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A History of the Swedish Pension System

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Abstract

This report provides an extensive overview of the history of the Swedish pension system. Starting with the implementation of the world's first universal public pension system in 1913, the report discusses the political as well as the economic background to each major public pension reform up until today. It presents the rules and the institutional details of these reforms and discuss their implications for retirement behavior, the general state of the economy and the political environment. Parallel to the development of the public pension system, a comprehensive and quite complex occupational pension system has emerged. This report describes the historical background and the institutional details of the four largest agreement-based occupational pension schemes in Sweden.

Keywords: pensions, retirement, economic history, private pensions, public pensions, historic review, funded, unfunded, defined contribution, defined benefit, Beveridgean welfare state, Bismarckian welfare state.

JEL: H55, H75, N33, N34, P35

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Contents

Concepts and Definitions

- **Base amount** - Three different base amounts have been and are used in the Swedish pension context: the price base amount (BA) (before 1999, the base amount), the income base amount (IBA) and the higher price base amount (HBA). The price base amount is calculated based on changes in the general price level and is used within the social insurance and different tax systems. The higher price base amount and the income base amount are only used in the public pension system.[1]

- **Basic pension** - The single person's flat rate state pension paid to all who have met the minimum contribution requirement. A universal basic pension was introduced in Sweden in 1935 and has remained an important feature, although in different versions, of the Swedish pension system ever since.

- **Beveridgean pension system** - Public pension arrangement based on means-tested or universal flat-rate benefits. The Beveridgean pension model stems from the Beveridge plan (Beveridge, 1942) presented in the UK in 1942. It is probably the most influencing social policy reform proposal of all time. The plan states that social insurance systems should be universal and mandatory and guarantee existential minimum. Benefits are financed by flat-rate contributions and consist of simple cash transfers. Since there is no, and has never been, a pension system designed completely along the lines of the Beveridge plan, the pension systems we refer to as *Beveridgean* exhibit much variation. Benefits can be paid by tax revenue and Beveridgean components may co-exist with Bismarckian components within the same pension system and so forth.

- **Bismarckian pension system** - Public pension arrangement based on earnings-related social insurance, typically financed out of wage-based contributions. There is a close relationship between benefits and contributions, which is why pension is referred to as *retirement insurance*. There is little re-distribution and benefits are not usually universal. The term *Bismarckian* refers back to the German Chancellor, Otto von Bismarck, who implemented the first formal pension system in the world in the late 19th century.

[1]See table A.8, A.9 and A.10 for statistics and more details on in what contexts they have been or are being used.

- **Collective agreement** - An agreement between employers and employees which regulates the terms and conditions of employees in their workplace, their duties and the duties of the employer. There are presently four large agreement-based occupational pension systems, covering privately employed blue-collar workers, privately employed white-collar workers, central government employees and local government employees respectively.

- **Contribution rate** - The amount of money that is contributed (monthly) to a specific pension scheme by law. Sometimes referred to as the premium fee.

- **Defined contribution (DC)** - In a DC pension scheme, individual plans are set up for participants and benefits are based on the amounts credited to these accounts. In the pension literature, DC schemes are therefore referred to as "individual account schemes". A DC scheme can either be financial defined contribution (FDC) or notional defined contribution (NDC). Individual account balances grow with annual contributions and the rate of return on the account. The rate of return depends on whether the scheme is NDC or FDC.

- **Defined benefit (DB)** - In a DB pension scheme, the state or the employer promises a specified monthly benefit on retirement that is predetermined by a formula based on the employee's earnings history, tenure of service and age. It is the converse of a defined contribution scheme, where the pension benefit is determined by investment returns or the accumulated amount of contributions.

- **Flat-rate benefits** - These are benefits that are related only to age and citizenship, not past earnings and contributions. These usually have an anti-poverty objective and are used to ensure everybody with a certain minimum standard of living. They are either financed by tax revenue or by contributions. The main advantage of universal flat-rate benefits is that they effectively can prevent poverty in old age with relatively little direct effect on saving incentives. However, they entail large costs for the state.

- **Financial defined contribution (FDC)** - An FDC scheme works as a DC scheme, where contributions to individual accounts are invested in market assets. The final benefit thus depends on the contribution plus the investment's return.

- **Full funding** - In a fully funded pension scheme, current contributions are set aside and invested in order to finance the future pensions of current contributors. Many company plans are fully funded as are individual retirement accounts. Public pay-as-you-go pensions may be partly pre-funded when the government raises the contribution rate above what is necessary to finance current benefits, in order to accumulate a fund to help pay future benefits. The designated pension fund(s) is (are) sometimes referred to as a *premium reserve system.*

- **Gross occupational pension** - Gross pension schemes are coordinated with the public pension system to guarantee the individual a certain *total* pension level (see *net* occupational pension for its converse).
- **Life-income principle** - The life-income principle implies that an individual should earn pension rights on all earnings, and not only on specific types of income or on income earned during a limited number of years.
- **Loss-of-earnings principle** - The insurance compensation should be based on the income of the insured. In other words, accumulated pension rights should be directly linked to previous earnings. This principle was at the core of the supplementary pension scheme, ATP, implemented in 1960, when pension was regarded as "deferred earnings" rather than a handout.
- **Indexation** - A system whereby pensions are automatically increased at regular intervals by reference to a specific index of prices or earnings.
- **Income ceiling** - The public pension system contains a ceiling on the income qualifying for pension rights. The ceiling is currently at 7,5 income base amounts. For 2013, this means that no pension rights are earned for the monthly wage portion that exceeds SEK 35 375. Supplementary occupational pensions typically provide pension benefits for income over the ceiling.
- **Means-tested benefits** - Benefits that are paid only if the recipient's income falls below a certain level. Means-tested benefits effectively target the poor and can potentially alleviate old-age poverty at a smaller cost than universal flat-rate benefits. However, a large bureaucratic apparatus is required to manage benefit applications that are subject to means-testing. Means-tested benefits also create incentives for some individuals to intentionally undersave or underreport earned income during the working years in order to claim benefits they are in fact not eligible for.
- **Net occupational pension** - Net pension schemes provide benefits that "float on top" of the public pension. They contain no direct coordination with the public pension system.
- **Notional defined contribution (NDC)** - An NDC scheme works as a DC scheme, where contributions to individual accounts are recorded but not invested in market assets. NDC schemes are PAYG, where annual contributions finance current pension benefit obligations. The rate of return in NDC schemes differ according to the indexation choice of the policy maker. The rate of return in the Swedish NDC scheme, *inkomstpensionen*, is determined by the per capita wage growth.
- **Occupational pension** - Access to occupational pension schemes is linked to an employment or professional relationship between the scheme member and the entity that establishes the plan (the scheme sponsor). Occupational schemes may be established by employers or groups thereof and

labor or professional associations, jointly or separately. The scheme may be administered directly by the plan sponsor or by an independent entity. In the latter case, the scheme sponsor may still have oversight responsibilities over the operation of the scheme. These are often regarded and designed as supplementary to the public pension system. In the Swedish case, participation is mandatory for employers who are part of some kind of collective agreement. Employers must set up (and make contributions to) occupational pension schemes which employees will be required to join.

- **Pay-as-you-go (PAYG)** - An arrangement under which benefits are paid out of current revenues and no funding is made for future liabilities. PAYG-systems are therefore *unfunded*.

- **Pension scheme/plan**[2] - A legally binding contract having an explicit retirement objective. This contract may be part of a broader employment contract, it may be set forth in the plan rules or documents, or it may be required by law. In addition to having an explicit retirement objective, pension schemes may offer additional benefits, such as disability, sickness, and survivors' benefits.

- **Pensionable income** - Income measure on which contributions to a certain pension scheme is paid. Pensionable income in the Swedish public pension system includes wages as well as payments from social security and unemployment insurance systems.

- **Premium reserve system** - System for creating a premium reserve used in different kinds of insurance contexts. Most occupational pension schemes make use of a premium reserve system, in which individuals contribute repeatedly, as pension rights are earned, to an actuarial liability that should guarantee the pension obligations. Premium reserve systems are also referred to as *fully funded* pension systems.

- **Public pension system** - Refers to the pension system that is administered by the government.

- **Replacement rate** - The ratio of an individual's (or a given population's) (average) pension in a given time period and the (average) income in a given time period. The replacement rate reflects the relative generosity of a pension scheme.

- **Social security** - Also referred to as social insurance, where people receive benefits or services in recognition of contributions to an insurance program. These services typically include provision for retirement pensions, disability insurance, survivor benefits and unemployment insurance. Should not be mixed with the term's meaning in the United States, where social security refers to a specific social insurance program for the retired and disabled.

[2] In this report, the term *pension system* refers to *a set* of pension schemes administered by a specific public or private actor, and therefore has a broader meaning than the term *pension scheme*.

Chapter 1

Introduction

This report provides an extensive overview of the history of the Swedish pension system. Starting with the implementation of the world's first universal public pension system in 1913, the report discusses the political as well as the economic background to each major public pension reform up until today. It presents the rules and the institutional details of these reforms and discuss their implications for retirement behavior, the general state of the economy and the political environment.

Parallel to the development of the public pension system, a comprehensive and quite complex occupational pension system has emerged. The occupational pension system is a separate system, but it is also supplementary in nature. The history of the occupational pension system is therefore closely related to the history of the public pension system. The latter has typically influenced the design of the former, but there are also examples when the direction of influence is the opposite. This, in combination with its importance for individual pension wealth and its sheer size, motivates the inclusion of a thorough analysis of the development of the occupational pension system in this report.

The history of the Swedish pension system is full of system changes, some more important than others. What is striking though, is how different issues and problems associated with pension system design keep recurring from time to time. Policy makers often face trade-offs and concerns that some other policy maker has already addressed, although in another historical context with different political and economic pre-conditions. It is therefore possible to identify several key issues when it comes to pension system design and pension reform. These key issues will help us understand why and how the pension system has become what it is today. I will discuss two classification strategies that I think best contribute to our understanding of the development of the Swedish pension system. The first classification strictly applies to pension systems and is taken from Lindbeck and Persson (2003). The second classification is broader and relates to welfare regimes in general. It makes a distinction between Bismarckian and Beveridgean social policy. This classification is often applied within a pension context, meaning that pension systems typically are classified as Bismarckian, Beveridgean or a mixture of both.

Lindbeck and Persson (2003) suggests a three-dimensional classification of alternative pension systems: funded (premium reserve system) versus unfunded (pay-as-you-go) systems, actuarial versus nonactuarial systems, and defined-benefit (DB) versus defined contribution (DC) systems.

[1] *Unfunded vs. fully funded*
One of the most central issues in pension system design is the choice of financing rules: how should pension payments to today's elderly be financed? Typically, a basic distinction between fully funded and unfunded pensions is made. Pensions from fully funded pension schemes are paid out of a fund built over a period of years from its members' contributions, whereas pensions from unfunded schemes are paid out of current income. Although a pension scheme can be of any of these two financing types, it can also contain elements of both. If more funding is wanted, there are many ways to achieve this. For example, funding can be in a central fund controlled by a government agency or in individual accounts controlled by individual workers. The money can be invested in government bonds or in a diversified portfolio (Diamond, 1999). Thus, the financing dimension is in practice not a choice between two extremes, but of the *degree of funding* (Diamond, 2006).

[2] *Actuarial vs. nonactuarial*
The second dimension of pension systems, actuarial versus nonactuarial arrangements, refers to the link between the individual's own contributions and her future pension benefits.[1] The strength of this link may be characterized as an expression of the degree of actuarial fairness. A pension system is completely nonactuarial if there is no link at all and "actuarially fair" if the capital value of the individual's expected pension benefits is equal to the capital value of her own contribution. Again, the choice is not dichotomous. Different degrees of actuarial fairness may be chosen, which can be illustrated by a simple example. The degree of actuarial fairness in a system that is a combination of a flat-rate benefit and a benefit proportional to the accumulation of contributions paid will be determined by the relative sizes of the two components. The greater the flat-rate benefit is in relation to the proportional component, the larger is the distortion on labor supply. That being said, there is no sense that "more actuarial" is necessarily better, since income distribution matters as well as efficiency.[2] Historically, the choice of the degree of actuarial fairness has been a political question and has turned out to be central in all major pension reforms. Typically, socialist parties have advocated pension systems with a high degree of redistribution, either by means of generous universal flat-rate benefits or by

[1]This refers to the microeconomic feature of the term "actuarial". In the insurance literature, there is also a macroeconomic feature, which refers to the long-run financial stability (viability) of the system. A stable system is said to be in "actuarial balance" (Lindbeck and Persson, 2003).

[2]Diamond (2006) points out that this dimension is more complex and cannot be represented on a one-dimensional scale. He prefers the phrase "labor market incentives" rather than "degree of actuarial fairness", as this dimension also relates to efficiency matters, individual insurance (through uncertainty) and redistribution.

having the richest pay contributions that do not earn pension rights. Liberal and conservative parties have preferred pension systems with a strong "insurance" character that provide a tight link between contributions and benefits.

[3] *Defined benefit vs. defined contribution*
The last dimension relates to how the size of the pension benefit is determined. A pension scheme can either be defined contribution or defined benefit. In a DC scheme, the pension benefit is directly related to the individual's accumulated contributions. Individual accounts are set up for participants and benefits are based on the amounts credited to and on the rate of return in these accounts. A DB scheme, on the other hand, has a benefit formula that relates annuitized (or lump-sum) benefits to the history of earnings covered by the pension scheme. Typically, the contributor is promised a certain share of her income earned during a specified period of time. In short, DB schemes focus attention on benefits relative to the history of earnings, whereas DC schemes focus attention on taxes paid.

One can also distinguish between the two types based on adjustment methods to financial realizations. In a DC system, the contribution rate is fixed, which implies that the pension benefits must be (endogenously) adjusted from time to time to ensure that the pension system remains financially stable. In a DB system, by contrast, the contribution rate must be (endogenously) adjusted from time to time, since the contributors must get the promised replacement rate or the promised lump-sum pension (Lindbeck and Persson, 2003). However, as Valdés-Prieto (2006) argues, this distinction is not entirely satisfactory, since the contribution rate in fully funded DC schemes can be changed without the schemes necessarily losing their DC character. He argues that the distinction rather should be based on the risk allocation of the pension scheme. In DC schemes, all the aggregate financial risk is transmitted to current members only. If an individual has all of her retirement savings invested in a pension fund, then the size of her pension benefit will be completely determined by the rate of return of that fund with no risk falling on the plan administrator. When the risk allocation method does *not* transmit *any* portion of the scheme's aggregate financial risk to retired members, the scheme is DB. Thus, classifying pension schemes into either category seems hard and the distinction is really a continuum in that one can adjust a combination of the two.

The choice between DB and DC has been a central issue in all discussions preceding major public and private pension system reforms. The reason is that DB and DC systems (in their purest forms) have very different implications not only for sharing of aggregate financial risk, but also for financial viability, intra- and intergenerational redistribution and intergenerational risk sharing. In terms of financial viability, the Swedish pension history shows that it is politically mush easier and more preferable to adjust contribution rates (taxes) than benefits in response to increasing financial imbalance in the pension system. During the second half of the

> 20th century, replacement rates were increased in a number of steps, particularly after the introduction of the ATP scheme. This expansion was accompanied by increased contribution rates up until the point when most people agreed that the system would have to be reformed to secure long-run financial stability. The outcome was a notional defined-contribution (NDC) system, which is a hybrid of DC and DB. The occupational pension schemes experienced a similar transition from DB to DC, partly to strengthen financial viability, but also to encourage old-age labor supply and stimulate private savings. Pure DC schemes neither redistribute across nor within generations, because the individual's pension benefit is directly linked to her accumulated contributions. DB and hybrid schemes often contain some redistributive mechanisms, such as progressive benefit formulas, income ceilings on pensionable income and flat-rate benefits. However, the distinction is primarily one of politics and not economics, as one can set up a DB scheme with little redistribution and, conversely, a DC scheme with redistribution (Diamond, 1999).

The second classification of pension systems into Bismarckian and Beveridgean pension systems stems from the French tradition of comparative social policy (Bonoli, 1997).[3] The terms Bismarckian and Beveridgean refer to the characteristics of the welfare programs associated with the German Chancellor, Otto von Bismarck, in the late 19th century and the British economist, William Beveridge, in the 1940s. The distinction between these two types mainly relate to the actuarial dimension of Lindbeck and Persson (2003). Bismarckian pension systems have a strong insurance character. They provide earnings-related benefits for employees, which size is determined past contributions. In a purely Bismarckian pension system, there is strictly speaking no concern for poverty and for that section of the population which does not participate in the labor market (Bonoli, 1997). Beveridgean pension systems aim at the prevention of poverty by means of universal, often means-tested, flat-rate benefits. Such systems emphasize the principle of "basic security for all" and are quite redistributive in nature.[4]

Both types influenced the early development of the Swedish pension system. The Bismarckian social insurance design permeated the funded DC component

[3] See for example Chatagner (1994), Chassard and Quintin (1992) and Hirsch (1993).

[4] A third commonly used classification of welfare regimes is developed by the Danish sociologist Gøsta Esping-Andersen in his famous book *The Three Worlds of Welfare Capitalism* (Esping-Andersen, 1990). He distinguishes between three types of welfare states: the liberal, the conservative-corporatist, and the social democratic welfare state. Liberal welfare states are conceptually quite similar to Beveridgean welfare states, characterized by means-tested assistance or modest universal transfers and contain little redistribution. Conservative-corporatist welfare states bear some resemblance to Bismarckian welfare regimes. They contain a moderate level of decommodification and the direct influence of the state is restricted to the provision of income maintenance benefits related to occupational status. Sweden is typically categorized as belonging to the social democratic type, in which the level of decommodification is high. Social democratic welfare states make use of generous, universal and highly redistributive benefits (Esping-Andersen, 1990, Arts and Gelissen, 2002). I will use the Bismarckain/Beveridgean classification rather than Esping-Andersen's *three worlds of welfare capitalism*, because the former relates more clear to and offers a better understanding of the early development of the Swedish pension system.

in the first universal public pension system that was implemented in 1913. However, since Sweden suffered from widespread old-age poverty, particularly in the rural areas, a second component, which was unfunded and means-tested, was created to lift elderly out of poverty in the short run. In the following decades, the role of pensions as retirement insurance was played down in favor of the Beveridgean objective of alleviating poverty among the elderly, which coincided with the rapid extension of the Social Democratic welfare state. Today, the pension system contain elements of both: the poorest are protected by the guaranteed minimum benefit (Beveridgean), the richest are subject to some payroll taxes that do not increase benefits (redistributive), whereas the most important component (the NDC) aims at providing a tight link between contributions and benefits (Bismarckian).

This classification also highlights the question whether pension systems should be **mandatory or voluntary**. Mandatory participation in a pension system is paternalistic in the sense that it forces individuals to save according to the rules of the pension system and not according to their own preferences for inter-temporal consumption smoothing and risk-taking. Pension systems based on voluntary participation, however, run the risk of having low participation rates, especially among people that are in most need of a paternalistic setting to counter life-cycle myopia. In fact, it is often argued that the most important reason for having mandatory pension systems is to counter life-cycle myopia (Feldstein and Liebman, 2002). According to this version, some of the elderly engaged in prodigal behavior when they were young and simply saved too little.[5] Another well-known justification for mandatory pension systems is to prevent free-riders from exploiting the altruism of others (Lindbeck and Persson, 2003). Based on these considerations, all major Swedish parties, both socialist and non-socialist, have approved of a mandatory public pension system. Liberals and conservatives, however, have consistently argued in favor of private pension solutions on top of a public pension system, where the latter should be based on the principle of basic security. The implementation of the ATP scheme made this scenario more or less impossible, as the scope of what could be done by successive policy makers was limited by the economic and social implications of the ATP scheme, a recurrent phenomenon in the pension reform context referred to as *path dependence*.[6]

A related question is whether pension benefits should be paid out to all individuals **(universal)** or only to individuals who meet certain criteria **(means-tested)**. The main advantage of means-tested benefits is that they can prevent

[5]Diamond (1977) suggests several reasons for this: (i) people may not have sufficient information to make long-term decisions; (ii) people may not be willing to confront the fact that one day they will be old; and (iii) they may fail to give sufficient weight to the future when making decisions (myopia).

[6]Path dependence theory was originally developed by economists to explain technology adoption processes and industry evolution. Recent methodological work in comparative work and sociology has applied the concept of path dependence to analyses of political and social phenomena, particularly in comparative-historical analyses of the development and persistence of institutions. See Pierson (2000) for a formalization of path dependence within political science, and Steinmo et al. (1992), Olsen and March (1989) and Pierson and Dolowitz (1994) for different approaches.

poverty at a lower cost than a universal pension system by targeting those in need. However, means-tested benefits also create disincentives for individuals to save. Some lower-income individuals might intentionally undersave during their working years so that, by gaming the system in this way, they will qualify for the means-tested benefit (Feldstein and Liebman, 2002). These arguments contributed to the gradual decrease in the relative importance of means-tested benefits in the public pension system after the pension reform in 1946. From 1960 up to 1994, the only means-tested components in the public pension system were the housing supplements. Today, the bulk of the pension income for the average pensioner comes from non-means-tested pension schemes.

The final, and perhaps the most important question, is what **purpose** a mandatory pension system should serve. Why should the government (or some other scheme sponsor) arrange a system, in which individuals' old-age savings are not taken care of by themselves? The three most common rationales for mandatory pension systems are consumption smoothing[7], redistribution from high income to low income individuals based on lifetime earnings rather than a single year's income[8], and insurance against a range of old-age uncertainties, including how long they are going to live (Barr and Diamond, 2006).[9] It has also been argued that mandatory pension systems are designed to induce the elderly to retire, because aggregate GDP is larger if the elderly do not work than f they do.[10] However, the main stated purpose of the first public pension in Sweden that was introduced in 1913 was none of these. The pension system was rather put in place in order to alleviate old-age poverty and provide elderly with decent retirement conditions. The theory of public pension systems as *welfare for the elderly* is based on the idea that the market "fails" to alleviate the poverty of the old, and the government steps in to create a pension program that solves this problem (Mulligan and Sala-i Martin, 1999). Poverty relief, and soon also providing a minimum standard of living in retirement, remained at the core of

[7]A process which enables an individual to transfer consumption from her productive middle years to her retired years, allowing her to choose her preferred time path of consumption over working and retired life (Barr and Diamond, 2006).

[8]A frequent reason for government intervention in other markets is to promote the consumption of some particular kind of good or service like education, food, or health care. However, since pension benefits are simple cash payments, a mandatory public pension system cannot be justified as a politically expressed desire to encourage a particular form of consumption (Feldstein and Liebman, 2002).

[9]A pension based on individual saving faces the individual with the risk of outliving those savings. In a pension system, to which many individuals' savings are pooled, an individual exchanges his pension accumulation at retirement for regular payments for the rest of her life, thus allowing people to insure against the risk of outliving their pension savings. Pension systems can also be seen as an optimal insurance arrangement, where ex poste "insurance awards" will vary systematically across ex ante distinguishable groups according to "premia" paid by those groups. This perspective helps explain why benefits often increase with pre-retirement income; those who earned more (and therefore paid more in taxes earlier in their lives) enjoy larger insurance rewards or "subsidies" (see for example Merton (1983), Mulligan and Sala-i Martin (1999)).

[10]See for example Sala-i Martin (1996) and Mulligan (2000). They argue that human capital depreciates with age so the elderly tend to have less than average human capital. It follows that the elderly have a negative impact on the productivity of the young, which implies that the young have incentives to induce the elderly to work less or even retire.

the rationale for the pension system up until the implementation of the earnings-related supplementary pension scheme, ATP, in 1960. Since then, the pension system is expected to target those in most need *and* provide pension benefits that sustain the standard of living attained during the working career into retirement. The public pension system should not only provide support for the elderly poor, but also prevent large falls in income for individuals with different pre-retirement income levels. Pensions were no longer seen as a "handout" to the poor, but rather as "deferred earnings".

The remainder of the report proceeds as follows. Chapter 2 discusses the origin and the implementation of the first public pension system in the world. It discusses the political and demographic factors that precipitated the 1913 reform and the influence of the existing foreign pension systems on Swedish policy makers. Chapter 3 explains why Sweden moved away from the Bismarckian retirement insurance design that was originally chosen, and instead choose to embark on a Beveridgean path towards the implementation of a pension system based on the principle of basic security. Chapter 4 goes on with discussing the dramatic implementation of the ATP scheme, the earnings-related supplementary pension scheme that won a majority in the parliament with only one vote in 1959 and that is referred to as the "jewel in the crown" of the Social Democratic Worker's Party. Chapter 4 also analyses the main problems of the ATP scheme that made the public pension system unsustainable in the long run and resulted in a major pension reform in 1994, discussed separately in chapter 6. Chapter 5 explains the origin of the major private occupational pension scheme and how they were coordinated with the public pension system. Chapter 7 describes the current occupational pension schemes; why they were reformed from defined benefit to defined contribution, their importance for individual retirement wealth, and how they affect the labor market and the government's objective to increase the actual retirement age. Chapter 8 concludes and gives a brief summary of the history of the Swedish pension system. A number of important pension concepts are defined in the section called *Concepts and Definitions*. Tables A.1 and A.2 contain important dates in the history of the public pension system and the occupational pension system respectively. Table A.3 provides an overview of all major public pension reforms.

Chapter 2

The Origin of the First Public Pension System in the World

2.1 Early pension systems

The first universal public pension system in the world was passed in 1913 by the Swedish Parliament. The first formal pension system was introduced by the German chancellor Otto von Bismarck about 30 years earlier. What citizens of western democracies today take for granted thus seems to be a rather recent phenomenon, especially considering the great expansion of the public pension system during the latter half of the 20th century. However, the idea of transferring wealth or other kinds of benefits from the working generation to the old generation is in fact as old as modern civilization, although not formalized in the way we think about pensions and certainly not universal in character.[1]

In pre-industrial Sweden, the traditional retirement systems were founded on family and property. Some congregations that abided the church laws passed at the turn of the 17th and 18th century built almshouses, in which the very poor and decrepit people were lodged (Ottander and Holqvist, 2003). Gradually, the responsibility of supporting the poor, who were often old and unable-bodied, was shifted from the congregations to the local authorities and was formally codified in the Poor Law of 1847. This law marked the very beginning of the development of the public social security system.

However, private pension solutions based on occupation had been in place long before the public pension reform in 1913. Most significantly, military pensions have a long history in Western civilization and have often been used as an element to attract and motivate military personnel.[2] In Sweden, old age benefits to ex-soldiers were introduced in the 17th century during a period of frequent warfare. Initially, crippled soldiers and their families were offered to stay in designated homes, but as the number of war victims increased, payments in the

[1]Ancient Roman writings by Cicero and Horatius, among others, reveal to us that people possessing an exalted societal position or significant financial means, chose to “retire with dignity” rather than work throughout life.

[2]For example, the U.S Congress used pensions to provide replacement income for soldiers injured in battle, to offer performance incentives and to arrange for orderly retirements (Clark et al., 2003).

form of grains and eventually cash were paid out. The first pension fund was formed by the navy already in 1642, in which the employees agreed to abstain from a certain proportion of their wage and allocate this money to the fund.

Amplified urbanization and public sector growth resulted in the emergence of new civil professions that introduced occupational pension funds similar to those of the military and the navy. Teachers, civil servants, bankers, and later on postal service employees, health service employees, law enforcement employees, and railway workers were covered by profession-specific pension agreements financed through voluntary or mandatory contributions. In most cases, the funds were primarily designed to support widows of public sector employees and replacement rates were generally very low. It is also important to note that the great majority of the Swedish population was not eligible for pension benefits up until 1913 (Ottander and Holqvist, 2003).

2.2 Political and demographic development

Retirement insurance, or pensions, and the economic situation of the elderly became an important political question at the end of the 19th century. This section discusses the main main political and demographic factors behind the introduction of the universal public pension system in 1913.

Changing demographic structures

One, perhaps obvious, reason why the pension question was brought to the fore in the latter part of the 19th century was the rapidly changing demographic structure of the Swedish population. The number of elderly increased substantially in the wake of the industrialization process, which brought decreased infant mortality and a subsequent drop in fertility rates. The demographic change was reinforced by high emigration rates between 1870 and 1900 when some 670 000 out of 4.2 million citizens emigrated, most of them in their twenties. By the turn of the century, Sweden probably had the oldest population in the contemporary world (Edebalk and Olsson, 2010). There were, relatively speaking, almost twice as many people above 65 years than in countries such as England, Russia, Germany and Austria. The increasingly growing share of elderly, especially in rural areas, implied a greater financial burden for family members and relatives, still on whom most elderly depended. As the poverty law of 1847 and later on the *poverty decree* of 1871, that held local authorities responsible for poor relief, were vaguely formulated and seldom put into proper practice, only those who lacked their own resources, supporting families or occupational pension schemes used local poor relief (Edebalk and Olsson, 2010). Nonetheless, the growing number of elderly and poor put severe financial pressure on the financial situation on many municipalities.

Local government expenses

Besides poor relief, the main obligation of the local authorities was primary school provision. From the 1870s up to 1910, total school expenditures tripled in real terms and its share of total expenditures increased rapidly. Reinforced legislation on the maintenance of schools, as well as making six years of primary school compulsory from 1878 onwards, forced local authorities to raise taxes in order to keep revenues at pace with increasing costs. Economically weak local districts raised taxes more than others, which resulted in a very uneven distribution of tax burdens. Growing inequalities across districts gave rise to calls for transferring the financial burdens of poor relief and school provision from local authorities to the central government.

Worth noticing is that the share of poor relief remained almost constant just like the average number on poor relief in the parishes during this period. The financial stress of the local authorities was instead predominantly caused by increasing school provision costs. However, the poor districts that went into a "vicious circle" of stagnant taxable income, considerable out-migration and raised taxes, also suffered from degrading poor relief more than the average district. Eventually, the two issues of fixing the poor relief and spreading the financial burden for local authorities became interlinked, to which the introduction of a universal pension system could be a solution.

The Poverty Question

The issue of poverty does not only relate to the origin of the pension system through calls for spreading the financial burden between local districts, but also through the growing awareness of the link between poverty and ageing. In England, the distinction between "worthy" and "unworthy" poor took shape, of which the former category consisted of people that were unable to work because of age and weakness (Edebalk, 1999). It was argued that a pension system would reduce the number of poor, alleviate the financial burden of poor relief, but also provide the elderly with an opportunity to age with "dignity". In Sweden, there was no social movement or organization dedicated to the poverty question up until the beginning of the 20th century. The Congress on Poverty[3] arranged in 1906 was an important milestone in the history of Swedish social security, since it provided a political platform for advocates of a complete revision of poor relief legislation and the extension of pension benefits. The demands presented by the congress resulted in the creation of the Old-age Insurance Commission[4] in 1907 by the right-wing government headed by Arvid Lindman. The commission emphasized that "worthy" retirees and unable-bodied should be offered better and more dignified social support than what was provided by the existing poor relief (Elmér, 1960). It also suggested that virtually all people should be covered by a public pension system, since needy retirees should not have to depend on ordinary poor relief or other individuals.

[3] *Fattigvårdskongressen*

[4] *Ålderdomsförsäkringskommittén*

2.3 Choosing a Pension System

Before the turn of the 20th century, there were basically only two types of pension systems in other countries that could inspire Swedish legislators and investigators. The first type was based on voluntary participation, but experienced unsuccessful implementation in a few countries[5], which is why the German pension system that had recently been introduced by Bismarck heavily influenced the first reform proposals in Sweden (Elmér, 1960).

The first proposal to introduce old-age pensions came from two liberals, Erik Westin and Adolf Hedin. Hedin tried to convince the government to initiate a thorough investigation of the introduction of a public pension system, motivating his case by citing citing the occurrence of such legislation in Germnay, France and Denmark. Hedin saw the creation of social insurance covering workers as a way to stop social discontent and emigration, which had reached unprecedented levels in the early 1880s. Hedin even claimed that a universal pension program should be considered. A commission was set up in 1884, which presented its findings five years later. The majority opinion supported a universal scheme, but the commission's proposal never reached the parliament (Heclo, 1974).

Following the German adoption of old-age insurance in 1889, the momentum for a public pensions system intensified. Sketched by an influential professor of mathematics, Anders Lindstedt, two proposals based on Bismarckian principles were presented to the parliament in 1895 and 1898 respectively. These were not universal and included mandatory worker insurance schemes against accidents as well as retirement insurance. However, the proposals were either significantly diminished to suit the opposition or not passed at all by the parliament. The critics argued that the German insurance-based pension system did not suit the predominantly agrarian Swedish society, that mandatory participation was a gateway to socialism and that it would have adverse effects on private saving (Elmér, 1960). Thus, when the Old Age Insurance Commission was set up in 1907, new ideas on the design of the public pension were required in order to overcome the considerable political obstacles it faced.

Foreign Influence

The Old-age Insurance Commission could learn far more from foreign experiments with pension system design than its predecessors were able to do only a few decades earlier. The commission worked for five years and presented a rather extensive report to the liberal government in November 1912 (Heclo, 1974). The commission quickly ruled out a pension system based on voluntary participation, after which three mandatory retirement insurance alternatives stood out as realistic.[6]

[1] *A universal pension system with flat-rate benefits*

[5] Belgium, France and Italy provided voluntary, government subsidized insurances. Participation rates were low, especially among the most needy.

[6] A system based on voluntary participation would come in the form of state-subsidized retirement insurance schemes. The commission thought such a solution would leave too many out of the system.

This type of pension had not been fully implemented in any country at the time. England took a first step towards a universal pension system in 1908, implementing means-tested, non-contributory benefits in the Old Age Pensions Act. This scheme was not universal in coverage and was based on voluntary participation, but nevertheless a first attempt to create a minimal living standard in the UK (Bozio et al., 2010). There was broad consensus in Sweden that the state budget was too weak to provide decent replacement rates within a flat-rate benefit system, especially since the economy was expected to deteriorate in the near future. Actually, a complete universal pension system with flat-rate benefits would not be introduced in Sweden until 1948 when the Social Democrats were politically consolidated and the Beveridge report had been published.

[2] *The Bismarckian model*
The German pension system, designed by Bismarck in the 1880s, was the first formal public pension system in the world and became a model for many pension systems in other countries. In contrast to a universal pension system with flat-rate benefits, public pensions in Germany was from the start designed to extend the standard of living that was achieved during work life also to the time after retirement. Pension benefits were thus roughly proportional to labor income averaged over the entire life course and comprised very few redistributive properties (Börsch-Supan and Wilke, 2004). Pension systems characterized by this direct link between the level of contributions and received benefits are referred to as "Bismarckian pension systems". Pensions were therefore called *retirement insurance* rather than *social security* and workers perceived their contributions as *insurance premia* rather than *taxes*. The insurance character was strengthened by the fact that the pension system was not part of the government budget, but a separate entity. This was a direct result of the decentralized political setting of Germany, where the *bundesländer* refused to finance the pension benefits (Edebalk, 2003a). Forced to sidestep from his plan to strengthen the central government through tax-financed retirement insurance premias, Bismarck decided to split contributions and insurance fees equally among workers and their employers (Börsch-Supan and Wilke, 2004).

While the German model was discussed extensively around the world, its spread was quite gradual. The only country that had fully adopted the compulsory and contributory Bismarckian system by 1910 was Austria (Feldstein and Liebman, 2002). Its ideas undoubtedly influenced Swedish policy and were indeed praised by Swedish officials and investigators, but the reform proposal that was presented by the Old-age Insurance Commission to the parliament in 1913 contained a quite different pension system. The reasons for diverging from the Bismarckian system were political and demographic. Firstly, excluding all but the workers from the retirement insurance schemes was politically impossible. The greater majority of the Swedish population lived in the countryside and would not be covered by a German-like pension system. The agrarian community was well represented in the parliament and made up an important voter base for all parties (Edebalk, 2003a). This, in combination with the presence of a relatively strong central government, made it possible to introduce a publicly financed pension system that was universal in nature. Secondly, as discussed in the previous section, the growing ratio of old-to-young people and deteriorating local government finances, called for a rapid solution to lift as many people as possible out of poverty (Edebalk, 2003b). Excluding non-workers from an old-age insurance scheme would not accomplish this effectively, nor alleviate the financial burden of poor relief for the worst off local districts.

[3] *A means-tested model*
The Danish model, implemented already in 1891, provided elderly with tax-revenue financed means-tested old-age pensions (Feldstein and Liebman, 2002). Representatives of the Congress on Poverty and prominent liberal politicians pointed out that saving rates as well as participation rates in other voluntary insurance schemes had declined in Denmark due to the introduction of means-tested benefits (Elmer 1960). They also strongly opposed the idea that "unworthy" elderly - people showing no work effort and negligent parents - would receive pension benefits (Edebalk, 2003b). At a public meeting in 1910, Baron G.A. Raab presented the ideas of a privately initiated investigation on public pension system design. Motivated by the failed reform attempts in the 1880s and 1890s, Raab proposed a pension system similar to the Danish model with means-tested benefits. Rather than being financed through state and local government contributions as in Denmark, Raab suggested the use of mandatory unit contributions for all citizens (Elmér, 1960). However, these were in practice unit taxes and hit low-income people disproportionately. The Raab system was never up for voting in the parliament, but its controversial means-tested component actually reappeared as one of two major components in the 1913 pension reform (Elmér, 1960). Whether pension benefits should be means-tested or not, in principal the question of choosing between a non-redistributive Bismarckian system and a universal Beveridgean system[7], has been, and is still, at the core of the pension debate. As we will see, the Swedish pension system developed into a hybrid of the two.

The 1913 Reform

At this time, the pension debate was not characterized by large party disagreements, since the common viewpoint was that something needed to be done about growing fiscal inequalities among municipalities and deteriorating poor relief. A public pension system would, at least partially, provide a solution to these problems. In May 1913, the Swedish parliament voted unanimously in favor of the

[7]Note that pension systems that contained "Beveridgean" properties, such as means-test, universality and redistribution, were not referred to as "Beveridgean" at the time. In fact, the Beveridge report (Beveridge, 1942), that later gave rise to the traditional distinction between Bismarckian and Beveridgean welfare regimes, was presented 30 years later. I make use of this term for the sake of conceptualization; it conveniently captures the essential properties of some of the early public pension system proposals.

world's first universal public pension system in line with the proposal drawn up by the Old-age Insurance Commission. The commission had chosen to present a combination of the Bismarckian model and the means-tested model, since both had its advantages and disadvantages. The system consisted of two components:

- The first, and the most important component, was fully funded and based on individual contributions collected by the local governments.[8] The contribution level was a function of reported income and benefits were actuarially fair. This implied that high-income people contributed more to the system, but eventually also received higher benefits. Similar to the German pension system, this component resembled *retirement insurance*, since it aimed at extending the standard of living acquired during work life to retirement. The pension benefit was paid out at from age 67 and was calculated as a share of the sum of the individual's contributions. On average, pension benefits were to represent 30 % of all contributions for men and 24 % for women (Höjer, 1952). This gender difference emphasized the insurance character of the system as both life expectancy and disability frequency were higher among women at the time (Elmér, 1960). The maximum annual contributory pension amounted to approximately SEK 199 and SEK 159 for men and women respectively. In 1914, the average annual wage of a farmer and a worker in the industrial sector amounted to SEK 1301 and SEK 811 respectively.

- The second component of the pension system was supplementary and means-tested.[9] Benefits were paid out to all retirees "in need" and was thus inspired by the model proposed by Raab several years earlier. The supplementary benefits, as opposed to the contributory pension benefits, were tax-financed[10] and were thus financed according to the *pay-as-you go*[11] principle. The annual supplementary pension amounted to SEK 150 and SEK 140 for men and women respectively and increased with paid contributions up until an annual income of SEK 300. Someone who had not paid contributions at all could receive a special benefit of the same amount as the supplementary pension provided that he/she fulfilled certain "dignity criteria" and had a valid reason for not paying. Given the maximum amount of benefits from the contributory component, the supplementary pension was indeed generous.

But how generous was the pension system as a whole? In order to compare the relative generosity of different pension systems over time, it is necessary to find an appropriate measure of the real value of the pension benefits. One way to do this is to relate total pension benefits to the average income level in

[8] *Avgiftspension.* A premium reserve system for managing the pension contributions was set up.

[9] Pensionstillägg

[10] 75 percent of the costs were paid by the central government and 25 percent by local authorities

[11] See Concepts and Definitions

different sectors.[12] Table 2.1 shows the average pension for pensioners with income from both the contributory component and the means-tested component. The means-tested benefits relate to individuals who claimed maximum benefits, which implies that the table reflects the relative size of the public pension system at its best. Replacement rates were nonetheless rather low, especially for factory workers whose pension only accounted for 8-16 % of their previous wage (column 4). Moreover, farmers' pension increased as a share of the average wage level over time and thus seemed to fare better than the factory workers (column 5), but this was partially explained by higher real wage growth rate in the industrial sector.[13]

Column 6 in table 2.1 shows that the participation rate, defined as the share of population over 67 years of age with some kind of retirement income, increased gradually after the introduction of the public pension system. The increased participation rate was a direct result of the design of two pension components. Benefits from the contributory component were only paid out if they exceeded SEK 6, which did not happen in any case until 1917. Since benefits were directly linked to the contributions paid, it would take many years for an individual to amass enough contributions to be able to claim a substantial pension. Even long after 1917, many people simply ignored claiming pension benefits. Supplementary, means-tested benefits, on the other hand, were paid out to approximately 40 % of the individuals over 67 years of age. This helps explain why the participation rates were so low between 1916 and 1936.

Table 2.1: **National pension with means test in relation to the average yearly earnings for farmers and factory workers 1914-1936**

Year	Avge. factory worker's wage (SEK/year)	Avge. farm worker's wage (SEK/year)	% of factory worker's wage	% of farm worker's wage	Participation rate
1914	1301	811	11,3	18,1	2
1916	1479	987	13,9	20,8	40
1920	3607	2352	8,1	12,5	47
1921	3363	1649	8,8	17,9	-
1926	2707	1328	16,4	33,5	57
1931	2767	1247	16,4	36,3	73
1936	2848	1378	16,2	33,5	81

Source: Elmér, 1960

The pension benefits from the first contributory component were completely financed by individual contributions. From 1914 to 1936, contributions were

[12]This method entails some problems, including difficulties in measuring average wage rates and determining their real value.

[13]Comparisons of replacement rates between farmers and factory workers might also be problematic as registered wage income most likely did not fully reflect the actual standard of living of farmers.

of two kinds: one basic payment of SEK 3 collected by the local authorities and one surcharge paid in combination with the income tax. As long as the pension system of 1913 was in place, payment frequency of the basic payment was quite low. Surcharges were paid to a much greater extent, which motivated the subsequent switch from a pension system financed by contributions to a system completely financed by taxes. Table 2.2 shows the pension fees for different income groups with annual incomes below SEK 10 000. Contributions were paid over a period of 51 years, from age 16 to 66.

Table 2.2: **Pension fees under the 1913 Act**

Income group (in SEK)	Pension fees	Percentage of income at middle of given income group
0-599	3	1,0
600-799	5	0,7
800-1199	8	0,8
1200-2999	13	0,6
3000-4999	18	0,5
5000-6999	23	0,4
7000-9999	28	0,3
10 000 or higher	33	.

Source: Elmér, 1960

The supplementary pension component was much disputed. The chair of the Old-age Insurance Commission, Professor Anders Lindstedt, argued that the state pension fund necessary to sustain a defined benefit plan would grow too large and inhibit capital formation. Gustav Cassel, another famous economist, emphasized the moral consequences of a means-tested pension plan. He argued that means-tested pension benefits have negative effects on private saving and work effort. Such a system would benefit "socially and economically inferior and depleting tendencies" and would also create an alternative poverty support system that was actually worse than the existing poor relief . Such concerns relating to demoralization and market inefficiency were mostly shared by liberals and conservatives. Some social democrats and more radical left-wing supporters, on the other hand, feared that benefits in practice were far too small, but nonetheless sufficiently large to inhibit further reforms (Elmér, 1960).

In the implementation of the first universal pension system in the world, the politicians did not in fact relate to any of the traditional rationales for government pension programs. The main objective of the pension program was rather to alleviate old-age poverty and provide elderly with decent retirement conditions. The benefits of lifting retired workers out of poverty were weighed against the costs of creating saving disincentives through a mandatory government pension program and the risk of encouraging intentional undersaving and social demoralization.

There were obvious flaws in the first public pension system. Designed to be the main source of pension income, the first component of the pension plan only yielded a few SEK per month for the average worker. In fact, it did not have any significant socioeconomic effects in the first 20-30 years or so (Edebalk, 2003b). A fully funded, defined contribution pension does not yield "reasonable" pensions until contributions have been paid over a life-time and is thus far from the most efficient way of tackling old-age poverty in the short run. Consequently, most retirees received the bulk of their benefits from the means-tested supplementary pension. This raises the fundamental question of what the main rationale for a pension system really is. Should a pension system simply provide a formal framework that will help people save for retirement? Or should a pension system be re-distributive in design and ensure all elderly a decent retirement income? In the decades following the 1913 reform, the latter perspective gained ground.

Chapter 3

Leaning Towards Beveridge – A Universalistic Welfare State

In the beginning of the 20th century two types of pension systems crystallized in western Europe, sometimes referred to as the "two worlds" of pension systems (Bonoli, 2003). Firstly, there was the Bismarckian social insurance system adopted by countries like Germany, Italy, France and Switzerland. Secondly, there was the redistributive Beveridgean pension system with flat-rate benefits introduced by Great Britain and Denmark among others. Sweden, as we have seen, did not fully endorse any of the two systems in the 1913 reform as it included characteristics of both. Over time, most countries reformed their pension systems only within the frameworks of the Bismarckian and the Beveridgean systems respectively.[1] The difficulty of changing the fundamental characteristics of the pension system gave rise to the idea of *path dependence* with respect to the long-term development of pension systems. If Sweden would stick to its universalistic, hybrid version or embark on any of the two major pension paths remained unclear even two decades after the 1913 reform. However, during the 1930s the Beveridgean ideals took hold and greatly characterized the pension reforms of 1935 and 1946.

3.1 Perspectives on pension reform

Apart from numerous minor changes, the fundamentals of the Swedish pension system were left unchanged between 1913 and 1935 (Elmér, 1960). However, since neither left- or right-wing parties were completely content with the 1913 pension reform, these years witnessed ongoing debate about how to reform the pension system. The first world war had brought an upturn in the Swedish economy, but soon after the war had ended in 1920 the consequences of the international recession were felt. The situation was worsened by deflationary monetary policy

[1]The exceptional case is the Netherlands that switched from a Bismarckian pension insurance to a Beveridgean basic pension system. The Bismarckian retirement insurance for manual and white-collar workers introduces in 1913 was replaced by a means-tested pension in 1947, which in turn was replaced by a universal flat-rate pension eleven years later, completing the transition to a Beveridgean pension system (Ebbinghaus, 2011).

and unemployment soared to 30 % (Edebalk, 2003b). Two opposite perspectives on pension reform dominated the debate. The first perspective was characterized by a fear that the pension system would grow too large and turn out to be unsustainable in the long run. The second perspective emphasized the insufficiency of current benefit levels. Ironically, advocates of both perspectives - those that preferred pension system *retrenchment* and those that preferred pension system *extension* - presented arguments that were somehow linked to the increasingly bad condition of the economy.

Frankenstein's monster

The right-wing government that was formed in 1923 expressed fears of a social security system that would grow out of control. A government investigation suggested that the contributory, funded component should be enlarged at the expense of the supplementary, means-tested component. Their arguments were based on pessimistic projections of the performance of the Swedish economy and on fears that a large social insurance system could severely harm free market mechanisms. Gösta Bagge, an influential professor of economics[2] said that the pension system would grow uncontrollably like Frankenstein's monster (Elmér, 1960). Surprisingly, the government's reform suggestions were cherished by the Swedish Trade Union Organization, the largest blue-collar union at the time, but were heavily criticized by some financial actors. The reason is that fears of a large pension system were not only based on concerns for the state budget, but also concerns for savings incentives. Since the contributory component of the pension system was fully funded, increased contribution rates would further crowd out private savings and also place more funds under the supervision of the government. However, the right-wing government was replaced by a social democratic government before it could implement any of the reform proposals put forward by the investigation. As a result, advocates of extending pension benefits gained momentum.

The poverty question again

In the wake of the economic downturn in the 1920s, an increasing number of poor elderly were forced to rely on locally provided poverty relief for old-age support. This form of retirement was considered even more "unworthy" now than before the 1913 reform since the welfare state had developed considerably in many other respects since then. Also, the current pension system would not significantly alleviate old-age poverty in the short run as a fully-funded contributory pension system comes into full effect once individuals have paid contributions over a lifetime. In 1933, 19 years after the implementation of the contributory component, the annual average payment from the contributory component was only SEK 31 and SEK 11 for men and women respectively, much less than what people and legislators considered a normal pension (Schmidt, 1974). This corresponded only to approximately 9 percent of the average wage in the industrial sector (Ståhlberg,

[2]He served as leader for the Conservative Party from 1935 to 1944.

1993). Gustav Möller, the Minister of Health and Social Affairs of the social democratic government, praised the universality of the Swedish pension system, but called for a pervasive pension reform that would ensure deserving old-age and disability insurance to current and future generations. Möller neglected the reform proposals put forward by the previous right-wing government and instead pointed to the danish pension system as a source of inspiration, completely tax-financed and without individual contributions (Elmér, 1960). Möller became a very influential member of the Pension Insurance Commission[3] that was set up in 1928 and whose results laid the foundation for the 1935 reform.

3.2 The 1935 reform

The Pension Insurance Commission was politically versatile. Broad political representation in working groups facilitates parliamentary decision-making in pension issues as political compromises can be reached during the investigatory process before they are up for voting. The commission worked intensely for six years and concluded that the pension system had overall been beneficial.

Most importantly, the commission had to agree on whether the insurance character of the pension should be increased or decreased, which implied choosing between strengthening or weakening the Bismarckian character of the pension system (Elmér, 1960). The resulting reform proposal was a compromise between radical right-wing politicians' calls for a non-re-distributive, fully contributory pension system and the social democrats' preference for tax-revenue financed pensions. On one hand, the insurance character was strengthened by the reduction of the share of total benefits that came from the means-tested component. On the other hand, the relationship between contributions and benefits was loosened to allow for more redistribution and an increase in the basic pension level. Individuals that had accumulated low levels of pension contributions would belong to the net winners under these changes, whereas individuals with high contribution accumulation would experience a decrease in future pension benefits. The commission emphasized the transition away from the Bismarckian insurance design by referring to the new pension system as the *people's pension* or *folkpension* rather than *retirement insurance* as before.

The bill passed in 1935 under the social democratic government was very much in line with the reform proposals of the commission. The main changes were:

- The premium reserve system was partially abandoned, shifting the larger share of pension funding from the pension fund to general tax revenue. The reasons for this were twofold. Firstly, the premium reserve system put much strain on the current working generation, as they had to finance the current old as well as contributions for their own future retirement. Secondly, a premium reserve system does not operate efficiently in the absence of a stable currency. After the first world war, Europe and Sweden

[3] *Pensionsförsäkringskommitten"*

had experienced dramatic currency fluctuations, which put monetary policy at forefront of the political agenda (Elmér, 1960).

- The previous contributory pension benefits were changed into an annual *basic pension*, of SEK 100 plus 10 percent of lifetime contributions for both men and women.[4] The basic pension of SEK 100 only amounted to 3-4 % of the average wage of a factory worker as shown by table 3.4. The benefits were financed by current contributions and tax revenue on a pay-as-you-go-basis. Loosening the relationship between contributions and benefits in this way illustrates the direction away from the Bismarckian insurance design towards the Beveridgean, flat-rate benefit system that was to be fully implemented in 1948.

- Supplementary pension benefits were increased to SEK 225 and 210 per year for men and women respectively, more generous than initially suggested by the commission.

- The most controversial element of the 1935 reform was regional heterogeneity in benefit generosity. Retirees in urban areas received higher pension benefits than retirees in rural areas for a given contribution level.[5]

The nature of the pension debate in the 1930's was quite different from that of the early 20th century. The debate preceding the 1913 reform was ideologically very heated, since it concerned the design of the fundamental characteristics of the pension system. 20 years later, the debate focused on the practical weaknesses of the current system that had become apparent over time, of which the time lag in claiming full contributory pension benefits was the most debated. The main challenge was to rapidly alleviate old-age poverty without jeopardizing the condition of the state budget. By extending the supplementary means-tested benefits and introducing a basic pension more people would receive a reasonable pension in much shorter time. These extensions were partially financed by the reduction in contributory pensions, but also by increasing the share financed by tax revenue. The increase in the share of pension costs financed by tax revenue and the partial abolishment of the premium reserve system implied that the pension system became more integrated with the normal state budget. Its insurance character was weakened and it was to a less extent seen as a separate, self-financing entity than before.

[4] *Folkpension*

[5] The country was divided into three parts based on expected cost of living ("Dyrortsgruppering" in Swedish). People that lived in places where costs were high were entitled to more generous supplementary pension benefits. This categorization of regions based on relative cost level played not only an important role in different welfare state issues like pension levels, but was also applied in direct income taxation where the size of possible deductions depended on place of living(Elmér, 1960).

3.3 A partial Beveridgean pension system

The Möller model

Gustav Möller played an important role in the 1935 reform, both as Minister for Health and Social Affairs and as a member of the Pension Insurance Commission that formulated the reform proposals. Remaining as Minister for most of the time up until 1951, Möller's influence on Swedish social security policy steadily increased. It culminated in the implementation of a universal, flat-rate benefit system in 1948 that was very much in line with his ideals. Before going into the details of this reform, I will explain the main characteristics of the so called Möller model and relate these to the Beveridge plan that was presented in the UK in 1942 (Beveridge, 1942).

Möller's model did not only concern pensions, but basically all aspects of social insurance.[6] Unlike Beveridge, who presented a complete solution to the design of the social insurance system, Möller did not explicitly formulate his model. What is now referred to as the Möller model was rather developed and put it into practice in a step-by-step fashion. The most important feature that was at the core of both the Möller model and the Beveridge plan was the minimum standard principle. The government should guarantee all citizens a certain minimum living standard by offering universal, flat-rate benefits independent of past contributions and earnings. The centrality of the minimum standard principle was unique and rather intriguing at the time. The universalistic character of the two models, on the other hand, was by no means unique, since it had been part of the Swedish pension system since the 1913 reform.

Even though Möller personally was very inspired by the Beveridge plan, repetitively referring to the design of the UK social insurance system, there were some important differences between the Möller model and the Beveridge plan. Most importantly, Möller and Beveridge were not in agreement on how social benefits should be financed. From a welfare perspective this is a crucial issue, since the degree of redistribution in a social insurance system is partially determined by the choice of funding source. Möller argued strongly in favor of tax-financed benefits as this would allow for greater flexibility in changing the re-distributive degree of the insurance system. For example, the policy maker can increase the degree of re-distribution by raising tax rates form high-income earners while keeping tax rates for low-income earners and pension benefits constant. Paying benefits out of general tax revenue would also be simple and efficient from an administrative perspective. Beveridge did not have strong re-distributional ambitions and preferred a social insurance system where all costs were covered by flat-rate contributions (Edebalk, 1994). According to Beveridge, relying solely on contributions for financing outgoing payments would maximize transparency and long-run sustainability of the system.

[6] Most notably health, accident, sickness and unemployment insurance

Reform proposals

Only a few years after the 1935 reform, a new commission[7] was set up to investigate a wide spectrum of welfare state issues. This commission produced no less than 19 official reports in 13 years, of which one laid the foundation for the pension reform in 1946 (Edebalk, 2003b). Pensions were initially not on the main agenda of the commission, but when the shortcomings of the 1935 reform became apparent the pension system was formally put under scrutiny in 1944. In the light of the recent development in the UK and the eventual introduction of flat-rate benefits in 1946, it is natural to believe that the commission was influenced by the Beveridge report. However, two out of the three pension reform alternatives that were presented by the commission in 1945 were not in line with the principals of the Beveridgean pension model. Thus, rather than having a direct influence on the legislative process, Beveridge's ideas gained ground in Sweden by influencing the thoughts of several key players like Gustav Möller. The commission presented the following three pension reform proposals:

[1] The first alternative included a basic pension of SEK 200 and a means-tested supplementary pension of SEK 800. The basic pension would correspond to approximately 5 % of the average factory wage, slightly more than under the current system. The increased supplementary pension would also contribute to raising the replacement rate of the public pension system.

[2] The second alternative also provided total pension benefits of SEK 1000, but reduced the share of the means-tested component to SEK 400. Some features were common to both alternatives. Firstly, the insurance character of the pension system would be completely erased since neither of them contained any relationship between contributions and benefits. Secondly, the commission responded to the growing dissatisfaction with the regional heterogeneity in pension benefits by dividing the country into five regions based on housing costs rather than general living costs. Retirees in the four most expensive regions would claim housing supplements of SEK 150, 300, 450 and 600 respectively. A retiree in Stockholm, for example, would under this institutional setting receive a total pension of SEK 1600 compared to SEK 1000 for a retiree in the least expensive region (Elmér, 1960).

[3] The third alternative, that was also ultimately implemented, was elaborated by a government official outside the commission. It would provide everybody with a pension of SEK 1000 independent of past contributions and income level. Even though there were still means-tested components in the form of housing supplements and supplementary wife benefits[8], the third alternative resembled the Beveridgean model of universal flat-rate benefits to a larger extent than the previous alternatives.

The members of the commission unanimously rejected the first alternative, since the allotted share of the universal basic pension under this alternative was too

[7] *Socialvårdskommittén"*

[8] "Hustrutillägg"

small to bring about a significant increase in the general living standard of the elderly. They could not, however, agree on whether alternative two or three should be preferred. Since a complete abolishment of the premium reserve system was embedded in all three alternatives, all pension costs were to be financed by tax revenue[9]. This put the financial issue at the core of the debate. Advocates of including a means-tested component next to a basic pension (alternative two) emphasized the excessive costs of having a universal flat-rate benefit of SEK 1000 (alternative three). They also argued that a pension system funded by tax revenue legitimized the use of means-tested benefits to a larger extent than a fully funded pension system (Elmér, 1960). Those who opposed means-tested benefits, on the other hand, highlighted the administrative simplicity of alternative three.[10] Only a third of the population would be subject to means-tested benefits under alternative three, compared to three quarters of the population under alternative two. Moreover, a universal flat-rate benefit would minimize saving disincentives as well as income underreporting tendencies.

The 1946 reform

There was broad support for the third alternative both among politicians and major newspapers. Even liberal and conservative politicians were in favor of this option. They believed that the distortionary and demoralizing consequences of means-tested benefits outweighed the financial costs of universal flat-rate benefits. Social democrats generally supported the third alternative as well, since raising the living standard of the elderly had been central to the party's agenda for a long time. However, the decision of the social democratic government was delayed because of an internal dispute between Gustav Möller and the Minister of Finance, Ernst Wigforss, whose opinions were shared by the prime minister, Per-Albin Hansson. Wigforss argued that the state budget was too weak in the aftermath of the second world war to handle the costs implied by universal flat-rate pension benefit and called for a means-tested component to ease the financial burden (Elmér, 1960). Möller, on the other hand, argued that the effects of the social welfare reforms in the 1930s had been greatly overestimated, which necessitated the introduction of a generous flat-rate pension benefit that would substantially improve the living conditions of current and future elderly. In March 1946, to Möller and the political opposition's relief, the government finally decided to submit the third alternative to the parliament that voted unanimously in favor of it. The main characteristics of the new pension system, referred to as *folkpension*, that was implemented in 1948 were the following:

- The pension system was completely unfunded, since no assets were set aside in a particular pension fund. Instead, all benefits were paid directly out of current taxes. The existing pension fund assets and the interest earned on these assets were used to finance outgoing pension payments during a

[9]Pension contributions still had to be paid as a "special tax". This tax was collected mainly for psychological reasons.

[10]Having no means-tested benefits except for the housing supplements would make it possible to abolish the paper-based population register of contribution rates.

transition period. As seen in 3.1, the share of pension costs financed by interest on funds declined from 22 % in 1936 to only 1% in 1957.

- The most important component was a universal flat-rate benefit of SEK 1000 per year.[11] This benefit substantially improved the financial situation for the elderly and was the first serious attempt to more or less eliminate old-age poverty. Putting the size of the benefit into a comprehensible context, in 1948, the average annual income of a male worker in the agrarian sector amounted to SEK 4259. The average annual income among female workers was SEK 2184 (Socialstyrelsen, 1931).
- The contribution rate was one percent of total taxable income and pensions could start to be claimed at an age of 67.[12]
- Pensioners in the four most expensive regions would claim housing supplements[13] of SEK 150, 300, 450 and 600 respectively.[14]
- Married couples could no longer claim benefits twice the size of singles' benefits, but only 60 percent more. Supplementary means-tested wife[15] and widow[16] pension benefits were also introduced.
- The central government was responsible for paying out benefits that were exempt from means-testing, whereas local authorities administrated the means-tested, supplementary components.

Some important additions were made in the following years:

- *Indexation* - As soon as the *folkpension* came into force in 1948, it became obvious that the real value of the flat-rate benefit of SEK 1000 had decreased as a result of an increase in the general price level. Continuing inflationary pressure and unpredictable price volatility spurred an intense debate on how to secure a stable economic environment for pensioners. Various solutions on how to compensate for nominal price increases[17] were presented and some of them were temporarily implemented (Elmér, 1960). In 1950, the parliament passed a bill that marked a first step in the implementation of an automatic indexation mechanism that tied pension benefits to the current inflation rate. In fact, a common view among economists

[11] *Allmän folkpension (AFP)*

[12] This retirement age was considered too high by many. There were also discussions about whether the retirement age should be fixed or flexible.

[13] *Bostadstillägg*

[14] Housing supplements are still paid out in the current pension system and make up an important source of retirement income for approximately 250 000 pensioners. See section 4.3 for details on the present housing supplement legislation.

[15] Paid out to male pensioner, whose wife received no *folkpension* and had turned 60. It was deemed "unreasonable" for two elderly spouses to receive only the husband's pension benefit. (Schmidt, 1974).

[16] Paid out to widow that had been married for at least 5 years and who had been left behind at an age of at least 55.

[17] *Dyrtidstillägg*

was that automatic inflation indexation of pension benefits was undesirable, since this would signal governmental powerlessness against inflation. Soon enough, however, they acknowledged that inflation indexation should not worsen the financial situation of the least well off. Price inflation was used as indexation measure within the ATP scheme until ATP was abolished in 2002, but soon became one of the earnings-related scheme's most debated properties, particularly for making the real value of pension benefits excessively sensitive to changes in economic growth.[18] Moreover, given that several other countries, including Germany, Netherlands, Finland and Norway, either tied pensions to a wage index or to a combined price-wage index, it is somewhat surprising that the most important public pension scheme used price indexation for such a long time.

- *Standard additions*[19] - Related to the previous issue of price indexation, there were also discussions about whether public pension benefits should be tied to real wage increases. It was argued that when the working population fared better, so should the pensioners. In 1957, the parliament unanimously voted in favor of a gradual "standard" increase of pension benefits over a ten-years period that was supposed to mirror the rising living standards in the economy.

- *Housing supplements*[20] - The supplementary means-tested component of the *folkpension* was transformed into a system of means-tested housing supplements. The 1946 division of the country into five regions based on the level of housing costs, of which the least expensive was to be exempt from means-tested housing supplements, was heavily criticized by the Agrarian Party as well as the liberal and right-wing parties. The Agrarian Party demanded a complete abolishment of this regional division, as it in practice endowed urban pensioners with higher benefits. The parliament met their demand and in 1954, the responsibility of determining the size of and paying out housing supplements was given to the municipalities. However, through designated government grants to the municipalities that should help finance the housing supplements and which size depended positively on the municipal housing cost level, pensioners in expensive regions could still be compensated.

The 1946 reform was an important milestone in the Swedish pension history. There was no longer any relationship between contributions and benefits, as all benefits were paid out independent of past earnings and contributions. Thus, the insurance character that was relatively prominent in the 1913 reform, significantly weakened in 1935, was now completely erased. Moreover, the relatively generous, flat-rate basic pension substantially improved the living conditions for many elderly, which none of the previous reform attempts had achieved successfully. In 1950, pension benefits were approximately 21 percent of the average wage in the industrial sector, significantly higher than the corresponding share

[18] See section 4.4 for a detailed discussion on this matter.
[19] *Standardtillägg*
[20] *Bostadstillägg*

after the 1935 reform. As a result of raising benefit levels, the pension costs were expected to increase by more than 100 percent (Palme and Svensson, 2010). The new pension system reduced risk exposure and financial uncertainty among pensioners by real-wage and inflation rate indexation. These indexation procedures, though in other forms, are natural components of the pension system today.

Möller's influence on the pension arena during this period should not be underestimated. Although less successful in implementing his ideas in other social insurance contexts, Möller had a great impact on the design of the pension system that was put in place in 1948. It was no secret that Möller drew a lot on the British experience and that a huge step towards the Beveridgean model and away from the Bismarckian model had been taken with the implementation of the *folkpension*. But Möller also sidestepped the Beveridgean ideals in a number of different ways. Most notably, he supported the introduction of several means-tested benefits and financing benefits by general tax revenue. Ironically, some of his most vigorous opponents came from within the Social Democratic Workers' Party (SAP), whereas the Rightist Party[21] and the Agrarian Party were the first parties to support his idea of a pension system based on universal flat-rate benefits financed by general tax revenue.

3.4 Pension fees and replacement rates

The gradual shift from a pension system with a strong insurance character to a system characterized by Beveridgean ideals was clearly reflected in the composition of revenue sources of the public pension system. Soon after the implementation of the first public pension system, individual contributions financed as much as around 50 % of total pension costs as shown by table 3.1. This share was only 16 % in 1953. Meanwhile, the share of total pension costs financed by state taxes increased from 23 % to 72 % during the same period.

As shown by table 3.2, from 1937-47, the pension fee was 1 % of taxable income, but at least SEK 6 and maximum SEK 20 per person. Fees were paid over 48 years, from age 18 to 65. The pension system put in place in 1948 kept the contribution rate of 1 % of taxable income, but increased the maximum fee to SEK 100. In 1952, people with income below SEK 1200 were made exempt from all pension payments. From 1954 to 1959, the contribution rate was raised stepwise up to 4 %, which reflected the increasing generosity of the pension system.

The pace at which pension levels were increased can be analyzed by converting them to the money value for a specific year. Table 3.3 contains the average pension for pensioners with means-tested benefits in both nominal terms and in 1958 prices. The average real value of the pensions decreased by as much as 50 % as a result of the high inflation after the first world war. From 1921 and

[21]The party was founded on 17 October 1904 and was called the General Electoral League (*Allmänna valmansförbundet*) until it was renamed the National Organization of the Right *Högerns riksorganisation* in 1938, and about 14 years later the Rightist party (*Högerpartiet*). From 1969 it is referred to as the Moderate Party (*Moderaterna*). I will refer to the party simply as the Conservative Party.

Table 3.1: **Distribution of costs (%) of national pensions in different sources, 1918-1957**

Year	Contributions	Local taxes	State taxes	Interest on funds	Total
1918	49	17	23	11	100
1927	25	18	39	18	100
1936	22	17	39	22	100
1937	27	15	38	20	100
1939	26	20	36	18	100
1947	18	19	56	7	100
1949	18	9	70	3	100
1953	16	10	72	2	100
1957	22	14	63	1	100

Source: Elmér, 1960

onwards, there was a consistent rise in real pensions, which by far outran the increase in real cost of living.

When the pension act of 1935 came into force in 1937, some groups that were previously not covered by the public pension system, like state civil servants, were now eligible for the basic pension of SEK 100. Up until then, pension benefits that were paid out from the non-means-tested component had been very small. Since more people found it worthwhile to claim those benefits, the participation rate increased from 81 % to 96 % between 1936 and 1946 (column 6, table 3.3). The participation rate increased to 100 % with the implementation of the universal, flat-rate *folkpension* in 1948.

However, relating the increase in real pension to the increase in real wages over the same period shows that recurrent calls for extending pension benefits often were legitimate. Table 3.4 shows that pension benefits for a factory worker amounted to only one third of the average wage of a full-time worker as late as in 1948. The table also shows that the pension reform of 1946 hardly had any effect on the financial situation of the worst off. Total benefits as a share of the average factory worker's wage increased only by 5 percentage points over the period 1941 to 1956. Farmers claimed higher pensions as a share of their earned income, but given that the average income level in the agrarian sector was very low at the time, pension benefits were in fact not very generous at all.

Table 3.2: **Pension fees 1914-1959**

From initial year onwards	Percentage of income	Lowest income for compulsory fees	Lowest fee	Highest fee
1914	At most 1,1	0	3	13
1922	1	0	3	33
1937	1	0	6	20
1948	1	0	6	100
1952	1	1200	12	100
1954	1,8	1200	22	1280
1957	2,5	1200	30	250
1959	4	1200	48	600

Source: Elmér, 1960

Table 3.3: **National pensions 1914-1958, converted to the money value for 1958 - average amount for single male pensioner with means test.**

Year	Real pension	Index for real pension (1914=100)	Cost of living index (1914=100)	Participation rate
1914	225	100	100	2
1916	173	77	141	40
1920	111	49	269	40
1921	208	92	231	47
1926	345	153	171	57
1931	444	197	158	73
1936	492	219	158	81
1937	709	315	161	85
1941	747	332	215	93
1946	1222	543	234	96
1948	1881	836	252	100
1951	1877	834	300	100
1956	5351	1178	356	100
1958	2840	1262	388	100

Source: Elmér, 1960

Table 3.4: **National pension with means test in relation to the average yearly earnings for a factory worker 1937-1956**

Year	Avge. factory worker's wage	Avge. farm worker's wage	% of factory worker's wage	% of farm worker's wage
1937	2974	1471	21,9	44,2
1941	3615	1919	29,4	42,6
1946	4790	3246	30,8	37,1
1948	5912	4222	35,0	39,8
1951	7600	5026	31	39,1
1956	11300	7704	35	43,5

Source: Elmér, 1960

Chapter 4

The Unsustainable Jewel in the Crown - the Rise and Fall of a DB Scheme

By 1950, Sweden had experienced three major pension reforms. Implemented in 1948, the universal flat-rate *folkpension* had indeed raised the general living standard among the elderly, but still only amounted to 35 percent of the average wage in the industrial sector. This was still considered too low by many, especially among high-income earners, whose acquired standard of living was far from sustained into retirement by the *folkpension.* Facing a confined public pension system, large labor market groups tried to find private complementary solutions, most notably by supplementing the basic pension with negotiated occupational pension. Such pension schemes had existed long before 1940s, although on a rather small scale, but the debate intensified as large differences in real retirement income between different income groups and professions emerged. In a system with flat-rate benefits, rising real wages in the economy implied that pensioners, especially those without some kind of private pension solution, lagged behind the working generation. There was a growing discontent among pensioners that their acquired standard of living was not sustained into retirement by the current pensions system. This was especially true for blue-collar workers who did not include pensions in their negotiations with the employers, which implied that a majority of the working population only had their basic pension to live off as pensioners. This laid the foundation for one of the greatest political battles and by far the most controversial pension reform in contemporary Swedish history; the *ATP scheme*[1].

[1] *Den Allmänna Tilläggspensionen*

4.1 A non-conventional pension reform

Pension investigations

The discussion of how the standard of living can be sustained into retirement was not new. Already in 1913, there were proposals of a of supplementary, earnings-related pension component, which was further discussed by the Pension Insurance Commission of 1928. Motions of a mandatory, public occupational pension scheme were also presented to the parliament in 1935, which, according to its advocates, would help level out class differences and have a positive effect on social well-being (Elmér, 1960). However, none of the proposals were put into practice.

Over time, the issue of an earnings-related pension component centered more and more on the retirement conditions of blue-collar workers. Despite improvements in the basic pension in 1935 and later on in 1948, blue collar workers' loss of earnings at retirement was large considering the rising living standard they had experienced during their working years. In 1947, the parliament launched an investigation led by O A Åkesson, the chairman of the The Swedish Insurance Supervisory Authority[2]. The commission was tasked with investigating how a system where the standard of living was sustained into retirement could be arranged. As opposed to previous pension commissions, no political parties were represented in the Åkeson commission. Only representatives of the major labor market organizations were part of the investigation (Kruse and Ståhlberg, 1977). The three main elements of the proposal put forward by the commission in 1950 were the following[3]:

[1] The pension system should be mandatory[4] as to provide unitary retirement conditions across the population.

[2] The pension system should be actuarially neutral.

[3] The pension system should be financed on a pay-as-you-go basis that tied benefits to the general standard of living.[5]

The proposal of the Åkesson Commission was heavily criticized, particularly for neglecting the issue of how the existing private occupational pension schemes should be coordinated with the new proposal. A second commission, referred to as the General Pension Commission[6], was launched. This commission was headed by the Secretary of State of the Ministry for Health and Social Affairs, Per Eckerberg, and was made up of labor market representatives as well as

[2] *Försäkringsinspektionen*

[3] Interestingly, the proposed pension system has many similarities to the current pension system that was introduced in the 1990s. The current pension system is defined contribution and thus provides a tight link between contributions and benefits (actuarially neutral). Moreover, it is mandatory and is mainly financed on a PAYG basis.

[4] The public pension system at the time was already mandatory, but some people had prior to the Åkesson commission proposed voluntary occupational pension solutions.

[5] The commission opposed a premium reserve system because of its adverse effects on the stock market.

[6] *Allmänna Pensionsberedningen*

political representatives from the three bourgeois parties. The 1956 coalition government of the SAP and the Agrarian Party hoped that the commission would negotiate a cross-party proposal on a radical extension of the current *folkpension* and also some kind of supplementary, earnings-related pension component. The commission's proposal would then provide the basis for a traditional compromise solution (Hermansson, 1993).

The national referendum

The members of the commission fully agreed on a gradual increase of the real value of the *folkpension* over a period of ten years.[7] There was, however, considerable disagreement on the design of the new supplementary pension. The politicians were very reluctant to compromise on this ideologically charged issue that had come to dominate the political debate completely in the late 1950s. Not even the governmental coalition partners, the Social Democrats and the Agrarian Party, could agree on a common policy platform, which evoked demands for a national referendum to help resolve this issue. This broke the long-lasting trend of traditional consensus-seeking decision-making based on the work of cross-party investigation agencies. The people that were entitled to vote in the referendum that was subsequently held on October 13 1957 could choose between three alternatives. The alternatives were referred to as *linje 1*,*linje 2* and *linje 3* and corresponded to the policy preferences of the Social Democrats, the Agrarian Party and the bourgeois parties respectively:

- *Linje 1* - All employees would receive statutory supplementary pension based on previous earnings. Pension benefits would be financed by employer contributions and be tied to the nominal price level to secure their real value. Other workers and self-employed would have the option to pay (limited) contributions to insure themselves within the framework of the supplementary pension. *Linje 1* was supported by the SAP, the Communist Party and the The Swedish Trade Union Confederation [8].

- *Linje 2* was put forward by the Agrarian Party, emphasized the voluntary character of the new earnings-related pension component, which should merely be complementary to the existing basic pension, the *folkpension*. All wage earners and self-employed would have the option to pay (limited) contributions to insure themselves within the framework of the supplementary pension. Along with this, the basic pension would be raised and the government would guarantee the real value of the pension benefits.

- *Linje 3* - Employees, self-employed and others would have the option to insure themselves within the framework of the supplementary pension. Accession to the supplementary pension system could be achieved through individual, group or, most preferably, collective agreements. Labor market parties would agree to set up designated pension funds administrated by

[7] See section 3.3.3 on *standard additions.*

[8] *Landsorganisationen - LO*

the companies and used to finance the pension entitlements of their employees. The government would *not* guarantee to uphold the real value of the pensions benefits. *Linje 3* was put forward by the Conservative Party (*Högerpartiet*), the Liberal Party (*Folkpartiet*) and the Employers' Confederation (*Arbetsgivarföreningen - KFO*).

Linje 1 received 45.8 % of the votes, *linje 2* 15.0 % and *linje 3* 35.3 %. 3.9 % of the votes were blank and the vote turnout was 72.4 % (Elmér, 1960).

A very slim majority

The outcome of the national referendum might at first glance seem as a clear victory for *linje 1* and the Social Democrats. However, the outcome was indeed unfortunate, as each side could regard themselves as winners in some sense. Although *linje 1* got more votes than the other alternatives, the share of votes for *linje 1* was lower than the share of parliamentary seats currently held by the Communist Party and the SAP together. In this sense, the outcome of the referendum was a failure for the Social Democrats rather than a victory. Meanwhile, the Agrarian Party did much better in the pension referendum than in any parliamentary election during the 1950s and therefore perceived the outcome of the vote as a great success. Furthermore, the opposition parties, representing *linje 2* and *linje 3*, together received greater support than the left-wing parties.

Because of the ambiguous outcome of the national referendum and the unwillingness of the parties to compromise on this issue, the coalition government of the SAP and the Agrarian Party could not be sustained. On October 25, 1957, the Agrarian Party decided to leave the government, upon which the Prime Minister, Tage Erlander, decided to dissolve the government. The King of Sweden had to step in and asked the leader of the Conservative Party to form a right-wing coalition government together with the Agrarian Party. The Agrarian Party refused to be part of a new government, which forced the King to ask the SAP to form a minority government. Cross-party negotiations on the design of the supplementary pension component were resumed after the new government had been formed, but were officially ended on February 10, 1958, since, once again, no agreement had been reached. The Social Democratic government therefore chose to present their reform proposal, which was very much in line with the contents of *linje 1*, to the parliament. Both chambers[9] accepted an increase in the basic pension, but the introduction of a mandatory, earnings-related pension component was, after very long and intense discussions, rejected by the second chamber.

The Prime Minister had already made it clear that another parliamentary failure to pass a bill on the supplementary pension would lead to the parliament's dissolution. On June 1, 1958, almost two years after the national referendum, the seats of the second chamber were up for re-election. The Social democrats

[9]Sweden had a bicameral legislature, *Tvåkammarriksdagen*, between 1866 and 1971. The First and the Second Chambers were equal in power (both chambers had absolute veto rights), but the Second Chamber was larger. They were replaced by a unica meral body, *Enkammarriksdagen*, in 1971.

made progress and were allotted 116 seats, one more than the opposition parties together. However, since the Speaker of the Swedish Parliament belonged to the SAP and was legally refrained from voting, the two political blocs were equally large. This laid the foundation for one of the most dramatic events in the Swedish parliament's post-war history (Molin, 1965).

Further efforts to negotiate a compromise were made, but the ideological rift between the blocs was to large to bridge. For example, the Liberal Party proposed that private insurance companies should administer the funds of the new pension system in order to decentralize capital control and avoid "undemocratic power concentration". The government, on the other hand, considered it impossible to involve private actors in a PAYG pension system.

Prior to the decisive parliamentary vote on the ATP scheme in May 1959, a member of the parliament of the Liberal Party, Ture Königson, completely changed the course of the game when he announced that he would abstain from voting. Despite massive critique from fellow party members, Ture Königson argued that it was more important to get *some* supplementary pension system into place rather than a system according to his party line. Consequently, *linje 1* finally won a majority with only one vote (!) in the parliament and the ATP scheme could be put in place on January 1, 1960.[10]

The intensity of the political drama that unfolded in the late 1950s is surprising in many ways. Why did SAP continue to promote their version of the supplementary pension after multiple negotiation breakdowns, without sufficient parliamentary support and with public support on a 30-year low? A parliamentary failure would have put the party in a very distressing situation given its great and lengthy efforts to carry through the earnings-related supplementary pension. However, the alternative of relinquishing from a parliamentary vote appeared less and less attractive the more heated the debate became and the more political "goodwill" that was invested by the SAP in the ATP-project. In the end, it was simply not possible to compromise a solution on the supplementary pension issue while preserving the party's political reputation.

The behavior of the opposition parties also explain why the pension debate became so heated and why no compromise was reached. The gradual power consolidation of the SAP during the 1930s and 1940s impelled the bourgeois parties to find ways to challenge the left-wing dominance and the supplementary pension issue seemed a fruitful way to go. The Liberal Party strongly criticized the ATP scheme for spurring unsound power centralization, and the Conservative Party, encouraged by the outcome of the parliamentary election in 1956, gained widespread support for denouncing the increased bureaucracy that would come out of the ATP scheme.

Another surprising feature of the reform was that the fundamental principle of the new ATP scheme did not cohere with the traditional policy platform of the SAP. From the very start of the Swedish pension debate in the 1890s, the SAP had pushed for universal coverage and basic security for all citizens. This traditional principle of "same for all" was set aside in the ATP scheme in favor

[10]The details of the new law were formulated in Prop. 1959:100

of the so called *loss-of-earnings principle*[11]. The main purpose of the supplementary pension was to sustain the acquired standard of living into retirement by letting the size of the pension depend on previous earnings.[12] The pension would be perceived as ”deferred earnings” rather than a handout.

The ultimate implementation of the ATP was a great success for the SAP. The ATP scheme was the last major and the most important building block in the Swedish welfare state, the ”jewel in the crown”, for which the SAP could claim full credit. It became a symbol for the Social Democrats' idealistic struggle against conservative forces, to which leading figures of the SAP repetitively and effectively appealed to during the following decades (Lundberg, 2003). The 1960 reform was unconventional in the sense that one party alone was responsible for the design and the implementation of a major pension system.

4.2 Properties of the ATP scheme

The ATP reform was the last major change to the public pension system before the major public pension reform in the 1990s. ATP operated as a separate pension scheme next to the *folkpension* that had been in place since 1948. There were also a number of supplementary benefits. These were either already in place or implemented after the ATP-reform and were often subject to changes. More details on these benefits and the changes made to the *folkpension* are discussed in section 4.3 below.

Size of the ATP benefit

ATP was a mandatory pay-as-you-go system covering all employees. Self-employed could choose to stay outside the system. The annual old-age pension from ATP was paid out to all individuals that had earned pensionable income[13] for at least three years. The pensionable income consisted of earnings that were greater than one *price base amount* (BA) and less than 7,5 price base amounts within a given year[14]. In addition to earnings and income from self-employment, the pensionable income also included transfer payments from social insurance (such as income from sickness or unemployment insurance), the parental cash benefit and the partial retirement pension. The BA is determined on an annual basis and is tied to the consumer price index (CPI).[15] In this way, pension benefits are

[11] See Concepts and Definitions

[12] The loss of earnings principle was not new. In fact, it had been used as early as in the 1916 accident insurance reform and later on in the public health insurance reform of 1955 (Edebalk, 2005). Tage Erlander, serving Prime Minister of Sweden from 1946-1969, said that the design of the ATP was exclusively based on health insurance experience (Erlander, 1976).

[13] *Pensionsgrundande inkomst (PGI)*

[14] Today, the income ceiling is 7,5 income base amounts and the minimum annual pensionable income is 42,3 % of one price base amount.

[15] The price base amounts from 1960 to 2013 are given in table A.8. In 1996, an extension of the price base amount, the ”higher” base price amount (*förhöjt prisbasbelopp*), to which the ATP benefits have been indexed ever since. The values for this index from 1996 to 2013 are given in table A.9.

secured against nominal price changes.

As noted earlier, ATP was based on the loss-of-earnings principle, which implied that the size of an individual's pension income should be related to her previous earnings. The ATP benefit was in fact related to previous earnings, but only to the earnings of the 15 most successful years. It also required 30 years of covered earnings for a full benefit. The so called *15-year rule* stated that the size of the ATP benefit should only be based on the top 15 income years or more specifically the top 15 *ATP-credits*. Each working individual earned an annual ATP-credit, found by dividing pensionable income by the current BA.[16] The average of the top 15 ATP-credits, $\overline{p}$, was then used in the following formula to calculate the annual old-age ATP benefit, P:

$$P = \frac{t}{N} c\overline{p}B \tag{4.1}$$

where $\frac{t}{N} \leq 1$ for all $t \geq N$, $3 \leq t \leq 50$ and where
$t =$ the number of years the individual has earned ATP-credits (*credit years*).
$N =$ the number of credit years required to claim full benefit (30 years for 1924 cohort and later).
$c = 0,6$; a politically determined factor that sets the size of the pension.
$\overline{p} =$ the average of the top 15 ATP-credits.
$B =$ the BA of the given year.

Put in words, the annual ATP benefit for an individual was determined by the average ATP-credit ($\overline{p}$), earned during the top 15 credit years, multiplied by the current base amount (B). 60 % of this product ($\overline{p}B$) was paid out if the individual had at least 30 credit years. If not, the ATP benefit was reduced by 1/30 for each year the number of credit years was less than 30. The condition $\frac{t}{30} \leq 1$ made sure that an individual who earned credits for more than 30 years would not claim a higher ATP-benefit only for that reason.

Initially, a full pension benefit required earnings above the threshold of one base amount for only 20 years. From cohort 1915, the required number of years was then raised by one year for each successive cohort up to thirty years (Palme and Svensson, 2010). This generational injustice was somewhat controversial, since an individual born in 1914 with only 20 years of contributions could claim a pension benefit equal in size to that of an individual born in 1924 with 30 years of contributions.

The *folkpension*, together with the earnings-related ATP-benefit, provided a gross replacement rate of roughly 65 % for an average worker. Thus, the Swedish public pension system at the time was quite generous in an international context with an OECD replacement rate average of roughly 57 % (Queisser and Whitehouse, 2005).

[16]For example, an individual with an annual income of SEK 140 800, facing a BA of SEK 35 200 would have earned pensionable income of SEK 105 600 (140 800-35 200=105 600) and an ATP-credit of 3 (105 600/35200=3).

Financing

Payments were financed by mandatory proportional payroll taxes (employer's contributions) levied on wages. No contributions were paid on wage portions above the income ceiling of 7,5 base amounts.[17] The total annual ATP-fee for the employer was calculated according to equation 4.2 (Schmidt, 1974):

$$t[W - \sum_{i=1}^{n} E_i] - AB \tag{4.2}$$

where
t= Contribution rate
W= the sum of all wages paid out in the given year
A= the average number of employees in the given year
B= the current base amount
E_i= the wage amount of individual i exceeding 7,5 BA
n= the number of individuals with E_i>0

The fees were collected in designated pension funds, the so called National Pension Funds[18], which administered the pension capital and were responsible for, but did not guarantee, outgoing pension payments. During the initial years of the ATP scheme, the contribution rate was set so that the system would build up a surplus to act as a buffer against cyclical shifts in contributions. The surplus would also help offset the expected decrease in private saving that would follow the introduction of a universal earnings-related scheme by making more capital available for lending (Sundén, 2006). The surplus could also be used to finance outgoing payments in case payroll tax revenue from the employers was insufficient. Even revenue from other tax bases was sometimes used for the same purpose.

Another element of intra-generational injustice within the ATP scheme was a direct result of the fact that older generations benefited from gradual increases in the payroll tax rates. Table 4.1 shows the stepwise increase in the politically determined payroll tax rate between 1960 and 1979. Since the individual was promised a certain share of her pensionable income and the definition of pensionable income did not change, the eventual pension benefit was independent of previous payroll tax rates, which benefited the older generations that had been subject to lower rates.

[17] This upper limit on contributions was removed under a centre government in the beginning of the 1980s. The stated purpose of the reform was to facilitate administration of social contributions for employers (Könberg, 2008). Since benefits were still capped at 7,5 base amounts, the reform reduced the link between contributions and benefits, thereby increasing the degree of redistribution in the public pension system. The question of whether contributions should be levied above the income ceiling or not became one of the most intractable issues in the pension negotiations preceding the next major pension reform in the 1990s. Ironically, the Social Democrats would support the current setup, whereas the Conservative Party and the Liberals basically would demand a return to how it was when the Social Democrats implemented the ATP scheme.

[18] *AP-fonderna*

Table 4.1: **Payroll tax rates (employer's contributions) levied on wages, 1960-79**

Year	Tax rate	Year	Tax rate
1960	3	1969	9,5
1961	4	1970	10
1962	5	1971	10,25
1963	6	1972	10,5
1964	7	1973	10,5
1965	7,5	1974	10,5
1966	8	1975	10,75
1967	8,5	1976-79	11
1968	9		

Source: Schmidt, 1974

Although there was no specific ATP-fee for individuals, everyone still had to pay the pension fee for the *folkpension*. As seen in table 3.2, the fee was 4 % just before the ATP-reform and had risen to 5,86 % in 1994 (Ståhlberg, 1993).

4.3 Other public pension properties 1960-1999

From 1961 and 30 years onwards, the public pension system was subject to more than 50 changes. All changes, with a few notable exceptions[19], were referred to as "improvements", which in fact were "extensions", of the pension system. During this period, the Swedish public pension system expanded rapidly, far beyond what proved to be financially and politically sustainable in the long run. Some of the properties discussed in this section existed before the ATP-reform and were only subject to minor changes. Others were completely new and accrued to both or any of the two major public pension components, the *folkpension* and ATP. One of the most important changes that accrued to both components was the decision to lower the retirement age from 67 to 65 in 1975.

The Folkpension

The term *folkpension* (FP) is normally used to refer to the flat-rate benefit that was paid out to all individuals independent of previous earnings. However,

[19]In 1980, under a bourgeois coalition government, an indexation change unexpectedly reduced the real value of pensions. Pensions were not fully adjusted to the inflation rate, which eroded the real value of the pension entitlements. The SAP, which won the election in 1982, promised to correct and compensate for the failure to secure the pension benefits' real value. However, the pensioners were once again disappointed when they found themselves left uncompensated for the SAP government's devaluation of the Swedish krona (Kruse, 2003). The 1988 decision to abolish the widow pension is also one of the few examples of pension system retrenchment in the Swedish pre-reform pension history.

the FP was in fact a wider concept and also included several other pension components:

- *Folkpension* - This universal flat-rate pension benefit was paid out from an age of 67 and amounted to 90 % and 70 % of 1 BA for singles and married individuals respectively[20]. The costs associated with this benefit made up more than 75 % of the whole FP budget.

- *Municipal housing supplement*[21] - Means-tested housing supplements (KBT) were introduced in 1946 and were administrated by the municipalities. The size of the supplement was determined by each municipality individually, as they bore the great bulk of the costs themselves. However, to qualify for financial support from the government, the housing supplement should cover at least 85 % of the housing costs/rent between SEK 150 and SEK 3500. As a result of this, the housing supplement could vary substantially between municipalities, which was subject to heavy criticism. Replacing the KBT with a centralized housing supplement system under the government would equalize benefit generosity across municipalities and ease the financial and administrative burden for the municipalities. This was achieved in 1995 when the *government housing supplement*[22] replaced the KBT.

- *Special housing supplement*[23] - A special housing supplement was introduced in 1991 to compensate for the dramatic effect of the major tax reform[24] passed in the same year. In 1991, rents were on average 45 % higher than two years earlier, which put many low-income households under financial pressure. The SKBT was paid out if the difference between the pensioner's income and what was considered a "reasonable" housing cost level was less than the municipal social assistance norm. The SKBT was phased out already in 1994 and replaced by a centralized equivalent, the *government special housing supplement.*[25] The two municipal housing supplement schemes together accounted for 10-15% of the FP budget, the second largest budget post next to the flat-rate benefit.

- *Special supplement*[26] - A special supplement, introduced in 1969, was paid out to individuals with no or low ATP. This supplement was independent of marital status and grew from 15 % of 1 BA in 1969 to 55,5 % in 1993. The special supplement was reduced on a one-to-one basis against the ATP and was the third largest post in the FP budget. The supplement was abolished in 1994 and was replaced by the *äldreförsörjningsstöd* nine years later (see section 4.3).

[20] The use of BA as price indexation method was first applied within the framework of the *folkpension* in 1968, eight years after the ATP-reform.

[21] *Kommunalt bostadstillägg (KBT)*

[22] *Statligt bostadstillägg (BTP)*

[23] *Särskilt kommunalt bostadstillägg (SKBT)*

[24] The 1991 reform is often referred to as the "tax reform of the century"

[25] *Särskilt bostadstillägg (SBTP)*

[26] *Pensionstillskott*

- *Survivor benefit* - Survivor benefits were paid out from the ATP as well as the old-age pension. The public pension system contained a widow pension[27], but no similar benefit for men. Most agreement-based occupational pensions, however, included survivor benefits both for widows and widowers. Women relied mostly on survival benefits from the public pension system, which were paid out to widows that had turned 36 or had children under 16 years of age and had been married for at least 5 years at the time of the husband's death. The survivor benefit amounted to 90 % of one BA and was paid out either until death or until the widow remarried depending on the source of income. Today, most occupational pension agreements still contain some kind of survival protection, whereas in the public pension system, only the fully funded, investment-based component, the so-called *Premium Pension*, does. The widow pension was abolished in 1990 and is only paid out to widowers born before 1944 and who were married to the deceased husband before the date of legislation change (Prop. 1987/88:171).

- *Wife benefit* - The wife benefit was introduced already in 1946. Eligible for the benefit were married men whose wife did not receive *folkpension*. The wife should have turned 60 and been married for at least 5 years. The cohort born in 1933 was the last cohort to receive the wife benefit.

- *Child benefit* - The child benefit was paid out from the ATP and the *folkpension* to children under 18 who had lost their father or mother or both parents. The benefit amounted to 25-50 % of one BA.

Flexible retirement age

Although full benefits from ATP and FP could not be claimed before 65, there were mechanisms that allowed for flexible retirement. Firstly, all individuals could start withdraw benefits both before and after they had turned 65. Then there were two part-time pension schemes in the public pension system; the partial pension scheme and the partial disability insurance. Part-time pension means that instead of continuing full-time work, a person can change to part-time work some years before full-time retirement, i.e. a reduction in the number of hours worked.

Early and postponed withdrawal Table 4.2 shows normal, early and delayed retirement ages in the public pension system. Before the introduction of the ATP, pension could only be claimed from age 67. When the earnings-related ATP scheme was introduced, pension benefits from the FP, the ATP and also the special supplement could be withdrawn from age 63, which was then lowered to 60 in 1976. The annual pension was reduced by 0,5 % (after 1976) for each month the pension was withdrawn before 65, which implied that the annual pension benefit of an individual

[27] *Änkepension*

retiring at 60 was reduced by 30 % ($0,5 * 12 * 5 = 30$). Postponed withdrawals were made between 65 and 70 and increased the annual pension by 0,5-0,7 % for each month after 65. Not many people used these withdrawal opportunities. In 1990, only 6 % of all old-age pensioners had chosen to withdraw their pension before 65 and 2 % after (Ståhlberg, 1993). The reason why the actual retirement age as well as the labor force participation rate among elderly declined consistently during the ATP era despite these low numbers, is that *partial retirement* and *early retirement* (disability insurance) constituted much more favorable pathways into retirement than early withdrawal.

Table 4.2: **Normal, early and delayed retirement ages along with actuarial adjustment factors in the public pension system**

Period	NR	ER	UR	Reduction per month % of benefit	Increase per month % of benefit
1914-62	67				
1963-1976 (June)	67	63	72	0,6	0,6
1976 (July)-90 (June)	65	60	70	0,5	0,5
1990 (July)-97	65	60	70	0,5	0,7
1998-	65	61	70	0,5	0,7

Note: NR = normal retirement; ER = early retirement; UR = delayed retirement.

Source: Palme and Svensson, 2010

Partial pension Sweden had a special partial pension scheme between 1976 and 2001, which was open for employees aged 60-64. To be eligible one had to have earned some pension qualifying income during at least 10 years since the age of 45. Retirees had to reduce work time by at least 5 hours per week, and continue working at least 17 hours per week. The benefit was initially only available to employees, but as of January 1980, the self-employed could also apply. The government compensated 65 percent of lost gross income, up to a cap of 7,5 BA, although many collective agreements gave additional compensation above this level. The benefit was included in the calculation of old-age pension qualifying income, so the effect of the reduction in working hours on an individual's subsequent old age pension was, therefore, limited. The system was especially generous since the high marginal tax rates at the time implied that the after tax replacement rate was actually substantially higher than 65 % (Glans, 2009).

The special partial pension scheme became very popular with a high take-up rate and was criticized for being too expensive. As a result, the replacement rate was decreased to 50 % in 1980, but changing economic circumstances and large fluctuations in the number of partial pensioners elicited indecisive behavior among politicians and two more replacement rate changes were made in the next ten years. In 1987 the replacement rate was restored to its original level and in 1994 it was lowered again (Wadensjö, 2006). Interestingly, people responded quite strongly to these somewhat expected replacement rate changes. Table 4.3 shows that major changes in the number of partial pensioners clearly coincides with these changes. For example, when the decision was made to lower the replacement rate to 50 % in 1980, many who would have applied for a pension later hurried to apply already in 1980 to be able to get a pension with the old, higher replacement rate. The increase in 1987 is explained by the increase in the replacement rate back to the original 65 per cent level. Moreover, after the drastic changes in the rules in 1994 the number of new part-time pensions declined dramatically and the number of part-time pensioners gradually fell to a very low level. The part-time pension system more or less disappeared before it was totally abolished from year 2001 (Wadensjö, 2006). A summary of the development of the Swedish partial pension scheme is given in table A.5 in the appendix.

Table 4.3: **Partial pensions 1976-2002**

Year	Number of partial pensions	Year	Number of partial pensions
1976	15 000	1991	37 000
1977	31 000	1992	48 000
1978	41 000	1993	49 000
1979	49 000	1994	51 000
1980	68 000	1995	38 000
1981	65 000	1996	27 000
1982	62 000	1997	18 000
1983	55 000	1998	11 000
1984	47 000	1999	8 000
1985	38 000	2000	13 000
1986	32 000	2001	10 000
1987	36 000	2002	6 000
1988	38 000		
1989	39 000		
1990	38 000		

Source: Swedish Pensions Agency, Statistics

Disability insurance The pension law had contained regulations for a disability (invalidity) pension[28] (DI) ever since 1913. Before 1948, an individual was entitled to disability insurance before the age of 67 if her working

[28]Disability insurance was usually referred to simply as *early retirement* and should not be confused with *early withdrawal* discussed above.

ability permanently was reduced by at least two-thirds due to sickness or ability. While the means-tested component within the FP was significantly reduced, the main part of the disability insurance was still means-tested and a disabled person could earn labor income up to one-third of normal earnings of an individual of his education and place of residence without losing the right to disability insurance. Following the introduction of the ATP in 1960, the eligibility rules in the Disability Insurance program were made increasingly more generous in several steps. Among the most important changes were the lowering of the limit from 63 to 60 (1974), raising the lowest partial benefit from one-third to one-half of a full pension (1970) and the possibility of elderly long-term unemployed to receive a disability insurance without any impairment of working ability due to sickness or disability (1972). The overall purpose was to provide better income security for elderly workers with demanding working conditions, a development which was mainly driven by the Swedish Trade Union Confederation (LO) and the SAP. A summary of the eras of different eligibility rules in the DI scheme is given in table A.4 in the appendix.

Not too surprisingly, the share with disability insurance increased steadily up until 2000 and has been put forward as one explanation for the negative development in labor force participation among men and women at the time (Palme and Svensson, 2010). Apart from increasing generosity in the eligibility rules, the economic incentives to retire with disability insurance created by the 1963 reform contributed to this trend. As said previously, a full ATP pension was not possible until 1980, but by the new disability insurance rules, an individual could receive a considerable ATP pension already in the 1960s because "assumed pension points" from the year of pensioning until normal retirement age were added to pension points based on actual earnings. Thus, it was economically advantageous to retire with DI and the number of new disability pensioners increased consistently. Between 1968 and 1994, the share of males aged 55-64 with disability insurance (including partial pension) increased from slightly above 10 % to more than 25 %, which corresponds closely to the growth of males outside the labor force in the same growth. The correspondence between these series of data motivates the conclusion that disability insurance was the dominating pathway to retirement below age 65 during these decades (Palme and Svensson, 2010).

The most worrying observation during the 1980s was the growing use of labor market reasons within the DI system, which became increasingly more expensive to sustain. Although the intention with the 1972 law was to lift some long-term unemployed elderly into the DI scheme, the use of labor market reasons within the DI system was well beyond the original social reasons for the rules. This use peaked in 1985 when around 20 % of the new pensions had non-medical reasons. One of the major contributing factors to the sharp rise of labor market reasons within the DI program was the so called "58,3-pensions". Under these rules, employers could dismiss elderly workers, who subsequently were put under the unemployment insurance system for 450 days, after which they were granted early retirement. The disability insurance program was thus integrated with the old-age pension system and labor market policy. Finally, these rules were abolished in October 1991, which, as shown by Jönsson et al. (2011), seems to have had a strong negative effect on disability insurance recipiency in the affected age group. Somewhat surprisingly, both non-employment and non-labor force participation increased in the age group 60-64 right after the reform, which might be explained by the the deep economic recession in the early 1990s that led to a sharp decrease in labor demand. Affected individuals could also replace disability benefits by income from unemployment benefits, occupational pensions and sickness benefits. However, according to the rules introduced in July 1970, workers above the age of 60 were still able to take labor market considerations into account in decisions about disability insurance. In January 1997, these special rules for elderly workers were also abolished, which marked the start of a positive trend in labor force participation among males aged 55-64.[29]

4.4 Problems with the ATP

The introduction of ATP, an earnings-related supplementary pension, in 1960 was indeed a great victory for the SAP. ATP rapidly received widespread support as the new system had a direct and strong impact on the financial situation of the current elderly through generous transition rules and the gradual extensions that were made. Not even the bourgeois governments that were in power between 1976 and 1982 made any major changes to the ATP scheme, partially because its design had turned out to be particularly beneficial for people with shorter work histories and rising earnings profiles (typically liberal and conservative high-income workers). Hence, ideological forces were not the main contributory factor to the rise of a new debate on the need for pension reform in the beginning of the 1980s. Instead, deteriorating fiscal balances and sluggish growth exposed the financial instability inherent in the current pension system.

Historically, most pay-as-you-go defined benefit pension schemes around the world, in which pension benefits rather than pension contributions are paid in fixed amounts, have found their financial stability threatened by the combination

[29]This reform has been studied thoroughly in Karlström et al. (2008), who find that there is in fact no significant effect on entry rates into the disability insurance. There is, however, a significant anticipation effect - an increase in entry rates into DI just before the reform - corresponding to almost 2 % of the labor force in ages 60-64. Since the new eligibility rules were announced long before they were implemented, workers who believed they would pass the pre-reform eligibility rules, but not the post-reform ones, could apply under the pre-reform regime. Whether the stricter eligibility rules in the DI during the 1990s had a positive effect on employment is unclear, but they did at least affect the inflow to the DI program and on both entry and persistence in the unemployment and sickness insurance programs. It is plausible that other income security programs worked like "communicating vessels" that crowded out the employment effect of the stricter eligibility rules enacted in the 1997 reform (Karlström et al., 2008).

of slowing growth rates and aging populations. Knowing the real value of the future pension by certainty is indeed a virtue for the individual and is made possible by the way benefits are determined in DB-schemes, but must come at the expense of jeopardizing the income distribution between the working population and the pensioners. If the number of pensioners rise, either because of demographic changes or changes in the pension system which encourage retirement at earlier ages, or if the real income growth of the working populations slows down, the contributions paid by the working population must be increased in order to cover current pension costs. This is exactly what the actuarial projections made in the years prior to the major pension reform in 1994 showed. With a future real wage growth of 1,5 %, increasing longevity and unchanged contribution rates, the ATP buffer funds would be exhausted sometime between 2010 and 2015[30], and, in order to maintain financial stability, total contribution rates would have to be increased to about 24 % by 2015 (from 18,86 % in 1994) and continue to rise subsequently (to 30 % in 2025) (Sundén, 2006).

Universal and generous DB-schemes, like ATP, will at some point run into financial problems, but the ATP scheme contained several other properties that either exacerbated the consequences of sluggish growth or resulted in adverse effects on private saving, labor supply and income redistribution, which further raised suspicions against the current system. The most important of these properties are discussed in this section.

Sensitive to changes in economic growth

The design of the ATP scheme makes the income distribution between the working population and the pensioners very sensitive to changes in economic growth. Pension benefits from ATP were determined by previous earnings and were indexed to follow prices to secure them against inflation. Thus, there was no link between the wage level of the working population and the pensions of the elderly. Real wages could increase without affecting the size of outgoing pension payments and earned pension rights, which made the system sensitive to changes in productivity. In times of rising real wages, contribution rates can be kept low and the standard of living of the working population rises relative that of the pensioners. This happened in Sweden after the second world war and precipitated the ATP reform in 1960 that was supposed to sustain the standard of living into retirement. At the time, positive growth rates were more or less taken for granted and expectations of a long-run growth rate of 2-4 % were reasonable. At this pace, the sum of contributions was projected to increase rapidly and the system could be maintained with low contribution rates. However, when real wages fall and productivity lingers, contribution rates must be increased in order to finance the pension costs. In the years leading up to the reform, Sweden experienced low or negative growth, so earned pension rights and benefits rose faster than wages and contributions.

The excessive sensitivity of the income distribution to changes in the growth

[30]By the time of the 1998 reform, the amount in the buffer funds was equal to approximately 5 years' worth of benefits, a substantial amount. Today, there is a little more than 4 years' worth of benefits.

rate between these two groups was illustrated by Ståhlberg (1989), who compared the average net-of-tax pension to the average net-of-tax income in the economy under different assumptions about the growth rate. Her calculations, illustrated in table 4.4, showed that the share of average net pension income from ATP and the *folkpension* to average net income would amount to 119 % in 2025 without economic growth, but only 61 % under a 2 % growth rate. Projections were also made about how high the contribution rate would have to be under different growth rates in order to finance outgoing pension payments. Table 4.5 shows that the contribution rate would have to be as high as 44,2 % in 2025 under zero growth, but only 26,2 % assuming a growth rate of 3 %.

Now, raising the contribution rates within a PAYG system is not necessarily problematic. The consequences of such an action depends on how the system is designed. Were contributions actuarial, that is when there is a tight link between contributions and benefits, an individual faced with increased contribution rates would also reap higher benefits in the future. However, the ATP fee was not at all actuarial as there was no link between contributions and benefits. Increasing contribution rates to the extent implied by table 4.5 would put severe pressure on the tax burden of the working population and was deemed impossible by many.

Table 4.4: **Share of average net public pension to average wage among workers**

Year	Real GDP growth rate 0 %	2 %
1990	70	66
1995	77	61
2005	118	67
2015	111	68
2025	119	61
2035	116	51

Source: Ståhlberg, 1989

Table 4.5: **Public pension costs as a percentage of total wage income**

Year	Real GDP growth rate 0 %	1 %	2 %	3 %
1990	22,7	22,7	22,7	22,7
2005	31,7	26,4	22,4	20,0
2015	43,0 %	32,2	24,8	19,3
2025	47,5	32,7	23,1	16,2

Source: SOU 1990:76

Sensitive to demographic change

Like many other industrialized countries, Sweden is experiencing an aging population where the number of individuals aged 20-64 relative to the number of individuals aged 65 or older will decrease from 3,2 in the early 1990s to 2,4 in 2025. Again, the consequences of an aging population depends on the design of the pension system in question. In fully funded systems, for example, individuals accept increased contribution rates as they realize that more resources have to be set aside during her working years in order to finance a longer retirement period. However, a PAYG DB-scheme, like the ATP scheme, is exposed to the risk of a declining labor force as the current working population must finance the current old. Next to political decisions that affect the labor supply and retirement decisions of individuals, an aging population is the most important determinant of the development of the labor force or the share of pensioners to workers. In 1994, there were twice as many pensioners per worker as at the time of the ATP implementation and there were fears that the current working population would not be able to finance the forthcoming pension costs of the cohorts born in the 1940s. But when serious discussions of reforming the ATP scheme began in the 1980s, sluggish growth posed as a much bigger threat than the increasing dependency ratio. Calculations that were made by the government pension commissions even showed that pension costs as a share of total income of the working population could even decrease by one percentage point as a result of the demographic projections compared to a scenario with unchanged demographic composition (SOU, 1990).

Arbitrary redistribution

The most important property of the ATP scheme was the 15/30 rule, meaning that ATP benefit was determined by the earnings of the 15 most successful years and that 30 years of covered earnings were necessary for a full benefit. The 15/30 rule has been hailed as the main foundation of the ATP scheme that would ensure fairness, redistribute from high-income to low-income earners and from men to women. However, these presumptions turned out to be inaccurate and the arbitrary redistributional implications of the ATP scheme further emphasized the need for reform in the late 1980s.

Firstly, as discussed above, PAYG systems inherently redistribute income between generations. Among the winners were the first cohorts that retired under the ATP scheme. The 1905-14 cohorts received pension benefits that were almost six times the size of paid contributions. Those that were young or middle-aged when the ATP was implemented also struck an advantageous deal, whereas cohorts born after 1944 gradually received less in relation to what they paid into the system. As shown by table 4.6, measuring the share received pension benefits to paid contributions for different age cohorts, people born after 1944 will only get 80 öre per contributed krona.

Secondly, the intended redistribution from high-income to low-income earners and from men to women did not take place despite the fact that high-income earners did not earn pension rights for contributions that were paid above the

Table 4.6: **Relation between paid contributions and outgoing pension benefits for different age cohorts**

Cohort	Ratio pension/contribution	Cohort	Ratio pension/contribution
1905-14	5,9	1934-43	1,2
1915-23	3,7	1944-50	0,8
1924-33	2,0	1964-70	0,8

Source: Ståhlberg, 1995

benefit ceiling of 7,5 base amounts and that the 15/30 rule made it possible to claim full pension after many years of part-time work or absence from the labor market. Instead, since contributions were paid on all earnings from age 16 until retirement, while benefits were based on the 15 years with highest earnings, the ATP 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) (Sundén, 2006). Table 4.7 shows that white-collar workers with high or middle positions in the 1944-50 cohorts actually receive higher pension as a share of paid contributions than low-income workers. Moreover, female workers in lower income groups fare worse than their male counterparts. One group that has fared particularly well under the 15/30 rule is highly educated women that dedicated many years to part-time work or staying home, but then turned to full-time work for at least 15 years. Redistribution from high-income to low-income workers only take place if the flat-rate *folkpension* is taken into account, as illustrated by table 4.7.

Since income redistribution is one of the main motivations for having a mandatory, tax-financed pension system, the failure of the ATP to deliver income redistribution from high-income to low-income earners, and therefore in practice turned out be regressive rather than progressive, was a serious threat to its very existence. The redistributional implications of ATP were regarded as "unjust" and undermined its political legitimacy. As a result, there were growing fears that future generations would refuse to fulfill the "implicit generational contract" that was implied by ATP by cutting outgoing pension benefits or raising different costs for public service used by pensioners (Lindbeck, 1992).

Saving disincentives

There is a vast literature, both empirical and theoretical, on how different pension systems affect individuals' saving behavior and also aggregate saving in the economy. The theoretical predictions of the effect on private saving depends on the type of pension system. An actuarial pension system should not affect the total amount an individual saves, as he/she will reduce her private saving by an amount equal to the paid pension contributions. On the other hand, a pension system that overcompensates the individual, that is when the expected capital value of the pension benefit exceeds the capital value of expected contributions, most likely induces the individual to reduce private saving. As discussed in sec-

Table 4.7: **The ratio of total contributions to outgoing pension benefits for different income groups, 1944-50 cohorts**

Socio-economic group	Men	Women
Senior officials	0,84	1,06
Officials on middle level	0,88	0,88
Officials on lower level	0,84	0,73
Qualified workers	0,82	0,79
Unqualified workers	0,77	0,64
All	0,83	0,78

Source: SOU 1998:3

tion 4.4, overcompensation normally occurs when a new PAYG pension system is put in place and particularly relates to the first retiring cohorts. In case the pension system undercompensates households, the expected net effect on private as well as aggregate saving is positive.

Since the older cohorts were drastically overcompensated by the ATP scheme (see table 4.6), it is interesting to study how total financial household savings developed after 1960. During the sixties and seventies, total financial household savings declined by 4 % as a share of GDP. Several studies have also tried to estimate the effect of the ATP on household saving (Ståhlberg, 1989). They estimate that household saving as a share of disposable income was reduced by 1,5-4 % as a result of the ATP scheme, which corresponds closely to the decline in aggregate financial savings among households. It is therefore plausible to believe that the decline in household saving levels as well as aggregate savings in the economy between 1960 and 1980 could be partially explained by the crowding-out effects of the ATP scheme.

Labor market distortions

The design of the ATP scheme was also criticized for distorting individuals' labor supply decisions, which supposedly contributed to the decline in labor force participation, particularly among men and older workers, witnessed during the second half of the 20th century. The labor market distortions were caused both by changes in the rules for different part-time retirement solutions (see section 4.3) that encouraged early retirement and the 15/30 rule explicitly.

The introduction of ATP and the associated lowering of retirement ages according to table 4.2 had two contradictory effects on incentives to remain on the labor market. For some workers, increased pension benefit generosity created a wealth effect toward earlier exit from the labor market, assuming leisure is a normal good. This effect was amplified by the lowering of the normal retirement ages and the extension of early withdrawal possibilities. However, an earnings-related pension scheme like ATP, also created incentives to work longer as the benefit increases during the years of maturity of the pension scheme. The actuarial addition, which was paid out to individuals who delayed retirement, also encouraged people to remain in the labor force. Thus,the direction of the net effect is hard to determine, but it should be added that the effect towards earlier retirement and decreasing labor force participation of elderly was further enhanced by the rules of the Disability Insurance (DI) and the partial pension scheme as discussed in sections 4.3 and 4.3.

The 15/30 rule had more explicit effects on the labor supply decision, since extra pension rights were not earned for working years after 30 years on the labor market, unless this income exceeded the income of the 15 best years. This meant that reducing labor force participation did not necessarily translate into lower benefits and conversely, that increasing labor force participation did not necessarily translate into higher benefits. Someone who worked full-time for 45 years did not necessarily receive a higher ATP benefit than someone who worked full-time for only 15 years and then another 15 years part-time. The 15-rule provided incentives to reduce hours of work and the 30-rule to work fewer years. Thus, contributions that were paid into the ATP scheme during working years that did not affect the size of the pension benefit more or less worked as a pure tax on labor income. Persson (1991) estimates that four fifths of total contributions to the ATP scheme can be regarded as a pure tax and the remaining fifth as a "pension insurance premium".[31]

Not only contributions paid during working yeas that did not affect the size of the pension benefit worked as a disguised tax, but also pension contributions for earnings above the income ceiling. When the ATP scheme was implemented, both benefits and contributions accrued to earnings below the ceiling, but in 1982, the minority government of the Centre Party introduced payments for contributions above the ceiling. The SAP approved of this progressive tax for re-distributive reasons, whereas the bourgeois parties wanted to revoke it. This stance would turn out to be one of the most debated issues in the negotiations between the SAP and the bourgeois parties in the years leading up the the major pension compromise in 1994 (Marier, 2002).

Two other distinguished features of the ATP scheme that most likely affected labor force participation negatively were the income ceiling and the interaction with the special supplement[32]. The link between benefits and contributions was especially weak for high-income earners, whose wages exceeded the income ceiling. For these people, ATP hardly functioned as an earnings-related supplementary pension scheme, as more work was not rewarded with higher pension. Nor did the ATP scheme relate past earnings with the size of the pension benefit for workers with income below 4 BA (about 80 % of an average industry wage). This was a direct result of the construction of the special supplement, which was reduced on a one-to-one basis against ATP (Ståhlberg, 1993).

Erosion of loss of earnings principle

The guiding principle of the ATP scheme was the loss of earnings principle, which stipulates that accumulated pension rights should be directly linked to previous

[31]The estimation is not based on elaborate quantitative methods, but on simple reasoning. See Persson (1991), page 209-210 for details.

[32]see section 4.3 for details on the special supplement.

earnings. The ceiling of 7,5 BA, however, put a cap on the size of the ATP benefit; income above this level did not yield extra pension benefits. As long as a large fraction of the population did not earn wages above 7,5 BA, the ATP really worked as an earnings-related pension scheme. However, since 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 the ATP scheme as a source of income replacement (Sundén, 2006). In other words, the activation of the income ceiling for an increasingly larger proportion of the population meant that ATP gradually came to look more like an enhanced *folkpension*. Projections assuming a real growth rate of 2 % showed that 70 % of all men and 40 % of all women would earn wages above the ceiling in 2030 and over time, the ATP would transform completely into a flat-rate pension scheme (SOU, 9420). What was becoming apparent already during the 1980s, though, was that workers who were not covered by occupational pensions that compensated for income above the ceiling would lose most from the erosion of the ATP. These were exclusively workers belonging to the blue-collar trade union, the Swedish Trade Union Confederation (LO).

Negative effects on capital formation

One recurrent theme in the Swedish pension debate is the effect of state pension funds on capital formation. Already prior to the 1913 reform, there was much dispute about the pension fund that had to be set up in order to finance the controversial supplementary pension component. In conjunction with the ATP reform in 1960, the First, Second and the Third Fund Boards of the National Pension Funds[33] were set up in order to create a buffer of financial assets and to counteract the anticipated decline in private savings that would arise as a result of the ATP reform. The National Pension Funds had also been attacked by the liberals, who feared undemocratic power concentration on the capital market and that the vital distinction between state and society would be blurred. Initially, the funds were only allowed to invest in interest rate securities, but the fourth, fifth and sixth National Pension Funds that were created in 1974, 1988 and 1996 respectively were also allowed to invest in private equity and properties. The National Pension Funds underwent a major reorganization in 2001 and work until this day as buffer funds in the new reformed pension system.

Figure A.1 shows the annual growth and the total asset value of the National Pension Funds between 1960 and 2011. The National Pension Funds grew uninterruptedly until the outbreak of the financial crisis in 1990 caused a temporary dip. Since the National Pension Funds had not yet started to invest large-scale in private equity, the dip was not caused by a lower rate of return on the asset holdings, but by lower revenues in the form of pension contributions. When the economy enters a recession, unemployment rises and pension contributions fall as they are collected as a tax on the employers. After the 2001 reform, the AP funds have exhibited large fluctuations in real rates of return as well as in total size, which I will come back to later on in the text.

[33] *Allmänna Pensionsfondens Första, Andra och Tredje Fondstyrelser (AP-fonderna).*

The relentless growth of the National Pension Funds after they were created in 1960 was due to the desire to create a large buffer that would ensure financing of future pension commitments. Already after 10 years, the AP fund was of significant size. Only the interest return revenues well exceeded outgoing pension payments, which implied that all contributions that were paid into the system were piled up as a buffer. However, the National Pension Funds grew faster than projected and some people regarded these funds as a permanent "socialistic threat" to the Swedish business sector (Lindbeck, 1992).

Chapter 5

The Second Pillar – a Parallel Story of Occupational Pensions

The history of Sweden's occupational pension systems stretches far back before the implementation of the first public pension system in 1913. Different groups of employees received pension benefits from occupational pension schemes long before a universal public pension system was even considered by the policy makers. Many of the questions that have repeatedly come back regarding the design and the objectives of the public pension system had already been addressed within an occupational pension framework. All this, in combination with the fact occupational pensions still play a very important role for most pensioners today, makes it absolutely necessary to include occupational pensions, the so called second pillar, in any historical or analytical report on the Swedish pension system.

As discussed briefly in section 2.1, most of the profession-specific pension agreements that existed before 1913 accrued to state and public sector employees. The central government pensions play an important role in the Swedish pension history as they provided a model for the first occupational pension agreements in the private sector and also for the public pension system that was put in place in 1913. As the public pension system grew in the decades after the 1913 reform, and as more and more workers got covered by profession-specific occupational pension agreements, there was an increasing need to coordinate the public pension system and the occupational pension schemes. Since the public pension system was universal, it soon became the natural benchmark, to which the occupational pension schemes were adjusted. As a consequence, the design as well as the purpose of the early occupational pension schemes changed dramatically during the four first decades following the 1913 reform. When the ATP scheme was established in the 1960s, the existing agreement-based pensions for central and local government employees and white-collar workers in the private sector were simply supplements to the public pension system rather than independent pension schemes.

In principle, there are two ways to coordinate supplementary pension schemes with the public pension system. The occupational pension benefit is either calculated according to the *net method* or the *gross method*. Pensions calculated according to the net method are referred to as *net pensions*, which means that the occupational pension "floats on top" of the public pension. The net pension replacement rates are typically coordinated with the income ceiling in the public pension system, so that higher pension benefits are provided for earnings above the ceiling than below. Alternatively, the occupational pension benefit is calculated according to the *gross method*. *Gross pensions* are coordinated with the public pension system to guarantee the individual a certain *total* pension level. Historically, Sweden has seen both net and gross pensions, but the current occupational pension schemes are all net pensions.

5.1 Early occupational pensions for central government employees

The first central government pensions were based on the principle that civil servants should be entitled to keep their jobs for a whole life-time. Already in 1778, it was decided that a civil servant who had turned 70 could choose to resign and keep his full salary throughout life. In 1877, retirement at age 70 was made mandatory and about two-thirds of the previous wage was paid out to a pensioner who retired at 65. Only minor amounts were paid out to individuals who retired earlier than this. Not all public servants were eligible for central government pensions, but only those who were "permanently" employed.[1] Non-permanent civil servants and workers had no pension rights at all until the state pension reform in 1934 (Schmidt, 1974).

A new pension act came into force in 1907. The old-age pension was now paid out to men and women who had turned 67 and 60 respectively and made up approximately two-thirds of the previous wage. Even though many changes were made to the central government pension scheme after this reform, the replacement rate of 65 % was more or less upheld until the end of the 1980s. Retirement was mandatory and a contribution system was gradually introduced in conjunction with annual pay rises. One-third of the total pension cost of an individual was supposed to be covered by her own past contributions, the rest being financed by the state. Thus, the central government was still regarded responsible for upholding the standard of living after retirement for previous civil servants, but the reform marked a shift in the way people thought about pensions. The pension of a civil servant was now seen as a continued wage payment, to which he/she had contributed him-/herself. The introduction of an insurance principle into the central government pension system preceded the implementation of the public pension system in 1913, which also contained a strong insurance character.

In the 1930s, several important steps were taken towards the eventual implementation of a uniform, agreement-based occupational pension scheme for all central government employees. Firstly, non-permanent civil servants, which constituted more than 50 % of all central government employees, were made

[1]Permanent employment also implied that 35 years of service were needed to receive a central government pension. As to not let successors of retired permanent civil servants to retire without a pension, a designated pension fund for civil servants were set up in 1825 (*civilstatens pensionsinrättning*). The fund was financed by individual contributions and state funds and was similar to the army pension fund that had been in place since 1756.

eligible for central government pension in 1934. The state pension rules were also extended to include several professions that had previously administrated their own pension funds, for instance military, railway and telegraph personnel (Elmér, 1960). Even individuals that were formally employed by local municipalities, most notably teachers and health care workers, but whose salaries were determined by the central government, were also lifted into the new central government pension scheme.[2] Moreover, the financial responsibility of paying out pension benefits was shifted back to the central government and how much the individual had contributed to the system was considered less important. Rather than a continued wage payment, the pension was now regarded as a *deferred* wage payment, a benefit that accrued to all central government employees.

Up until 1946, the central government pension had been calculated according to the gross method so that it, together with the public pension benefit, would constitute about 65 % of the wage. However, when the *folkpension* benefit was dramatically increased in 1946 (see section 3.3 for details on this reform), it was argued that the size of the central government pension should be downward- adjusted accordingly in order to avoid too big a gap between workers that received no occupational pension and central government employees. The staff organizations opposed such reduction, but eventually agreed to take a limited amount of the *folkpension* into account. In practice, however, central government employees often received a total pension benefit that well exceeded the benchmark of two-thirds of the previous wage, partially because the central government pension was now paid out as a net pension rather than a gross pension.

The fact that the staff organizations actually were formally invited into central government pension discussions in the 1940s was new to the Swedish occupational pension arena. Pension regulations for central government employees had previously been unilaterally determined by the government, but a royal announcement in 1937 gave central government civil servants the right to participate in wage- and pension negotiations. The *negotiation principle* became an integral part of the central government occupational pension process and soon spread to the private sector as well. All major occupational pension schemes that developed in the decades after this were agreement-based and were preceded by extensive negotiations between employee and employer representatives.

Before the public pension system started to provide reasonable replacement rates in the mid 1930s, the early occupational pension systems were very important for the size of a covered individual's total pension. Individuals within professions that were covered by occupational pension agreements could count on sustaining their acquired living of standard after retirement to a greater extent than workers only entitled to public pension. To highlight the importance of occupational pension eligibility and the effect of increased public pension generosity, table 5.1 compares the replacement rates for married railway porters and factory workers in Stockholm for selected years. Railway porters were employed by the central government and were thus entitled to occupational pension, where as factory workers only received public pension. Initially, the difference in re-

[2]Starting in the 1860s, pensions for municipality employees had been paid out of a number of small pension funds.

placement rates between the two professions was very large, but got smaller over time. The decrease came as a direct result of the increased generosity of the public pension system that made up for the lack of occupational pensions on behalf of factory workers. In absolute terms, the *folkpension* benefit of a factory worker was about half the size of the central government employee's total pension in 1956. The persistence of the difference in replacement rates between individuals that were covered by occupational agreements and those that were not became a debated topic in the end of the 1950s and was one of the major contributing factors to the introduction of the earnings-related ATP scheme in 1960.

Table 5.1: **Replacement rates for male lower-grade government employee and male factory worker without occupational pension in Stockholm for certain years**

Year	Railway porter	Factory worker
1922	58	12
1935	50	12
1946	51	30
1956	77	39

Source: Elmér (1960)

5.2 Early occupational pension for privately-employed workers

The development of occupational pension schemes for privately-employed workers closely followed the development of central government pensions. The resemblance accrued not only to the design and the underlying motivations of the pension schemes, but also to the way in which blue-collar were discriminated against white-collar workers, just like central government workers were disfavored to "permanent" civil servants.

During the 19th century, most workers relied on their employer for old-age income. Farm workers and servants were considered to be part of their master's family, for which the master was legally required to provide old-age support. It was also quite common that employers paid out pension benefits to workers for long and faithful service. Such pensions were not mandatory and were viewed as a form of old-age charity, which size the employer could vary according to his own appreciation of the worker. It was customary for employers in the private sector to pay out pensions to white-collar workers, whereas all pension payments to blue-collar workers were signs of particular generosity.

The first major private sector pension scheme that covered large groups of workers in different professions was introduced in 1917. The Pension Fund for Swedish Personnel[3] (SPP) only included white-collar workers and was set up

[3] *Svenska Personal-pensionskassan*

by the Swedish Industrial Association[4] and several chambers of commerce. The pension fund had a strong insurance character and was largely influenced by the central government pension scheme of 1907 and the 1913 public pension system. The SPP reduced the uncertainty faced by an employee approaching retirement, as a pension benefit that corresponded to the actuarial value of the accumulated contributions would be paid out should he choose to resign in advance. Before the introduction of the SPP, early resignation would put the individual's pension benefit at risk. The uncertainty was further reduced by the fact that the pension rights of the individual were now partially protected by a third party and were less exposed to the risk of sudden changes in the pension terms by the employer. For many workers, the pension terms were not negotiable at all, but determined exclusively by the employer. Similar to the central government pension scheme, two-thirds of the insurance premium was paid by the employer and the rest by the employee, which yielded a pension that made up 60 % of the final wage. The SPP was a convenient way for companies to arrange for occupational pension for their employees. 1 186 out of 2 431 companies that offered occupational pensions in 1954 administered those through the SPP (Schmidt, 1974).

The average occupational pension for white-collar workers in the private sector was somewhat lower than the average pension for central government civil servants. However, since the private sector occupational pensions were paid out as net pensions and were not reduced against the *folkpension*, as opposed to the central government pension, white-collar workers ended up with slightly higher total pension than their public sector counterparts. The pensions were generally sufficiently high as to disqualify for the only means-tested component of the public pension system, namely the housing supplements.

While white-collar worker pensions were related to the previous wage level of the individual, blue-collar workers normally received fixed pension benefits, independent of the previous wage level. In 1948, the average occupational pension for blue-collar workers amounted to SEK 400 and made up less than 10 % of the average wage (Elmér, 1960). The widespread use of fixed pensions implied that among the few blue-collar workers who actually received occupational pension, very few received a pension that reflected the size of their previous earnings. This was the major source of indignation and the sense of injustice that spread among blue-collar workers during the 1950s, and which spurred demands for the introduction of a supplementary earnings-related pension component within the public pension system. In 1955, five years before the ATP reform, 72 % of all old-age households received no other pension than the modest, flat-rate *folkpension*. 13 % of the households were either covered by the SPP or the central government occupational pension scheme and the remaining 15 % by other pension schemes.

[4] *Sveriges Industriförbund*

5.3 The ATP reform - implications for the occupational pension schemes

The ATP reform of 1959 had important implications for the occupational pension schemes. Two major agreement-based occupational pension schemes for central government employees and privately employed white- collar workers were introduced slightly before and right after the ATP reform respectively. The reason why the public pension and the occupational pension reforms coincided was that discussions on how to reform the occupational pension schemes had been initiated almost 10 years before this when the Åkesson Commission presented its first proposals on how the *folkpension* could be supplemented by an earnings-related pension scheme. The central issues in the occupational pension reform process over the next few decades were how to coordinate the new pension schemes with the ATP scheme and the extension of occupational pension rights to blue-collar workers in the private sector.

Central government employees - SPR

The Occupational Pension System of the Central Government[5] (SPR) was introduced in 1959 and was in place for more than 30 years.[6] The details of the pensions scheme were drawn up by four major labor unions[7] and the central government. The SPR scheme was a pay-as-you-go defined benefit plan and covered central government employees as well as locally employed teachers, for whose salaries and pensions the central government was responsible.

Rate of compensation
There were different views on how the new central government pension scheme should be coordinated with the public pension system. These views were summarized by the 1951 pension investigation, which results were included in the report presented by the Public Pension Commission headed by Per Eckerberg. Some people argued that pension benefits from the state and from the employer should be regarded as completely independent. In such case, the legislators could simply keep the net pension concept from the 1946 reform and let the occupational pension "float on top" of the public pension. The major critique raised against net pensions was that they worked against the government's objective to achieve a relative improvement in the retirement standard of low-income earners. If the occupational pension is not reduced against the public pension or vice versa, the replacement rate ratio between high-income and low-income earners is left unaffected and no additional redistribution would arise from the reform. Based on these considerations, the pension investigation recommended the central government to pay out occupational pension benefits as gross pension instead of net pension.

[5] *Statens allmänna tjänstepensionsreglemente*

[6] A complementary pension regulation, PLF (*Statens pensionslöneförordning*), was also passed in 1959 and contained detailed precepts on how the pension was calculated. SPR and PLF were replaced by PA-91 in 1992.

[7] *Statstjänarkartellen*, SR, SACO and TCO-S.

The reform implied that pension benefits from the new central government pension scheme, SPR, were not determined independent from the *folkpension* and ATP. Instead, central government employees were guaranteed a certain pension income level, namely 65 % of the final wage. The occupational pension benefit was calculated as the difference between 65 % of the final wage and the sum of the individual's *folkpension* and ATP benefits. The final wage referred more specifically to the average wage of the last five working years before retirement.[8] To be eligible for a full pension benefit, the individual had to work for at least 30 years for the central government.

Financing

The SPR scheme contained no automatic indexation element as opposed to the ATP scheme, in which the real value of the pension benefits was protected by inflation rate indexation. Instead, SPR beneficiaries received *special additions* that were determined in the annual wage negotiations between the central government and the labor unions.[9] In fact, the purpose of these additions was not to secure the real value of the pension benefits, but to ensure that pensioners also benefited from increases in the living standard of the working generations. Annual negotiations between the central government and the labor unions provided a flexible way to achieve this. Generally, the addition that was paid on top of the gross pension corresponded to the size of the negotiated wage increase (Schmidt, 1974).

Retirement age

SPR contained quite distinguished retirement age regulations. The employee had to adopt her retirement decision to a profession-specific retirement window. A full pension benefit could be claimed at the lower age limit of the retirement window and retirement was also forced at the higher limit. There were basically three different retirement windows: age 60-63 (I), 63-65 (II) and age 65-66 (III). The majority of the central government work force, including unqualified postal service and railway workers, belonged to the first retirement window, which implied that the actual retirement age among central government employees was quite low compared to workers in the private sector. The actual retirement age was also much lower than the stipulated retirement age within the public pension system, which was 67 at the time. The scheme covered total costs from that lower retirement age up to the age of 67. When the retirement age in the ATP scheme was lowered to 65 in 1976 it was no longer necessary for the occupational scheme to cover the benefit of early retirement between 65 and 67 (Palmer and Wadensjö, 2004).

The SPR scheme was replaced by a new pension scheme in 1991, PA-91. The reform implied a shift from the gross to the net pension concept, which meant that the pension was no longer directly coordinated with the public pension system, but merely aimed at supplementing it. PA-91 therefore provided pension

[8]Note that the use of the five *most recent* income years as pensionable income contrasted to the ATP scheme, in which the 15 best years were used.

[9]This ad-hoc indexation procedure was also used in the *folkpension* until 1968, where the size of the additions were subject to parliamentary legislation rather than labor market negotiations.

benefits for earnings above the income ceiling (7,5 BA) in the public pension system. More specifically, the pension scheme scheme guaranteed a pension that corresponded to 65 % on wage portions between 7,5 and 20 BA, 32,5 % between 20 and 30 BA and an additional 10 % of pensionable income up to 7,5 BA, as shown by table 5.2. The structure of the PA-91 scheme was a direct copy of the occupational pension scheme for white-collar workers, ITP2, which had existed since 1960. Since the only differences between the two pension schemes pertained to the financing principle and the definition of pensionable income, I will not discuss PA-91 further and instead move on to discussing ITP2.

White-collar workers in the private sector

The supplementary pension for white-collar workers in the private sector, ITP[10], was introduced at the same time as ATP in 1960 and was an agreement between SIF and SALF, two major labor unions representing the private-sector, white-collar employees in industry and commerce, and the Swedish Employers Association (SAF). The ITP scheme only contained recommendations to individual employers, who could choose freely whether to apply these recommendations or not. From 1969, the ITP scheme was transformed into a collective bargaining agreement (CBA), to which terms and conditions the affiliated companies were legally bound. The agreement was renewed in 1977 and covered by then just about all white-collar employees in the private sector, about 22 % of the total workforce. The ITP scheme was constructed to supplement the public scheme and was administered by the SPP, a major pension fund to which many white-collar workers already were associated. In contrast to all other major agreement-based occupational pension systems, the ITP did not undergo any major reforms in conjunction with the implementation of the new public pension system in the beginning of the 1990s and remained in place until a new defined contribution ITP scheme was introduced as late as in 2006. The transition period for the new pension scheme is long and will be completely phased out in 2044, which means that the ITP scheme covers most white-collar workers of today. After the implementation of the new ITP scheme, which is called ITP1, the old ITP scheme is typically referred to as ITP2, a notation I will apply from now on.

Rate of compensation

The ITP2 scheme was not directly coordinated with the public pension system. Benefits were paid out according to the net method, which meant that they "floated on top" of the *folkpension* and the ATP benefit. ITP2 was supplementary to the public pension system in the sense that individuals earned pension rights for the salary above the income ceiling in the public pension system. The pension was calculated based on *pensionable wage*, which was in effect the final wage[11] at the time of retirement.[12] For the period from age 65 to 67 for men

[10] *Industrins tilläggspension för tjänstemän*

[11] Including benefits in kind, compensation for regular shift wok, time on call and stand-by time.

[12] The pensionable wage could in certain cases be below the actual wage, most often caused by *wage capping*. Wage capping meant that if the wage increase that occurred during last five

and from the lower age to 67 for women, the ITP2 pension was 65 % of the salary for the part of earnings up to the ceiling for coverage in the public system, namely 7,5 BA.[13] From the age of 67 an additional replacement rate of 10 % below the ceiling and 32,5 % on wage portions between 20 and 30 BA. No ITP2 was received on wage portions above 30 BA (Palmer and Wadensjö, 2004). The ITP2 benefit was calculated according to equation 5.1, where w_i denotes the wage portion related to BA i:

$$ITP = 0,1w_{<7.5\ BA} + 0,65w_{7.5-20\ BA} + 0.325w_{20-30\ BA} \tag{5.1}$$

For full ITP2, 30 whole entitlement years were required. An entitlement year could be earned from age 28 and was earned if the individual worked at least 20 % of full-time. The pension was reduced proportionally by the number of months that were lacking if the individual retired before earning 30 entitlement years. Earned ITP2 entitlement years were transferred to the new employer if the individual changed job. Coordination also took place for individuals who had previously worked in the public sector.

A supplementary defined contribution scheme called ITPK (where the 'K' stands for supplementary) was introduced in 1977 and is still in operation. The employer sets aside 2 % of the wage to ITPK from the time that the employee has attained the age of 28. The employee can choose whether to invest the money in a traditional management with guaranteed interest and a particular bonus or in fund management. The ITPK benefit normally amounts to 10 % of the final wage when drawn over a five-year period after at least 30 years of entitlement (Pensionsåldersutredningen, 2012).

Retirement age

The retirement age for white-collar workers in the private sector was 65 for men and 60 for women in 1960. The retirement age for women was raised to 62 in the 1960s and to 65 in 1971. The benefit could be withdrawn from the age of 55 with a deduction of about 0,6 % for each early month taken. It was also possible to start draw ITP2 later, so-called postponed pension up to the age of 70. The value of the pension was then increased life-long by approximately 0,5 % per month postponed.

Financing

With the introduction of ITP2, the employer's share of the contribution rate was increased from two-thirds to 100 %. As opposed to all other occupational pension schemes at the time, ITP2 was based on a premium reserve system. The employee was granted a pension that corresponded to a certain share of the final wage, but the pension benefit was paid out from invested assets rather than current contributions as under a PAYG scheme. Since most contributions under the ITP2 scheme were administrated and invested by the Pension Fund

years before retirement was larger than an amount set by the negotiating labor market parties, it was not pensionable.

[13]From 2003, the IPT2 is based on the income base amount (IBA) instead of the price base amount (BA).

for Swedish Personnel (SPP), which had previously operated the biggest occupational pension scheme for white-collar workers, it was a natural decision to keep the retirement insurance structure of SPP. In fact, ITP2 was the only occupational pension scheme based on a premium reserve system until the 1990s.

The size of the premium in a defined benefit plan is not constant, but generally depends on the employee's most recent wages and the number of years until retirement. The effect of the number of years until retirement is particularly strong in conjunction with wage increases at the end of the individual's working career. Fewer years of contributions will then have to finance the pension benefit, to which the employee is entitled.

Indexation

Similar to the central government pension system, SPR, ITP2 contained no automatic indexation mechanism. The reason for this was that fund returns and system surpluses were believed to be sufficient to enable price indexation of benefits on an ad-hoc basis. In a fully funded retirement insurance program any surplus accrues to the participants, which implied that SPP used its surplus to top up outgoing pension benefits with special additions. The main purpose of these additional pension payments was to secure the real value of the current pensions, which were aimed at compensating pensioners for increases in the cost of living. Initially, the fund surplus was very large and there was a major debate on how the surplus should be distributed.[14] For example, an individual who started to draw ITP2 benefits in 1963 received an additional pension benefit in 1973 that made up 59 % of the original pension benefit. An individual who started to draw benefits in 1972, received an additional 6 % one year later (Schmidt, 1974).

Privately-employed blue collar workers

Blue-collar workers still had less generous benefits than white-collar employees in the private sector and public sector employees after the ATP reform in 1960. They had both a lower total pension, since they lacked occupational pension coverage enjoyed by other groups, and they had no special arrangement for ages 65 and 66 that enabled them to exit the labor force at age 65 without having to claim an actuarially reduced *folkpension* and ATP benefit. In 1973, an agreement was reached between the central confederation of blue-collar workers, LO, and the Swedish Employers Association (SAF), to provide a supplement to the public system for blue-collar workers, the *special supplementary pension*[15] (STP). The overall goal with the STP scheme was to even out the difference in the replacement rates between white-collar and blue-collar workers that had occurred as a result of the implementation of the ITP scheme.

Rate of compensation

STP was a defined contribution scheme, paid out as a net pension on top of the

[14] See Schmidt (1974) for more information on this debate.

[15] *Särskild tilläggspension*

public pension system. However, in order to achieve the goal of supplementing the ATP benefit with an additional benefit that corresponded to 10 % of the final wage, the STP benefit calculation made direct use of earned ATP points, as illustrated by equation 5.2. In contrast to the other occupational pension schemes, STP did not pay out pension benefits for earnings above the income ceiling. The size of the pension was based on the three best years between age 59-63. An average of the three best ATP points during these years were increased by one to compensate for the BA deducted when calculating ATP points. The resulting number was multiplied by the BA amount to get pensionable income.

$$STP = (\overline{p} + 1)0,1BA \tag{5.2}$$

where $\overline{p}$ = three-year average of the best ATP points for age 59-63.

STP could be drawn from the age of 65 and the first date for drawing pension could be postponed until the age of 70. However, there was no early withdrawal option. In the event of postponed withdrawal, STP was increased by 0,7 per cent per month postponed. Those entitled to STP were persons who had either earned at least three STP years between the age of 55 and 64 or had earned 0,25 STP years during each of the two calendar years when they attained the age of 63 and 64 respectively. The individual could be credited with a full STP year if he or she had worked approximately 40 % of full-time employment. STP years could be earned from the age of 28 (Sjögren Lindquist and Wadensjö, 2006).

Financing

STP was neither a PAYG scheme, like the occupational pension scheme for central government employees, nor fully funded, like ITP2. The financing issue was a central topic in the negotiations prior to the implementation of STP in 1973. Inspired by the construction of the ATP scheme, the employee representatives advocated a PAYG system. The employers, on the other hand, strongly opposed this, since a PAYG system implies that the pension costs are postponed until the employee has retired. This in turn means that the employer might have to bear the costs and other requirements well after the employee has quit her employment. The most obvious alternative to PAYG was a premium reserve (fully funded) system. The parties were, however, well aware of the fact that premium reserve systems require quite some time to build up. Mitigated employment requirements for full pension for older age cohorts was an option to overcome this problem, but would impose too high costs on the current contributors. The parties therefore tried to find a compromise so that costs for the employer were smoothened across time and full pension benefits could be paid out immediately after the system had been implemented. The result was a pension scheme based on the so called *capital adequacy principle*. This implied that the pensions of the blue-collar workers were paid out from a pension insurance fund, to which premiums were paid by the employers. [16] In conjunction with the employee's retirement, the employer paid the capitalized value of the future pension costs

[16]The partially LO-owned insurance company, *AMF Försäkringar*, administered the insurance premiums and the outgoing pension payments.

of the employee to the insurance fund in a one-shot payment. Since all the pension costs for an employee were paid at once, the employer was not bound by any future requirements for that particular employee, a popular feature among the employers. The annual insurance premium of a specific employer was therefore based on the estimated costs of the total number of potential retirees in a given year. On the downside was the fact that pension costs were unevenly distributed across time, which could put the liquidity under severe pressure during years when many employees retire. The use of a capital adequacy financing system within the STP scheme was indeed a bold move. The method was internationally relatively untested and had definitely not been applied for such a large collective of workers for such a long time (Lindgren and Svernsjö, 1993).

Indexation
The STP agreement contained explicit regulations on how the real value of the STP benefits were to be protected. The technique for achieving this was very similar to that of the ITP2 scheme and was based on the assumption that contribution rates were sufficiently high to sustain a considerable surplus. The surplus could be then be invested or used directly to finance pension additions to the pensioners.

Local government employees

With the introduction of the ATP scheme, the pensions for local government employees were coordinated with the public pension system. As for central government employees, the pension benefit was calculated using the gross method; a defined benefit level was set and the difference between this benefit and the level provided by the ATP was paid by the occupational pension scheme. On 1 January 1985, a new agreement-based occupational pension scheme, PA-KL, for local government employees came into force. PA-KL was a also defined benefit gross pension scheme, but contained a slightly more sophisticated coordination structure with the public pension system than its predecessor.[17]

5.4 Problems with the occupational pension schemes

The occupational pension systems that had been implemented before the major public pension reform in 1994 were either directly or indirectly coordinated with the public pension system. When plans for an abolishment of the ATP scheme were drawn up in the beginning of the 1990s, a reconstruction of the occupational pension schemes thus became necessary. However, a reconstruction was not only necessary because of the upcoming abolishment of the ATP scheme, but also because of increasing awareness of the problems caused by some features of the occupational pensions schemes. The characteristics of these problems were very similar to those of the ATP scheme, since the occupational pension schemes and the ATP scheme were quite similar in design. Although all major occupational

[17]See Sjögren Lindquist and Wadensjö (2006) for more details on the rate of compensation within PA-KL.

Table 5.2: **A comparison of the main occupational pension schemes implemented before 1994**

	White-collar (ITP2)	Blue-collar (STP)	Central government (SPR)*
In effect	1960-2006	1973-96	1959-92
Replaced by	ITP1	SAF-LO	PA-91
Type	Defined benefit	Defined benefit	Defined benefit
Public pension coordination	Net pension	Net pension	Gross pension
Employment requirements for full pension	30 years	30 years	30 years
Base for calculation	Wage year before retirement	Average of best 3 of the 5 years between 59-63	Average of the 5 last working years
Rate of compensation	10 % - 7.5 BA 65 % 7.5-20 BA 32.5 % 20-30 BA	10 % up to 7.5 BA	Guaranteed 65 % of final wage - (ATP+folkpension)
Financing principle	Premium reserve	Capital adequacy system	PAYG
Financing rules	Payroll fee	Payroll fee	Costs paid by central government

Note: *SPR was replaced by PA-91 in 1992. PA-91 was similar to ITP2, but kept the financing principle and the definition of pensionable income according to the SPR regulations. Local government employees were also covered by the SPR scheme until the introduction of PA-KL in 1985.

pension schemes have been reformed since then, some of these problems are still being felt today. This is mainly due to long transition periods, but also to the design of the present occupational pension systems (these will be discussed throughly in section 7).

Underfunding

Underfunding was not a problem in all occupational pension schemes, least of all in the fully funded ITP2 scheme for privately employed white-collar workers. Neither the central government pension scheme suffered from particular underfunding issues, much thanks to the possibility of shifting pension means between different central government agencies. Moreover, the fiscal balances of the capital adequacy system for blue-collar workers, STP, were managed quite well during the first two decades after its implementation in 1973. In the beginning of the 1990s, however, in the wake of the economic downturn, the structural disadvantages of a capital adequacy system were becoming increasingly apparent. Although pension costs should be equally distributed across employers in the long run, in the short run, employers with a relatively young work force had to contribute to the insurance premiums of other companies' elder work force. If some employers chose to leave the pension scheme, the remaining employers would face higher insurance premiums, which could put the whole system at risk (Lindgren and Svernsjö, 1993).

Most financially troubled in the beginning of the 1990s was the pension scheme for local government employees, PA-KL. PA-KL was a PAYG system, which meant that pension costs peaked in years when many people retired. During the 1990s, the pension costs for the local government were projected to increase dramatically as a result of two things. Firstly, a large share of the local government work force that was recruited during the rapid expansion of the public sector during the 1970s and 1980s approached retirement. They were in general entitled to higher pension incomes than the average pensioner. The second contributing factor was the changing labor market behavior of women, who made up as much as 80 % of the local government work force. The share of female workers with very low or no occupational pension rights declined steadily as a result of increasing labor supply and rising labor force participation. Since PA-KL paid out the difference between the defined benefit level and the public pension benefit, this trend had a dramatic effect on the size of outgoing occupational pension payments. Moreover, the municipalities could not alleviate the pressure by shifting pension means across municipalities, which piled up considerable pension debts that had to be financed by current budget means (Ståhlberg, 1993).

The role of the supplementary occupational pension systems became more and more important over time as a result of the indexation mechanism in the public pension system. The ceiling was high in 1960 when ATP was introduced, but was only about one and a half times the average wage of a full-time earner in the 1990s. As discussed in section 4.4, this was a direct result of indexing ATP benefits to the inflation rate without taking the real growth rate of wages into account. With a larger share of workers hitting the income ceiling, the share of the financial responsibility for Swedish pensions was shifted to the occupational pension schemes, which either provided the difference between the defined benefit level and the public pension benefit or covered 65 % of earnings exceeding the income ceiling. Actually, leaving the ceiling fixed as long as possible was to the advantage of both the blue-collar union and the employer's association, although for entirely different reasons (Palmer, 2002). Since the earnings of the blue-collar workers did not generally exceed the ceiling and since contributions were paid on all income, and not only the income below the ceiling as of before 1983, in principle this meant that money was being shifted from white-collar to blue-collar workers. The employer's association favored a fixed ceiling, since they opposed any measure that might increase the contribution rate of the employer. The income ceiling was therefore kept, but is today indexed to wage growth rather than prices, which implies that the relative importance of the public pension system should be largely maintained (Palmer and Wadensjö, 2004).

The shifting of burden between public and private pension schemes was however not one-directional. From 1960, most occupational pension schemes provided pension benefits from age 65, which contrasted to the formal retirement age of 67 in the public pension system. Even blue-collar workers were able to exit the labor force at age 65 with the implementation of STP, which precipitated a lowering of the retirement age in the public scheme to 65. The decrease shifted substantial, unfunded pension debt from the private and local government schemes to the public pension system that was not recognized as such at the time when Sweden experienced a long period of high growth rates. The burden was felt a decade later when the public pension scheme experienced severe financial stress.

Institutional complexity

The occupational pension schemes had a complex construction, which made it difficult for an individual to understand the effects of her labor supply decisions. The complexity of the schemes could be utilized by employers, since they were better informed than their employees. Two examples of this pertain to the early retirement option and the minimum amount of hours required to qualify for coverage.

Common for all major occupational pension schemes was that persons who left the labor force before the normal retirement age were granted an annuity from age 65. This meant, however, that accumulated rights were not indexed during the interim. With high rates of inflation as in the 1970s and 1980s, early exit from the labor market normally resulted in a lower occupational pension. This was generally not well understood by participants, but by employers, who could reduce the pension costs associated with a specific employee by making him/her choose this option (Palmer and Wadensjö, 2004).

The occupational pensions schemes also contained a lower limit for the minimum number of working hours required to draw a pension benefit. For example, the individual had to work at least 20 % of full-time to earn an entitlement year within the ITP2 scheme. Consequently, part-time workers, particularly younger employees and mothers with children, risked not acquiring pension rights, of which they were not always aware. Employers could utilize this feature of the system to save on overall pension costs.

Labor market distortions

Labor market distortions arose from the fact that all occupational pension schemes at the time were defined benefit schemes, in which the final pension benefit was based on the income of the most recent year/years prior to retirement. The fact that not all years were counted equally provided a low incentive to work during earlier years, but work many hours just before retirement. However, many individuals prefer to reduce their work effort in the end of their career, either for non-financial reasons or because they expect a low or perhaps even a negative real wage growth during the last working years.[18] Many people therefore tried to

[18]Negative real wage growth rates were not uncommon for elderly workers, manual workers in particular. Negative real wage growth rates resulted in lower pension benefits from the ATP

find more favorable ways out of the labor force than simply reducing the number of hours worked. Of these, early retirement through the disability insurance program proved to be the most attractive. The occupational pension that would be paid out at 65, after having received the disability pension for several years, was namely calculated on basis of the income during the year/years preceding the granting of disability pension.[19]

Another problem with the defined benefit portions of the occupational pension systems was that costs in certain cases were to a great extent paid by the last employer. In a defined benefit pension scheme, the premium paid by the employer generally increases with the age of the employee. This can make it difficult for older persons to change jobs, which reduces labor market mobility. This "lock-in" effect can be further enhanced by the fact that a wage increase in the years immediately preceding retirement typically has a much larger effect on the premium rate than a wage increase of the same magnitude earlier in the working career, since the increase in the defined benefit must be financed during a shorter time (Pensionsåldersutredningen, 2012). This effect is particularly strong for wages above the income ceiling. The progressiveness of pension premiums for employers with respect to age and wage was therefore (and is still) a matter of debate and was one of the main reasons for transforming the occupational pension schemes from defined benefit to defined contribution.

Arbitrary redistribution

The distributional effects of the occupational pension schemes were similar to those of the ATP scheme, but of greater magnitude. As discussed in section 4.4, due to the 15/30 rule, the ATP 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). 30 years of pensionable income was also required for a full occupational pension, but the size of the occupational pension benefit was either based on the final wage or on an average of the last several years' wages rather than on the best 15 years as in ATP. This implied that shifting from part-time work to full-time work at the end of the working career was even more beneficial within the occupational pension schemes than under the ATP scheme.

Short careers and professions with a steep earnings-profile benefited additionally from the fact that the income ceiling within all but the occupational pension scheme for blue-collar workers, STP, was four times as high as in the public pension system. The public pension system did not provide benefits for earnings exceeding 7,5 BA, whereas the pension schemes for white-collar workers in the private sector (ITP2), central government employees (PA-91) and local government employees (PA-KL) respectively, covered earnings up to 30 BA, as shown

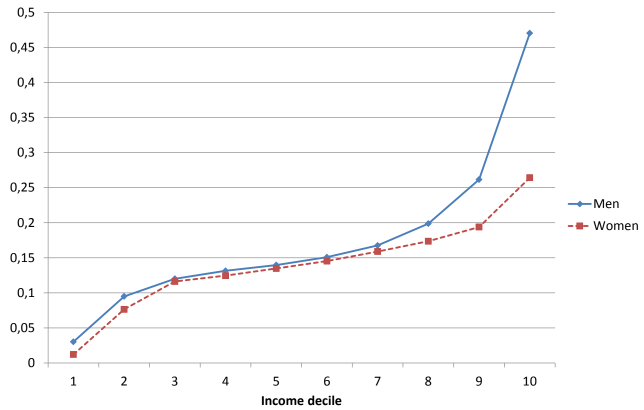
scheme as well as the occupational pension schemes due to the great weight they place on income during the years immediately preceding the age of 65.

[19]Under the assumption of a negative real wage growth rate during the last working years, early retirement through the DI program could also yield a higher ATP benefit than continued work would do. The reason was that income from the DI program produced higher pension points than continued work, increasing the 15-year pension point average.

by table 5.2. Individuals in professions with steep earnings-profiles therefore generally received higher pensions in relation to their life income than individuals in low-income professions.

The relative importance of the occupational pension for different income groups in 1996 is illustrated in figure 5.1, measured as occupational pension as a share of total pension. Due to the provision of benefits above the public pension income ceiling, the relative importance of the occupational pension rose with income. Since there were more men in high-paying jobs, these rules also implied a redistribution from women to men. For men in the 10th decile, the occupational pension made up almost 50 % of total pension income.

Figure 5.1: Occupational pension as a share of total pension* in 1996 for men and women aged 65-69



*Sum of *Folkpension*, ATP and occupational pension benefit.

Source: Palmer and Wadensjö, 2004

Chapter 6

The Great Compromise - a New NDC System

Most countries have PAYG, defined benefit pension systems. These have proved very difficult to reform. Sweden, on the other hand, has successfully implemented a major reform and is well under way of phasing out the financially unsustainable defined benefit scheme, ATP. The design of today's system is a result of an agreement between five out of seven parties in the parliament, which suggests that the Swedish tradition of passing pension reforms with political unanimity only took a detour with the implementation of the ATP scheme, passed with a majority of only one vote. The new pension system was implemented in 1999 and the first pension payments from the new system took place in 2001.

The reform essentially meant that the ATP scheme was replaced by two new pension schemes, both of which were novel in kind at the time. The major source of pension income in the new system is a notional defined contribution (NDC) pension scheme, called *inkomstpension*. Its novelty lies in the use of individual, non-financial (notional) accounts in a PAYG framework, which implies that a tight link between contributions and benefits can be preserved while avoiding the disadvantages of a large-scale fully funded pension system. Benefits are also adjusted to demographic changes and are automatically downward adjusted if the system's financial imbalance grows too large. These properties should supposedly make the system financially stable in the long run. The second pension scheme is the *Premium Pension*, a mandatory fully funded pension scheme with individual accounts, where individuals can choose how to invest their contributions. The structure and the properties of the new pension system are explained in more detail in section 6.2.

The question is then how this seemingly "impossible", but necessary, reform was made possible. The ATP scheme was a historical symbol of the strength of the SAP and summarized the fundamentals of social democratic values. Still, they helped rid the ATP scheme, the "jewel in the crown", in favor of the new public pension system (Lundberg, 2003). Also, the prospects for reform should have been low in the light of an aging population.[1] There are a number of factors

[1] A reform, which would shift the uncertainty about the future pension from the contributor to the individual and possibly harm older generations that had been part of the old pension system up until now, should, according to the most basic public choice theory, get little political

that contributed to the reform - the skillful political work of the Social Ministry and the investigative body, the Working Group on Pensions[2], a growing public awareness of the problems associated with the ATP scheme, and a ”smart use” of transition rules. The reform process and the work leading up to the reform is the subject of the first section in this chapter.

6.1 The reform process

Although the abolishment of the ATP scheme was not as politically heated as its implementation in 1960, the reform process leading up to the implementation of the new pension system in 1999 was long and extensive.

Reform attempts

The reform process began already in 1984 when the government set up the Pension Commission[3] tasked with evaluating the ATP scheme and providing an overview of its rules. The Pension Commission was created as a response to the growing number of reports that highlighted the financial instability of the ATP scheme and the need for reform.[4] The commission had a broad corporative member composition, was active for six years and produced several ample reports.

The commission failed to produce explicit reform proposals, partially because of political disagreement among its members (Lundberg, 2001), but also because there was a widespread unwillingness to change the fundamentals of the current pension system, particularly among the Social Democrats. The directives of the Pension Commission stated that the main characteristics of the *folkpension* and the ATP scheme should remain and that the basic pension levels should remain independent of previous employment and continue to complement the ATP pension. Methods of financing were also not to be altered (SOU, 1990).

Thus, even though there were signs in the early 1980s that the ATP scheme was financially unstable and therefore had to be reformed in some way, the politicians seemed unwilling and unable to initiate a reform process that would change

support.

[2] *Pensionsarbetsgruppen*

[3] *Pensionsberedningen*

[4] Among the most important were the 1982 report by *Riksförsäkringsverket* (RFV) (From 2005, *Försäkringskassan*) and a doctoral thesis written by Agneta Kruse and Ann-Charlotte Ståhlberg (Kruse and Ståhlberg, 1977). The former contained a bleak future of the ATP scheme, stating that if the economic stagnation were to continue, more than one third of the individual's wage would be required to finance the system by 2030. Kruse and Ståhlberg (1977) contains a detailed analysis of the socioeconomic and financial implications of the ATP scheme. A second report by RFV in 1987 also presented a grim picture for the future of the ATP scheme, demonstrating that even economic growth could not save the system. Other influential scriptures at the time were Persson (1991), which outlined the main weaknesses of the ATP scheme, and Ackerby (1992), published as an appendix to the 1992 *Långtidsutredning.* In fact, there are many similarities between Ackerby (1992) and the first sketch on the principles of the reformed pension system (Ds 1992:89). Finally, the Chief Economist at The Swedish Confederation of Professional Associations (SACO), Jan Bröms, published an influential book (Bröms, 1990) with suggestions on how to reform the pension system.

the fundamentals or lead to a complete abolishment of the ATP scheme. The decision makers were "locked" to a thought process that safeguarded the ATP scheme (Borg, 2004).

The SAP acknowledged that ATP had to be reformed in some way, but did not encourage the Pension Commission to come up with ideas that would threaten the existence of ATP. Nor the bourgeois parties, which were in opposition up to the 1991 elections, pushed strongly for the abolishment of the ATP scheme. Criticizing the ATP scheme was considered "political gambling" and the institutional complexity of the pension system made it unattractive for opposition politicians to try to explain the problems of the ATP scheme to the public. This partly explains why pensions never became one of the major election issues in 1988, 1991 and 1994 (Gennser, 2008).

Nevertheless, the work of the Pension Commission should not be underestimated. It provided a solid foundation for the continued pension debate and the work of the succeeding investigative body, the Working Group on Pensions, which played a decisive role in the reform process. Despite its limited role, the Pension Commission also created a strong consensus that pension reform was necessary. It generated further discussion in the public sphere, but also within the new government, which was willing to take initiatives for the following step in the reform process.

The new government formed after the 1991 elections was a coalition of four bourgeois parties (Conservative, Liberal, Centre and Christian Democrats) that had returned to power after close to 10 years in opposition. There was a strong conviction within and among the parties to avoid a repeat of the turbulent coalition period of 1976-1982. This included finding a solution to the pension question, which the party leaders had promised the public to do if they would win the election (Gennser, 2008). The new government, however, instantly had to deal with strong economic difficulties and was forced to negotiate "crisis packages" with the Social Democrats to counteract the economic crisis that broke out in the financial and property sectors about one year before the elections. Although the work of the Pension Commission was somewhat slowed down by the crisis, the crisis did not push pension reform off the agenda. Quite the opposite, the government was pressed to take fast and firm action in the pension question, as the Pension Commission had stressed that the problems associated with the ATP scheme would become even worse in the event of an economic recession (Marier, 2002). Only one week after the formation of the government, the new Minister of Health and Social Affairs, Bo Könberg (Liberal Party), created the Working Group on Pensions.

The Working Group on Pensions

The new working group consisted only of members of the parliament and hence excluded labor market representatives and pensioner organizations. All seven parliamentary parties were represented in the working group, whereas the reform is the outcome of an agreement between five of them (the coalition parties and the

Social Democrats), comprising around 85 % of the votes.[5] The individual parties chose their representatives from the working group, which had 10 members.[6] Most of them had been involved with pension questions previously and were considered to be open to compromises, which is indicative of the seriousness and of the hopes put on this new commission. Two of the members[7] had been part of the previous Pension Commission and as many as five of them[8] later became part of the Implementation Group[9]. The reform process was thus characterized by a strong degree of continuity and was led by a small group of knowledgeable people that was intent on reforming the current pension system.

The exclusion of labor market partners drew some criticism, but no strong protest on their part. Although not formally part of the working group, these non-parliamentary parties influenced the contents of the pension reform in a more indirect way, through lobbying and personal contacts, and as inspirers. They were also part of a "reference group" that was supposed to have regular meetings with the ordinary working group, whose members, however, paid them only sporadic attention (Lundberg, 2001).

The composition of the working group, which served both as a parliamentary commission and as a platform for negotiation, was quite unique and contrasted sharply to the Swedish corporatist custom of formally incorporating labor market partners in social welfare reform processes. Based on his experience as a member of the Pension Commission, which had been characterized by a high degree of inefficiency and political stalemates, Bo Könberg believed that the customary way to carry a parliamentary commission could not possibly lead to a major pension compromise. He therefore insisted on forming a small group of important political figures, a strategic, and in many ways, decisive move (Gennser, 2008).

A small group was also preferred given the short time frame of the reform process. The government instructed the working group to present a proposal already in March 1992, only four months after their first meeting. Indeed, the government wished to cut pension costs much sooner than later, but the most important reason for providing such a short time frame was to finalize the pension question before the end of the mandate period in 1994 (Author interview, Bo Könberg, 19 April 2013). An alternative explanation is that the government

[5] The Left Party and the recently formed New Democracy were not part of the agreement. However, both parties were formally part of the working group throughout the whole reform process. The parties were represented by Leif Bergdahl (nd) and Per Lennart Börjesson (v), who was later replaced by Ulla Hoffman. New Democracy was critical of the ATP scheme, but at the same time unwilling to make fundamental changes to it, whereas the Left Party opposed the proposed pension system because it would disfavor blue-collar workers and women (Könberg, 2008). In 1993, it became clear that New Democracy and the Left Party did not wish to proceed with the reform on the grounds proposed by the coalition parties and the SAP. As a result, the coalition parties and the SAP effectively, and rather controversially, diminished the influence of the Left Party and New Democracy by forming a parallel working group, where many important issues were discussed and compromises struck (Gennser, 2008).

[6] Bo Könberg (chairman, fp), Margit Gennser (m), Pontus Wiklund (kd), Anna Hedborg (s), Åke Petersson (c), Barbro Westerholm (fp), Leif Bergdahl (nd), Ingela Thalén (s), Per Lennart Börjesson (v) and Ulla Hoffman (v)

[7] Bo Könberg and Pontus Wiklund

[8] Bo Könberg, Margit Gennser, Anna Hedborg, Åke Petersson and Ingela Thalén

[9] *Genomförandegruppen*

simply underestimated the amount of work that is necessary to carry out a pension reform (Gennser, 2008).

The Working Group on Pensions was instructed to formulate a proposal on how to reform the public pension system based on the final report (SOU 1990:76) elaborated by the previous pension commission. The working group had to present a proposal characterized by long-term considerations and stability, and create a system that would (Pensionsarbetsgruppen, 1992):

- make pensions more responsive to the general state of the economy
- strengthen the link between contributions and benefits
- provide incentives to work longer
- allow for a flexible retirement age
- encourage an increase in long-term saving
- contain more transparent redistribution mechanisms

The members of the working group solved a number of issues and fulfilled some of these objectives relatively easily, while others were subject to more hefty and extensive discussions before consensus was reached. It was widely acknowledged that ATP suffered from serious problems and was dangerously vulnerable to changing demographics and staggering growth rates. However, the extent to which it had to be reformed and how it should be reformed was not very consensual.

Although the bourgeois parties had different preferences regarding the design of the new pension system[10], they all saw the reform process as an opportunity to reduce the size of the large public pension funds, the National Pension Funds, and promote the implementation of a fully funded component. In principle, the bourgeois parties advocated a basic security model supplemented with private pension insurance, very much in line with the ideas proposed during the 1950s in the run-up to the ATP reform.

The Social Democrats, on the other hand, were not overly enthusiastic about embarking on a reform attempt of the ATP scheme and joined the working group for pragmatic reasons (Lundberg, 2001). The Social Democrats strongly opposed any solution that meant that fully funded component or an increased use of private pension arrangements would crowd out the public, PAYG component. Inclined to solve the financial problems of the ATP scheme, the Social Democrats were also determined to safeguard traditional social democratic values and keep the bourgeois parties from implementing their ideal pension system (Lundberg, 2001).

[10]The Centre Party wanted to enhance the basic security component, the *folkpension*. The Christian Democrats shared this view and also pushed for the possibility of spouses to freely divide individual pension rights between them. The Conservative Party wanted to diminish the size of the pension system and instead promote individual savings. The Liberal Party also favored an individual savings component. They also wanted to strengthen the insurance character of the pension system by providing a tighter link between contributions and benefits ("straight pipes") (Könberg, 2008).

The labor market partners also recognized the need for reform, but nor they were in agreement on the basis of a reformed system.[11] The Swedish Trade Union Confederation (LO) was the only organization to give its full support to the new pension proposal. LO was also the quietest among the organizations during the reform process. There are different explanations for this passivity, one being that LO, just like all other labor market partners, was excluded from the Working Group on Pensions and had to rely on the Social Democrats and the reference group to obtain information on the progress made by the working group and documentation. Secondly, LO was divided internally, which not only made it hard to express a common voice in the debate, but also marginalized its position. Finally, there was a pre-negotiation between the leadership of SAP and LO to support each other throughout the process in order to avoid an internal conflict between those supporting reforming the reform and those seeking to maintain the ATP system (Lundberg, 2001).

The Swedish Confederation for Professional Employees (TCO) opposed the reform proposal presented by the working group in 1992. The 15/30 rule in the ATP scheme was clearly advantageous to its TCO members, making a switch to the *life-income principle*[12] look highly unattractive. The Swedish Confederation of Professional Associations, SACO, agreed to some of the main principles of the reformed pension system. SACO was in favor of the life-income principle and an indexation method based on the state of the national economy. Like the bourgeois parties, SACO advocated the abolishment of pension fees above the income ceiling.

The support of TCO and SACO was not crucial for the bourgeois parties because the reform could be carried out as long as they were in agreement with the Social Democrats. LO's support, however, was more crucial because of its connection to the SAP. It was unclear whether or not LO members would actually gain a higher pension with the new system, but by demonstrating that LO's members became relatively better off under the new pension system, SAP and the five-party coalition were able to secure its support (Marier, 2002). Since LO members came to be relative winners in the new system at the expense of TCO and SACO members, it is somewhat puzzling that so many LO members were skeptical about the reform (Author interview, Bo Könberg, 19 April 2013).

A sketch on a reformed pension system

The Working Group on Pensions first met in December 1991. Despite the sharp ideological differences between the parties and also between the individual members of the working group[13], a compromise seemed within reach few months after the creation of the group. The group's first report, *A reformed pension system:*

[11] See table 4.10 in (Marier, 2002) for a summary of the specific positions of each labor market partner on specific issues proposed by the working group.

[12] *Livsinkomstprincipen.* See Concepts and Definitions for a definition of this principle.

[13] See Gennser (2008) and Hoffmann (2005) for autobiographical depictions of the social environment and the diverging views at different stages in the reform process among the members of the working group. Lundberg (2001), Marier (2002) and the doctoral thesis by Urban Lundberg (Lundberg, 2003) contain interviews with the members.

Background, aspects and sketch[14], was presented in August 1992. The report contained many important guiding principles of the design of the new pension system and it became clear that a rather extensive reform was underway.

The report was not clearly defined and merely gave a broad picture of what a reformed pension system would look like, while underlining the problems associated with the ATP scheme. It included the elements under which a consensus could be established, many of which would actually end up being part of the new legislation on pensions that would be introduced two years later (Marier, 2002). The 89 pages document was unique at the time, as it was the first political document to describe a non-financial (notional) defined contribution (NDC) pension system.[15] The main ingredients of the sketch were the following (Pensionsarbetsgruppen, 1992):

- The adoption of the *life-income principle* implied that all life-time earnings would count towards the calculation of an individual's pension and a switch from defined benefit to defined contribution.
- The reformed pension system, like the previous one, would be *mandatory*.
- A *flexible retirement age* that would make it possible to retire at any time between the ages of 60-70. This would encourage old-age labor supply and play down the age of 65 as the "normal" retirement age.
- Replace price indexation for pensions with *wage indexation*.
- A *transition period* of 20 years.[16]
- Pensionable income granted for child caring and military service (these were not compensated in the previous system).
- The reformed pension system would either be PAYG or a combination of a PAYG and a premium reserve system (no consensus reached at the time).

The Social Democrats emphasized that constructing a system based on these elements did not necessarily imply the introduction of a completely new system. Instead, these changes could come about by a reformation of the old system, which helps explain why the working group's final report was named "reformed pension system". The sketch did not result in a strong debate, partially because a strong currency and economic crisis broke out shortly after, but also because the lack of political conflicts made the pension issue unappealing to the mass media.

The working group continued the reform process, but would experience several political stalemates in 1993. The outbreak of the financial crisis in the fall of 1992 slowed down the progress, since several members of the working group also held leading positions in their respective parties, which forced them to devote

[14]Ds 1992:89 - *Ett reformerat pensionssystem - Bakgrund, principer och skiss*

[15]See Concepts and Definitions and section 6.2 for further details on NDC pension systems.

[16]Anna Hedborg, one of the SAP representatives in the working group, was behind the idea of attributing one extra 1/20 of the new pension system per successive birth cohort (Author interview, Bo Könberg, 19 April 2013).

much time and effort to managing the crisis (Könberg, 2008). In February 1994, the working group presented a comprehensive final report, *Reformerat pensionssystem*[17]. The report provided the basis for the Pension Agreement between the coalition parties and the SAP that was passed with overwhelming majority in early June 1994.

Political dissents

Before the publication of the final report in 1994, the working group found it particularly hard to agree on three issues - the fully funded component (the premium reserve system), the income ceiling in the public pension system and the amount of the guaranteed pension.

The introduction of a mandatory financial defined contribution scheme in the public pension system was central to the bourgeois parties, and is probably the most important aspect of the eventual pension compromise. The reform prospects engaged not only the political parties, but also powerful actors in the financial sector, such as equity traders, banks and insurance companies. The right-wing representatives in the working group made it clear that some kind of premium reserve system must be included in the new pension system, although more modest in size than some people proposed in the public debate (Lindbom, 2001).[18] The bourgeois parties favored a premium reserve system based on private individual savings in order to strengthen the sense of ownership of individuals' earned pension rights and to balance an increasingly powerful concentration of power within the economy by the state, especially through the National Pension Funds.

The Social Democrats defended the National Pension Funds and viewed it as an important collective saving instrument. The early proposals from the SAP were to increase contribution rates to expand the size of the National Pension Funds to finance the upcoming increase in the number of retirements (Marier, 2002). They did agree to the introduction of a financial defined contribution (FDC) component, but insisted that a contribution rate of 16,5 % to the the PAYG component was needed to secure the pension entitlements inherent in the old system. Moreover, the Social Democrats also desired to keep the two systems apart, which is why the premium reserve system was eventually decided to "float on top" of the PAYG scheme. Despite the fact that only 12 % (2/16,5) of the amount contributed to the new public pension system would be allocated to the premium reserve system, the introduction of an FDC scheme was an important symbolic victory for the bourgeois parties. The outcome was also a victory for the Social Democrats, since the new pension system was, under certain conditions, equivalent to the ATP scheme and because they had managed to keep the new premium reserve system quite small, although not negligible.

[17] *Reformed pension system* - SOU 1994:20

[18] Some people argued in favor of a Premium Pension system that would be phased in and eventually account for as much as 50 % of the total pension contributions (Lindbom, 2001). The representative of the Conservatives in the working group, Margit Gennser, suggested that the funded component should account for one third of the pension contributions (Gennser, 2008).

The second major issue, which proved to be even harder to resolve, was the design of the income ceiling in the ATP scheme. The ceiling actualized two important questions. The first concerns how much weight should be given to the loss-of-earnings principle and the basic security principle respectively in the new system. As discussed in section 4.4, the indexation of ATP benefits to prices resulted in an erosion of the loss-of-earnings principle, as the activation of the income ceiling for an increasingly larger proportion of the population meant that the ATP gradually came to look more like an enhanced *folkpension*. This development was the bourgeois parties' "trump card", as it illustrated how dysfunctional the ATP scheme really had become. If no radical action was taken, the ATP scheme would eventually collapse (Lindbom, 2001). At the same time, a pension system based on the basic security principle was exactly what the bourgeois parties wanted. The ATP scheme could therefore be eradicated by taking no action. In the early spring of 1991, the Conservative Party announced a "let-go-solution", where the ATP problem would be solved and the overall pension generosity automatically be reduced by the effects of the inflation rate (Gennser, 2008). The money could instead be used to increase the basic security components of the pension system, implying that the importance of the ATP scheme would be eroded not only from "above", but also from "below" (Bröms, 1990). However, keeping a price index and thereby allowing for an eventual transformation of the system into a large basic pension was unacceptable for the SAP. It was thus important to create a ceiling that would be indexed to the real wage growth. The working group eventually agreed on a ceiling indexed to real wages.

The construction of the income ceiling is also an important determinant of the degree of progressivity in a pension system. By replacing the defined benefit scheme, ATP, by two defined contribution schemes, a tighter link between contributions and benefits was accomplished. Instead, redistribution from high to low income earners arise from the fact that contributions are paid above the ceiling with no corresponding increase in earned pension rights. The bourgeois parties wanted contributions to be paid only below the income ceiling and instead allow individuals to find private pension solutions for earnings that exceeded this threshold. This would strengthen the insurance character of the pension system. The Social Democrats, on the other hand, wished to maintain a progressive feature in the new public pension system and strongly rejected the idea of abolishing pension contributions above the income ceiling. As a result, Bo Könberg, the chairman of the Working Group of Pensions, suggested a compromise solution, which was later also accepted, where the pension contribution is split in half between employers and individuals. The payroll fee levied on employers is paid on all earnings, whereas the individual part, the so called *general pension contribution*[19], is paid only on earnings below the income ceiling. More details on the financing rules of the new pension system are given in section 6.2.

The third issue was the amount of the guaranteed pension, or the *minimum guarantee*[20]. The size of the minimum guarantee was an ideologically important issue: should the basic pension or the earnings-related pension receive most pri-

[19] *Allmän pensionsavgift*

[20] *Garantipensionen*

ority? The members of the Working Group on Pensions found it hard to agree on a fixed relationship between the earnings-related pension component and the minimum guarantee and were instead inclined to find a compromise solution. They suggested that the minimum guarantee be indexed to prices in contrast to benefits from the earnings-related component, which were to be indexed to the real wage growth. As a result, in periods of rapidly rising wages and low inflation, the difference between the minimum guarantee and the earnings-related pension would grow. In the opposite case, the difference would shrink.

The 1994 Pension Agreement

In June 1994, the parliament passed a bill of a reformed pension system. The bill was based on the final report of the Working Group on Pensions (SOU 1994:20). The final report contained both new and old elements and was more elaborate on elements that had been touched upon in the reform sketch from 1992 and that had already been subject to public discussion for a while, such as the life-income principle, a flexible retirement age, the sharing of pension rights within married couples, and a new form of indexation. Importantly, the working group had agreed on that two percent of an individual's earnings should be allocated to an individual financial account, the *Premium Pension*. The final report also contained details on the design of the new NDC system, *inkomstpensionen*. The new pension system would thus consist of three main pillars: the minimum guarantee, which would act as the new basic security component, *inkomstpensionen*, a non-financial defined contribution (NDC) scheme, which is earnings-related and financed on a PAYG basis, and the *Premium Pension*, a financial defined contribution (FDC) scheme based on individual savings accounts.[21]

Because the final report left several issues unresolved, the bill that was presented to the parliament was referred to as a "general proposal" of a reformed pension system. According to the working group, some technical details would need further analysis, one of the most important being the indexation procedure. To resolve these issues, the working group announced the creation of an implementation commission, the Implementation Group, which consisted of five of the previous working group members and five new members[22].

The initial ambition of the Implementation Group was to complete and implement the agreement within a year. However, the final report that served as the basis for the government's proposition to the parliament was not completed until four years later in June 1998 (Socialdepartementet, 1998). These four years were quite turbulent and on a few occasions, it seemed like the coalition behind the agreement was going to break up (Marier, 2002). After the SAP returned to power in the 1994 elections, there was growing discontent with the pension compromise within the party. The most controversial issues which endangered the pension compromise were (i) the design of the funded component, (ii) the proposal that the minimum guarantee should be means-tested rather than universal,

[21] These are explained in detail in section 6.2.

[22] Rose-Marie Frebran (kd), Maud Björnemalm (s), Arne Kjörnsberg (s), Hans Svensson (s) and Inger-Maj Klingvall (s).

and (iii) how contributions were to be split equally between employers and employees. However, the Implementation Group was determined to continue with the implementation of the new pension system and managed to find compromise solutions to most controversial issues that came up during the process.

The bill was accepted on June 8, 1998, again with an overwhelming majority. Several issues were in fact postponed for future negotiations, including the automatic balance mechanism[23] and transfer of money from the National Pension Funds to the state. These, and all other important properties of the public pension system, as it is today, are thoroughly accounted for in section 6.2.

The great compromise - a new pension system

Given the dramatic and politically infected implementation of the ATP scheme and the great span of reform ideas that were in the air at the time when the Working Group of Pensions was launched, many people did not believe that a pension agreement across the two political blocs would be possible to attain. No one could have predicted that a brand new pension system would be in place only 8 years later based on a compromise among the five largest parties, and that the reformation of the pension system would not even become a major electoral question.

The pension reform was the outcome of a rather unique reform process, where a small, but efficient and consensus-seeking investigative commission managed to design a pension system that all participating political actors were content with. Moreover, the new system would supposedly solve the problems associated with an aging population and be financially stable in the long run. The members of the working group had to be in agreement and the respective party leadership had to be informed before media and the public were to be informed (Lundberg, 2001). The pension reform was in that sense to a large extent expert-driven. Given the complexity of the institutional features of the old pension system and the dire need for reform, this way was the preferred one for all involved parties. The emergence of a broad agreement across the political blocs was also spurred by the large degree of continuity that characterized the working group (Marier, 2002). Their decision to be united and avoid public debate, combined with an understanding among the public that the ATP scheme had to be reformed, especially in the light of the financial crisis, also added to this.

Now, the crisis may have helped the process by increasing the readiness of the policy makers to make tough decisions, but it was not the cause behind the pension reform. The first report of the working group, which outlined the general principles of the new pension system, was presented in the summer of 1992, that is, *before* the outbreak of the financial crisis. Moreover, despite having the possibility to withdraw from the agreement once the crisis was over, no party did so. All parties involved were quick to affirm that the pension reform had not been a crisis decision, but rather the continuation of a long process that began in the mid 1980s (Marier, 2002).

It was also very important that the bourgeois parties and the Social Democrats

[23]In Swedish popularly referred to as the pension "brake".

could agree on what was portrayed as the most central property of the new pension system, the life-income principle. By introducing the life-income principle at the expense of the 15/30 rule, the bourgeois parties' preference for a stronger insurance character, and the Social Democrats' wish to end the adverse redistribution from individuals with flat earnings profiles to individuals with steep earnings profiles, could be satisfied at the same time (Könberg, 2008).

In contrast to the ATP reform, the pension reform in the 1990s had no clear winner. The reform can either be viewed as a necessary reduction of ATP, which main features are nonetheless kept intact - the new pension system is also mandatory, earnings-related, administered by the government and provides benefits up to a certain income threshold. Or it can be viewed as the first introduction of a mandatory FDC scheme with individual accounts. Irrespective of what perspective is chosen, the reform process was perhaps driven more by pragmatism and a common objective of reforming an instable pension system in a time of economic hardship.

The consequences of path dependence for pension reform are often portrayed as essential in understanding how the great compromise was possible.[24] Intuitively, path dependence seems likely to worsen the prospects for pension reform, as the policy makers are constrained by the institutional setup of the old system. However, the Swedish example illustrates how path dependence can foster broad political agreements, and therefore make pension reform more likely, by making some actions "impossible". It is true that path dependence, in terms of future pension obligations in the ATP scheme, limited the scope of what was possible. The bourgeois parties were aware that any credible reform proposal would have to be based on a financially and politically feasible transition plan. It is quite likely that a five-party agreement would never had happened if the bourgeois parties would have had more freedom of action, since more radical reform proposals would have been rejected by the Social Democrats (Lindbom, 2001).

Finally, it is interesting to note how the members of the working group were not aware of, or at least not saw it that way in the early phase of the reform process, that one of the great novelties of the new pension system was that it was defined contribution *and* financed on a PAYG basis. Before the reform, economists and politicians around the world had more or less assumed that PAYG schemes had to be defined benefit, and defined contribution schemes fully funded. The new Swedish pension system, making use of individual non-financial accounts, was indeed a novel construction and has inspired many other countries to embark on similar reform paths.

At the same time, it should be noted that an NDC system is not purely DC. In fact, it is a hybrid of DB and DC.

[24]See Lundberg (2001), Lindbom (2001) and Lundberg (2003) for thorough discussions on the importance of path dependence for the Swedish pension reform.

6.2 The three tiers of the new pension system

The new national public pension system consists of three tiers.[25] Two of these tiers, the *inkomstpension* and the Premium Pension Scheme (PPM), comprise the earnings-related component of the new pension system. The third tier, the *minimum guarantee*[26], is a means-tested pension supplement that ensures individuals with no or low pension income from the earnings-related component a minimum standard of living in retirement. The *inkomstpension* is a notional defined contribution (NDC) scheme and is the main part of the new pension system and the Premium Pension Plan is a financial defined contribution (FDC) scheme. The minimum guarantee is financed by general tax revenue, whereas the financing of the earnings-related component is shared between employers and employees. The contribution rate is 18,5 % of earnings; 16 % is credited to the notional account and 2,5 %[27] is contributed to the FDC scheme.

The minimum guarantee

Up until the 1994 reform, the *basic pension protection*[28] was made up of two components, the universal flat-rate *folkpension* and the special supplement. In the new system, these two components have been replaced by a *minimum guarantee* that was put into force on January 1, 2001.[29] The minimum guarantee is slightly more generous than the FP and the special supplement taken together, providing a pension benefit of 2,13 BA[30] and 1,9 BA to unmarried and married pensioners respectively. The benefit is worth approximately 35 % of the average wage of a blue-collar worker and ensures a minimum living standard of living in retirement. The minimum guarantee is means-tested against the earnings-related *inkomstpension* and is therefore only paid out to individuals that receive a relatively small or no earnings-related pension, which is similar to how the means-tested special supplement worked in the old system. As shown by figure A.2, the reduction is taken in two steps: for low incomes, the guaranteed pension is decreased by the full amount of the earnings-related pension; for higher incomes, the guaranteed pension is decreased by only 48 percent. This means that a single pensioner with a monthly earnings-related pension of SEK 10,959 or more received no guaranteed pension in 2011. For a married pensioner the corresponding income limit was SEK 9,713 (Pensionsmyndigheten, 2012a).

[25] This categorization should not be confused with the three *pillars* that make up the Swedish pension system as a whole. Next to the public national pension system, these include the occupational pension system and the private individual retirement accounts.

[26] *Garantipension*

[27] The 1994 Pension Agreement stated that the contribution rate to the individual account would be 2 %. However, increasing the contribution rate by 0,5 percentage points to 2,5 %, was a concession to the bourgeois parties for accepting the social democratic option on an issue related to individual contributions in 1998 (Marier, 2002).

[28] *Grundskyddet*

[29] The housing supplement (BTP) and the special housing supplement (SBTP) are usually seen as components of the basic security concept, as they are also paid out to ensure a minimum living of standard in retirement.

[30] Note that this index refers to the price base amount and not the "higher" price base amount, which is used in the ATP scheme.

Because the *folkpension* is abolished, the pension system no longer contains any "same for all", flat-rate benefit. Currently, approximately 30 % of all retirees collect at least some pension income from the guaranteed benefit, typically women with low prior labor-force attachment (Könberg et al., 2006). In order to claim the full minimum guarantee, the individual must have lived in Sweden for at least 40 years.

Means-tested benefits often entail more bureaucratic costs, but the administrative burden of the means-tested minimum guarantee is kept rather light by means of a straightforward reduction scheme against the earnings-related NDC component, *inkomstpension* (Pensionsmyndigheten, 2012a).[31] Table 6.1 contains an illustrative example of how the minimum guarantee is reduced against the *inkomstpension*.[32] The minimum guarantee decreases with the wage of the individual, reaching zero for a monthly wage of SEK 16 200 in 1998. The last column in the table highlights one of the major criticisms raised against the current minimum guarantee, namely that total net pension differs insignificantly between low-income earners and individuals who have not worked at all. These rules may make additional work seem pointless from a retirement perspective.

Table 6.1: **Reduction rates for the minimum guarantee against the *inkomstpension***

Initial wage (SEK/month)	Final wage (SEK/month)	Inkomst-pension (SEK/month)	Minimum guarantee	Gross pension	Net pension
0	0	0	6 461	6 461	4 694
3 300	6 600	3 822 (1,26)	2 639	6 461	4 694
5 200	10 600	6 067 (2,0)	1 561	7 628	5 584
6 500	13 200	7 583 (2,5)	834	8 417	6 186
7 700	15 800	9 100 (3,0)	106	9 206	6 752
8 000	16 200	9 329 (3,07)	0	9 320	6 827

Note: Based on 1998 BA. Individuals are assumed to be unmarried, have 42 years of earned pension rights and retire at 65. They face a municipal income tax of 31,66 % and the real wage growth is 2 %.

Source: Prop. 1997/98:152

The minimum guarantee is payable from age 65. The lack of an early withdrawal option was subject to hefty criticism, as increased flexibility had been one of the main issues in the pension debate prior to the reform. Under these rules,

[31] When the guaranteed pension is calculated, the Premium Pension is disregarded. Instead, the inkomstpension is calculated as if it had been earned at 18,5 % of the pension base, rather than 16 percent.

[32] The minimum guarantee is not reduced against the occupational pension and other private retirement savings. As a result, this example might underestimate the difference in net pension between workers and non-workers.

some individuals that retire before 65 run the risk of claiming a pension benefit that is actually lower than the minimum guarantee. This is due to the fact that the actuarially reduced *inkomstpension* will be reduced equally much as had the individual retired at 65.

Another quite intriguing aspect of the minimum guarantee is that the benefit is indexed to prices rather than to the real growth rate in the economy, to which the new NDC component is indexed. The reason for choosing different indexation measures is to reduce the role of the guaranteed benefit in times of high economic growth. When real growth is high, the value of the earnings-related pension will increase more than the price base amount that determines the size of the minimum guarantee. As a result, more pensioners will have an earnings-related pension income that exceeds the threshold for qualifying for the minimum guarantee. Conversely, a low real growth rate will make more pensioners eligible for the minimum guarantee on the margin. Even without inflation indexation, the role of the guaranteed benefit will be reduced over time since very few groups are expected to lack earnings-related or occupational pension benefits in the future. Increased labor force attachment among women and the fact that contributions are paid on almost all types of income - earnings, disability benefits, parental benefits, unemployment benefits, etc. - are the two most important driving factors behind this trend (Sundén, 2006).

A final important note on the guaranteed benefit regards its source of financing. Unlike the *inkomstpension*, which is financed by pension contributions, the minimum guarantee is financed by general tax revenue directly from the state budget. The implied fiscal burden will therefore be a function of the number of recipients, which in turn, as just discussed, depends on the growth rate in the economy. A low growth rate will decrease the earnings-related pension, make more pensioners eligible for the minimum guarantee and hence increase the financial burden of the pension system.

The NDC component, *Inkomstpensionen*

The main part of the new pension system is the NDC component, the *inkomstpension* (IGP). The *inkomstpension* replaces the ATP scheme as the most important earnings-related pension scheme and was designed to bring financial stability into the pension system. Whereas the ATP scheme was defined benefit (DB), the *inkomstpension* is based on defined contributions (DC), which reduces uncertainty about the size of future pension commitments for the authorities, as individual benefits are directly linked to accumulated pension contributions.The previous DC pension schemes, the most recent one being abolished in 1948, had been fully funded in the sense that contributions were recorded on individual accounts and the account values represented individuals' claims on future pension benefits and are usually referred to as financial defined contribution (FDC) pension schemes. The present NDC scheme also makes use of individual accounts, but contrary to the 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*. The main characteristics of the *inkomstpension* are discussed below.

Financing

The *inkomstpension* is financed by three different types of pension contributions; the general pension contribution, the employer's contribution and the state old-age contribution.[33] The general pension contribution is paid by all employees and amounts to 7 % of total wage income plus other social security benefits. The general contribution is paid on gross income up to a ceiling of 8,07 *income base amounts*[34] (IBA) and is deducted automatically from taxable income. This implies that the general contribution is in practice completely financed by general tax revenue. Since the general contribution is deducted from gross income to get pensionable income, total contributions and earned pension rights make up 18,5 % of pensionable income, but only 17,21 % of gross income. This implies that the largest pensionable income is 93 % of 8,07 IBA, that is 7,5 IBA. Annual earnings yield pension rights when they exceed the minimum income for the obligation to file a tax return, which as from 2003 is 42,3 %t of the current price base base amount. When the individual's income has exceeded this threshold, it is pension-qualifying from the first krona.

The employer's contribution is a payroll tax that amounts to 10,21 % of the wage of each employee.[35] In contrast to the general contribution, the employer's share is not limited by a ceiling, but is levied on all earnings. The contribution share that exceeds the ceiling for earned pension rights should therefore be regarded as a pure tax. If the individual is on parental leave, enrolled in the military or relies on sickness benefits or public student funds, he/she earns pension rights through the state old-age contribution of 18,5 % paid by the government. Of the total contribution rate of 18,5 %, 16 percentage points are allocated to the NDC component and 2,5 percentage points to the Premium Pension, which corresponds to 14,66 % and 2,28 % of total gross income respectively. For a monthly gross income of SEK 17 000, an annual contribution of SEK 29 906 (14,66 %) SEK 4 605 (2,28 %) is contributed to the NDC component and the Premium Pension respectively.

The individual contribution (16 %) to the *inkomstpension* is deposited in the four buffer funds of the public pension system: the First, Second, Third and Fourth National Pension Funds. Each fund receives one fourth of contributions and finances one fourth of pension disbursements. The monthly pension disbursements of the *inkomstpension* thus come from the buffer funds. In principle, the same money that was paid in during the month are paid out in pensions, making the *inkomstpension* a PAYG system (Pensionsmyndigheten, 2012a).

The new definition of pensionable income (gross income minus the general pension contribution) was controversial and was particularly criticized by various labor unions at the time of the implementation of the new pension system. In the

[33] *Allmän pensionsavgift, arbetsgivaravgift* and *statlig ålderspensionsavgift.*

[34] The income base amount replaced the price base amount (BA) as the measure used in calculations of pensionable income (PGI). The income ceiling for earned pension rights is now simply 7,5 IBA of pensionable income, instead of 7,5 BA. Table A.10 contains the income base amounts from 2001 to 2013.

[35] Self-employed persons pay an individual pension contribution of 7 % and a self-employment contribution of 10,21%.

ATP scheme, the individual earned pension points based on her gross income. In the present system, the income base, on which pension rights is calculated, is smaller, as the general pension contribution is deducted from the gross income share that is below the income ceiling to get pensionable income. In effect, this reduces the size of the pension for individuals with wages below the income ceiling of 7,5 IBA, whereas the pension for high-income earners is left unaffected. The policy makers motivated this change in the definition of pensionable income by referring to the fact that the general payroll tax, which also included the employer's contribution to the pension system, did not earn pension rights; then why should the general pension contribution?

Another important change in the concept of pensionable income is that the 15/30 rule was replaced by the life-income principle. The main objective of the life-income principle is to reinforce incentives to work; additional years' of work should translate into higher benefits. In the NDC scheme, pension rights are accumulated on all types of earnings from age 16, provided that they exceed 24 % of one BA. Income earned even after the age of 65 counts as pensionable income in contrast to the old ATP scheme. A worker can also start collecting benefits and then return to work and continue earning pension rights.

Benefits from the *inkomstpension* can be withdrawn from age 61 and workers have statutory rights to work until age 67. This means that the there is no formal retirement age in the new pension system and that individuals are very free to choose their own preferred retirement age. In contrast to a DB scheme, in which early retirement necessitates an actuarial reduction of the outgoing pension benefit (see table 4.2 for reduction rates in the old ATP scheme), the pension benefit that is paid out at, say, age 61 is calculated just like it would have been at age 65. However, "early" retirement comes at the cost of a significantly lower pension benefit, as several years of pensionable income are bygone.

Rate of return

The main problem of the ATP scheme was that benefits were indexed to prices rather than wages, which induced a negative relationship between the development of costs and economic growth. The policy makers have remedied this problem by letting the rate of return in the NDC scheme be determined by the per capita wage growth. One of the major political goals of the reform was to ensure a stable relationship between the the living standard of the working population and that of the current elderly, not overly sensitive to changes in economic growth as under the ATP scheme, which was achieved by tying pension rights and benefits to the growth in living standards for the working population. Initially, the policy makers considered using the change in the contribution wage sum (total wage growth) as the measure of the rate of return, as it provides a more relevant measure of the system's contribution base and financial capacity than the average wage growth. This measure would probably come closer to achieving the goal of system financial stability.[36] Another plausible alternative

[36]Auerbach and Lee (2009) shows that an NDC system in which rates of return are based on total rather than per capita economic growth is inherently more stable. They agree that basing the cohort rate of return r on the growth rate of the average wage g might be more comprehensible from an individual worker's perspective, but basing the cohort's rate of return

would be a combined price-wage index. The use of a wage index for benefits in payment places some of aggregate wage growth risk on retirees. A combined price-wage index would place less risk on retirees, but less indexing to wages, and so less correlation with revenues, would also increase the probability of a need for legislative intervention.

However, keeping a tight link between the living standard of the young and the old was prioritized and was assessed to be best achieved by indexing benefits to average wage growth. To ensure financial stability, the policy-makers added an automatic mechanism that abandons indexation by average wage growth when the stability of the system is threatened (see "automatic balancing" below). The individual does not earn pension *points* as in the old ATP scheme. Instead, pension rights are denoted in Swedish kronor (SEK), which are adjusted annually according to an income index that reflects the average wage growth.[37] The annual change in the income index is based on the average wage growth during the last three years, the price change during the last year, and an adjustment of previous income forecasts (Pensionsmyndigheten, 2012a). The expression for the income index for year t is:

$$I_t = \left(\frac{u_{t-1}}{u_{t-4}}\frac{CPI_{t-4}}{CPI_{t-1}}\right)^{1/3}\left(\frac{CPI_{t-1}}{CPI_{t-2}}\right) kI_{t-1} \tag{6.1}$$

where $u_t = Y_t/N_t; Y_t$ is the total pension-qualifying income without ceiling limitation, persons aged 16-64 in year t, after deduction of the individual pension contribution; N_t the number of persons aged 16-64 with pension-qualifying income in year t; CPI_t the consumer price index for June of year t; and k the adjustment factor for error estimation of u_{t-1}. Thus, the account balance increases with indexation from one year to the next, and with new contributions from the current year.

The *inkomstpension* also includes a mechanism that adjusts the pension benefits to changes in average life expectancy. When the individual starts to withdraw benefits from the *inkomstpension*, which can be done at any time from age 61, annual benefits are calculated by dividing the balance in the individual notional account by an annuity divisor[39]. The divisor is determined by average life expectancy at retirement for a given cohort at the given retirement age[40] and an imputed real return of 1,6 %. This imputed rate of return of 1,6 % works as an "advance payment" and is paid out at retirement, which results in a forward shifting of consumption possibilities. The initial benefit at retirement is thus higher than if benefits were adjusted fully for economic growth each

instead on the growth rate of the covered payroll, $n + g$, would be preferable, since it would automatically take into account another determinant of the system's capacity, the growth rate of the workforce.

[37]The responsibility of calculating the income index has been with the central government up until 2010, when the Swedish Pensions Agency[38], at the request of the government, took over. The income index is presented to the government in August the year before the index is implemented.

[39]*Delningstal*. See Pensionsmyndigheten (2012a) for the mathematical representation of the annuity divisor.

[40]If the individual retires before age 65, preliminary annuity divisors are used. When the age cohort turns 65, the definite annuity divisor is determined.

year. As long as life expectancy continues to increase, future cohorts will receive ever smaller monthly pension payments, as earned pension rights are distributed across more years.

The benefit reductions caused by increasing life expectancy are quite substantial as illustrated by table 6.2. If those born in 1995 are to have the same pension level as those born in 1930, the anticipated increase in remaining life expectancy at age 65 must be spent working further. For birth cohort 1995 the duration of working life must be increased to 68 years and 10 months. At the same time, those born in 1990, despite the higher retirement age, can look forward to being pensioners for 1 year and 8 months longer than persons born 1930.

Table 6.2: **Average Life Expectancy and Retirement Age**

Cohort born in	...reaches 65 in	Life expectancy at 65	Alternative age	Time spent retired of retirement	...compared to birth cohort 1930
1930	1995	82 yr 5 mo	65 yr	17 yr 5 mo	
1940	2005	83 yr 7 mo	65 yr 2 mo	18 yr 5 mo	1 yr
1945	2010	84 yr 3 mo	65 yr 9 mo	18 yr 8 mo	1 yr 3 mo
1950	2015	84 yr 9 mo	66 yr 4 mo	18 yr 8 mo	1 yr 3 mo
1955	2020	85 yr 2 mo	67 yr 2 mo	18 yr 5 mo	1 yr
1960	2025	85 yr 7 mo	67 yr 6 mo	18 yr 7 mo	1 yr 2 mo
1965	2030	86 yr	67 yr 9 mo	18 yr 8 mo	1 yr 3 mo
1970	2035	86 yr 3 mo	68 yr	18 yr 9 mo	1 yr 4 mo
1975	2040	86 yr 7 mo	68 yr 3 mo	18 yr 10 mo	1 yr 5 mo
1980	2045	86 yr 10 mo	68 yr 5 mo	18 yr 11 mo	1 yr 6 mo
1985	2050	87 yr	68 yr 7 mo	18 yr 11 mo	1 yr 6 mo
1990	2055	87 yr 3 mo	68 yr 8 mo	19 yr 1 mo	1 yr 8 mo
1995	2060	87 yr 5 mo	68 yr 10 mo	19 yr 1 mo	1 yr 8 mo

Source: Orange report - Annual report of the Swedish pension system (2011)

By means of the annuity divisor, the NDC (and FDC) accounts are converted into annuities using factors that depend on age and cohort, but not on gender or earnings level. Since women and high income earners, on average, live longer than men and low income earners respectively, the new pension system redistribute from men to women, and within each gender, from low income earners to high income earners. There is considerable awareness of the difference across men and women, but the difference by earnings level has not received as much attention. The ATP scheme was partially abolished on the grounds that its 15-year rule implied significant redistribution from low to high income earners. The introduction of the life-income principle and the fact that the richest pay contributions that do not increase benefits, indeed solved part of this problem, but in the middle of the income distribution, the redistribution within each gender is still from low to high income earners. Moreover, those with shorter life expectancy will have an incentive to claim early, while those with longer life expectancy will have an incentive to delay claiming. (Diamond, 1999).

An important implication of the indexation to average wage growth is that the real value of the pensions are secured. However, pensioners cannot expect a raise in their standard of living, since the *inkomstpension* contains a ceiling that puts a cap on the real growth rate of pensions. This ceiling is called the "growth norm"[41] and reflects the future expected growth rate in the economy. This ceiling is necessary to maintain financial stability in the system. Since the calculation of the annuity takes the imputed rate of return of 1,6 % into account, implying that pensions are indexed over the lifetime at this rate, pensions cannot be allowed to increase at this rate if real long-term growth falls short of 1,6 %. The ceiling, or the "growth norm", implies that changes in the income index greater than 1,6 % do not induce a revaluation of the pension benefits, as they are indexed only with the difference between the growth norm of 1,6 % and the *actual* outcome for per capita real wages. The change in the value of the pensions is determined by the difference between the actual growth rate and the growth norm plus a compensation for changes in the consumer prices (Palmer, 2002). This indexation procedure is referred to as "adjustment indexation"[42].

For example, if wage growth is 1,6 % in year t, then the pension annuity level would remain constant in real terms in year $t+1$. However, if the realized growth of wage per worker in year t were actually 1,3 %, the annuity would be 0,3 % lower in real terms in year $t+1$ than in year t. If it were 1,3 % in every year, the annuity would fall in real terms at a rate of 0,3 % per year throughout the individual's life.[43] Even though the real income of pensioners do not increase as fast as the real income of the working population during periods of high growth, they do not have to fear declining purchasing power during periods of low growth. The purpose of the growth norm mechanism is therefore to smooth the size of the pension during retirement and gives the same the result as straightforward wage indexation over a worker's lifetime (Palmer, 2002).

Having described all the important features of the NDC scheme, the monthly pension payment from the *inkomstpension* of an individual is calculated in the following way:

- When the individual starts to withdraw benefits, the earned pension rights are divided by the annuity divisor.
  Monthly pension: $M = \frac{P}{d*12}$, where P is accumulated pension rights and d is the annuity divisor

- The real value of the pension is then secured by the adjustment indexation.
  Adjustment indexation (at the end of year t-1): $i = \frac{I_t}{I_{t-1}} * 1,016$, where I_t is the income index for year t and given by equation 6.1.[44]

[41] *Tillväxtnormen*

[42] *Följsamhetsindexering*

[43] Another example of adjustment indexation: if the actual outcome for per capita wage growth is 2 % and consumer prices change by 1 %, benefits will be adjusted by 1,4 % (0,02-0,016+0,01=0,014).

[44] The income index is replaced by the balance index when the automatic balance mechanism is activated

As we know, pension systems can be classified according to how they adjust to financial realizations. Pure defined contribution schemes adjust benefits in response to changing financial circumstances, whereas defined benefit schemes have endogenous contribution rates (Lindbeck and Persson, 2003). Thus, if current contributions are insufficient to finance the system's liabilities, politicians can respond by either raising taxes (contribution rates) or reducing benefits. A pension system can contain both types of adjustment mechanisms. However, the Swedish NDC scheme does 100 % of the adjustment on the side of benefits and zero on the side of taxes. In other words, all of the risk of future outcomes is therefore put on the side of benefits and none on the side of taxes. Avoiding arbitrary tax changes and too much of new legislation indeed makes the system more predictable and transparent, especially for employers, but it should be balanced against the risks falling on the elderly.

The automatic balance mechanism

The indexation to per capita wage growth does not make the NDC scheme immune to financial instability. The system is still a PAYG system, which means that the government must cover its pension payments from annual contributions. Above all, there are two features in the design of the system that could introduce financial instability: the indexation of benefits to average wage growth rather than to the growth in the wage sum, and the use of fixed divisors in the annuity calculations (Sundén, 2006).

In contrast to contributions, which are determined by the growth in the total wage bill, earned pension rights and current benefits rise with the growth in the level of per capita earnings. If the rate of growth of the wage bill would be slower than that of average wages, for instance caused by a fall in the size of the work force, total benefits would grow faster than the contributions financing them, which could induce financial instability.

The second feature that could cause financial instability is the use of fixed annuity divisors. The annuity for a cohort reaching age 65 is calculated using cross-section estimates of cohort life expectancy based on actual longevity in the immediate past, rather than on a projection of that cohort's life expectancy. Since the annuity divisor is not adjusted to take into account changes in longevity *ex post*, total benefit payments for the cohort will exceed their total contributions if they live longer than expected.

If the contribution base is weak and there are significant fiscal imbalances in the system, increasing the contribution rate is not a viable option, since higher payments automatically boost benefit promises. Therefore, the policy makers designed an automatic balance mechanism, which would temporarily deactivate per capita wage indexation in periods of financial stress. The mechanism works automatically and does not require any political decisions. This goes in line with the objective of the pension reform to create a pension system autonomous from discretionary changes and minimize the risk of manipulation for political gain.[45]

[45] Automatic adjustment does indeed have its advantages, but it is not clear whether complete autonomy is desirable. Diamond (2006) illustrates the tradeoff in determining the optimal degree of autonomy by comparing the reliance on fully automatic adjustment rather than periodic new legislation to a familiar distinction in macroeconomics - rules vs. discretion for

The automatic balance mechanism requires that a measure of financial stability can be calculated.[46] The idea is that the balance mechanism is activated when this measure of financial stability falls below a certain threshold. The measure is called the *balance ratio*[47] and is calculated annually based on a financial balance sheet constructed specifically for the NDC scheme. The balance ratio relates the pension system's assets to its liabilities and is defined as follows:

$$Balance\ ratio = \frac{(Capitalized\ value\ of\ contributions + Buffer\ funds)}{Pension\ liability} \tag{6.2}$$

The system assets consist of the capitalized value of contributions and the current value of the buffer funds. The capitalized value of contributions is equal to the pension benefits that the annual contributions could finance in the long run. It is derived by multiplying annual contributions by the turnover duration, which is the expected average time between when a contributions is made to the system and when the benefit based on that contributions is paid out. The expected duration is currently set at 31,7 years, but is regularly recalculated based on the average age at which contributions are paid and pensions disbursed (Baroni and Axelson, 2011). The pension liability is the current vested liability, which implies that the calculation of the balance ratio involves only current values and no projections about future assets and liabilities.

If for some reason the balance ratio falls below one, the automatic balance mechanism is activated, as shown in figure 6.1. Basically, this consists of reducing the growth in pension liability, that is, the outgoing pension payments and the contributors' notional pension capital. Thus, the "balance index" rather than the average change in the average wage level (expressed by the income index) is used to revalue the outgoing pension payments and the notional account of each contributor (Settergren, 2001).

The balance index for year t (BI_t) is calculated by multiplying the balance ratio in year t (BR_t) by the change in the income index between two years:

$$BI_t = \frac{I_{t+i}}{I_{t+i-1}} BR_t \tag{6.3}$$

For example, if the balance ratio falls to 0,99 at the same time as the income index increases from 100 to 104, earned pension rights increases by 2,96 % instead

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monetary policy:

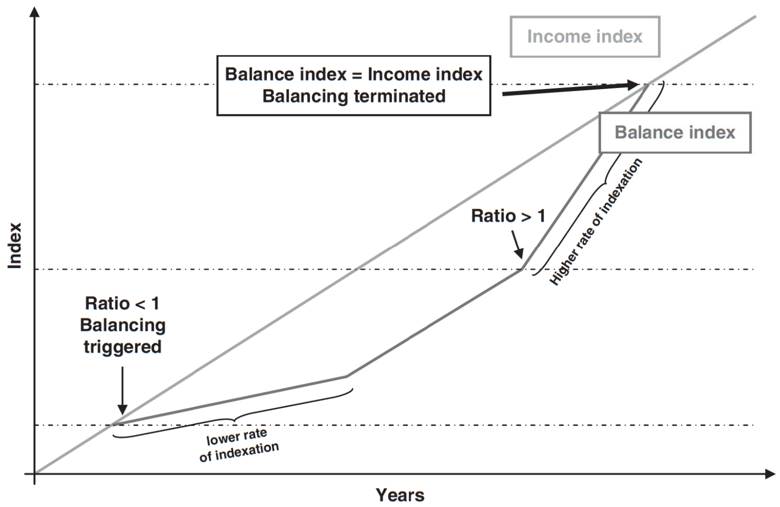
> Parallel issues include the concern about setting rules without fully knowing how the economy adjusts to the policy actions and recognition that the economy may evolve so that currently good rules may become less so in the future (Diamond, 2006, p.21).

A well-structured NDC scheme, with a decent size buffer stock of assets, should have little probability of needing legislative intervention as long as economic growth is large enough (Diamond, 2006). The adjustment of benefits in the NDC scheme is nonetheless completely automatic.

[46] Prop. 2000/01:70 - *Automatisk balansering av ålderspensionssystemet* - contains technical details of how the automatic balance mechanism works.

[47] *Balanstalet*

Figure 6.1: The automatic balance mechanism



Source: Adopted from Orange annual report 2011

of 4 %. In year $t+i$ the balance index is equal to:

$$BI_{t+i} = \frac{I_{t+i}}{I_{t+i-1}} BR_{t+i} BI_{t+i-1} = I_{t+i} \prod_{i=0}^{i} BR_{t+i} \tag{6.4}$$

If the balance ratio is greater than 1 when the mechanism is activated, the revaluation of the contributors' notional capital and the outgoing pension payments will exceed the change in the average wage level. This will continue until the balance index reaches the level of the income index. Pensions will therefore reach the same value they would have had if the mechanism had not been activated (Vidal-Meliá et al., 2009). Thus, the balance mechanism is asymmetric, taking effect only once the balance ratio falls below 1,0, but, once in effect, it does provide for "catch-up" periods of faster growth.

As shown by table 6.3, the balance ratio has fallen below 1 at two occasions since its introduction in 2001; in 2010 and 2011.

The activation of the balance mechanism in 2010 was mainly due to the financial crisis that caused real wage stagnation and increasing unemployment during 2008-2009. Since the growth norm was larger than the actual per capita wage growth, the real value of pensions rose faster than the average real wage rate in the economy, which in turn meant that the contribution base, that is total wages, was diminished relative to current pension liability. The major stock market decline during the financial crisis also contributed to the activation of the balance mechanism. The market value of the investments of the National Pension Funds fell sharply, which worsened the financial position of the NDC scheme (Pensionsmyndigheten, 2012a). The timing of the first activation of the

Table 6.3: **Balance ratio, 2001-2013**

Year	Balance ratio	Year	Balance ratio
2001	1,0402	2007	1,0044
2002	1,0090	2008	1,0149
2003	1,0097	2009	1,0026
2004	1,0014	2010	0,9826
2005	1,0097	2011	0,9549
2006	1,0014	2012	1,0024
		2013	1,0198

Source: The Swedish Pensions Agency

”pension brake” was quite bad for the incumbent right-wing government, as parliamentary elections were to be held in 2010. To compensate the pensioners, the government issued two increases in the basic deduction on pension income for individuals above age 65 in 2010 and 2011 respectively, which more or less neutralizes the intended effect of the automatic balance mechanism.

Projections show that the automatic balance mechanism will most likely be activated again in 2014. Something that was supposed to happen only in exceptional cases appears to be a recurrent theme in the new pension system. At the time of writing of this report, there are political discussions of how to reduce the sensitivity of the NDC scheme to fluctuations in the economy. One suggestion is to reduce the share of the contribution rate that is credited to the Premium Pension by 0,5 percentage points and instead put this money into the NDC scheme. Quite surprisingly, the reform proposal has been embraced by several members of the bourgeois, parties that historically have emphasized the advantages of fully funded pension systems and to a great degree helped design the current Premium Pension scheme. Whether this change is a necessary and valid step to diminish the sensitivity of the NDC scheme to fluctuations in the economy or just another illustrative example of how politicians easily can circumvent to autonomy of the current pension system in order to please important electoral groups is up for interpretation.

Thus, although the automatic balance mechanism was designed to be autonomous from discretionary changes by politicians, there seems to be many alternate ways to affect the size of the current pensions in the short run. Although the automatic balance mechanism was intended to be activated only in times of severe economic hardship (and the financial crisis must indeed be classified as such!) to restore balance between assets and current pension liability, it should be noted that projections made before 2008 showed that the balance ratio would remain close to 1 in the near future with a *few short periods* with automatic balancing. Moreover, as the baby-boom generation moves through the system, the financial status will be strengthened after 2020. According to current projections, revenue will exceed expenditure after 2035 in the base scenario.[48]

[48]Projections about the future state of the public pension system are calculated annually by

Another recent suggestion on how to reduce the sensitivity of the NDC scheme to fluctuations in the economy is purely technical and was presented by the Swedish Pensions Agency during the spring 2013 (Pensionsmyndigheten, 2013). When the balance mechanism is activated, benefits are indexed to the income growth during the last three years. This lag creates large benefit variations during adjustment periods, which implies that pension benefits may be adjusted in the opposite direction to the growth rate of the economy. This happened in 2010 and 2011, when the economy exhibited positive growth rates and the *inkomstpension* was adjusted downwards. It is more intuitive to think about pensions that are automatically reduced in bad times and automatically increased in good times. A way to accomplish this would be to index benefits to last year's wages and a forecast of next year's wages during periods of adjustment. This would lower the variation in the *inkomstpension* when the balance mechanism is activated and thereby help prevent current pensioners from feeling unfairly treated by the pension system.

However, there is a downside to this suggestion. By removing the counter-cyclical behavior in the *inkomstpension* that is generated by the balance mechanism, the pension system loses an important component of risk distribution. The creators of the pension system argued that one reason for establishing the Premium Pension as complement to the NDC scheme was that variations over the years in the growth of earnings and return on capital could offset each other. This distribution of risk has worked as intended since the new pension system was launched in year 2000 (Pensionsmyndigheten, 2012a).[49] However, since earned pension rights in the Premium Pension are converted to a guaranteed life-long annuity at retirement, stock market fluctuations do not directly affect the income of a retired individual.[50] Thus, the only source of major negative shocks to the size of the pension income is the automatic balance mechanism. It is therefore politically difficult to argue in favor of keeping the current design of the balance mechanism, as its interaction with the Premium Pension mainly aims at spreading the risk for those who still contribute, who are not as engaged in the pension debate as those already retired (Author interview, Bo Könberg, 19 April 2013).

The balance mechanism does indeed have the convenient property of providing financial stability in the pension system in the long run, but it is wrong

the Swedish Pensions Agency. Projections are made based on different assumptions about the demographic development and the performance of the economy. The Swedish Pensions Agency define an "optimistic", a "pessimistic" and a "base" scenario. In the base scenario, the main alternative in Statistics Sweden's latest population projection is used. The employment rate is expected to increase and then remain constant after 2030. Total employment will increase from 80,1 to 82,3 % in 2030. Real growth in average income is assumed to average 1,8 % per year. The real rate of return on the buffer fund is assumed to remain unchanged at 3,25 % per year (see Pensionsmyndigheten (2012a) for more details these scenarios).

[49] For example, in 2008 the relatively substantial increase in the income index compensated for the negative return on capital and resulted in a relatively good overall return for the pension system. In 2009 and 2010 the return on capital was positive and thus helped to offset the negative effect of subsequent balancing for 2010 and 2011. In some cases, of course, declines in asset values will inevitably coincide with decreases in the income/balance index.

[50] This is only true if the Premium Pension is drawn as *conventional insurance* and not as *fund insurance* (see section 6.2 for more details on how the Premium Pension works).

to analyze policy by considering only the long run, not including the short-run costs and benefits. Little is known about the short-run costs and benefits of the balance mechanism, especially in terms of intra- and intergenerational redistribution. One attempt has been done by Auerbach and Lee (2011), who analyze how public pension structures spread the risks arising from demographic and economic shocks across generations, focusing especially on a comparison between the public pension systems in Sweden, Germany and the US. Among all, they look at a measure of horizontal equity, that is, the relative well-being of individuals of similar ages, to shed light on this issue. The results show that the Swedish pension system treats contemporaneous generations smoother than the other pension systems. The variance in pension benefits across individuals of similar ages is quite low, which will make people think of the Swedish pension system as "fair". The Swedish pension system also performs relatively well using a general measure of social welfare, but the situation is worsened when transition generations are included. Here the balance mechanism plays a key role. As the Swedish system accumulates as a buffer during the initial phase, the balancing mechanism is frequently in place. The initial cohorts are therefore more likely to suffer under this initial adjustment process and to get little benefit from the subsequent reduction in volatility that this buffer provides (Auerbach and Lee, 2011). Thus, the low variance in the size of the benefits across cohorts and generations may come partially at the cost of transition generations having to experience a frequent activation of the balance mechanism. Since the pension brake is asymmetric the need for frequent adjustments in the future will have been alleviated by the accumulation of a buffer stock of assets.

The buffer funds

The National Pension Funds, or the buffer funds, are an integral part of the NDC scheme, but also played an important role in the implementation of the new pension system. In the short term, the funds alleviated the pressures from the demographic hangover of the old system (more on this in section 6.2). Money was also transferred from the funds to the general budget to help offset the financial burden implied by the new pension system. The pension reform namely implied several shifts of the financial responsibility of different pension components between the general state budget and the separate pension systems. The shifts went in both directions, but the net effect was to the disadvantage of the general budget, which would need considerable monetary support from the National Pension Funds in order to cope with the increasing costs of the pension system.

Most notably, two programs, the disability insurance and survivor pension, that were previously integrated with the old-age system and financed through payroll taxes were detached from the old-age system and are now financed through general tax revenue. At the same time, however, the financial responsibility of the *folkpension*, which would be gradually phased out, was shifted from the general budget to the old-age system. Together with the increase in the general contribution rate, which is fully deductible and hence completely financed by the government, and the fact that the government must pay pension contributions on government transfers, such as unemployment and parental leave benefits, the implementation of the new pension system implied a significant short-term cost to the general budget. Consequently, the net effect on the buffer funds was positive, which freed a portion of the existing employer payroll taxes for the NDC scheme. To help offset the increased financial burden on the general budget and, 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. At the time of the reform, the funds could cover more than five years of benefit payments. After the transfers in 2003, taking into account the funds' yields during the period, assets in the buffer were some 3,7 times annual benefit payments (Könberg et al., 2006).

The individual account - the Premium Pension

The Premium Pension is the third component of the present public pension system. Even though mandatory individual accounts were opposed by some parties, the Premium Pension eventually became part of the great pension compromise in 1994. The Premium Pension was created mainly for three purposes. Firstly, funded individual accounts were believed to increase overall savings in Sweden. However, this will only happen if the introduction of individual accounts constitutes new savings and does not crowd out private pension and non-pension savings one-to-one or more. Secondly, the policy makers wanted to allow participants to take account of the higher return in the capital markets as well as to tailor part of their pension to their risk preferences. Finally, an FDC scheme is inherently immune against financial instability, as an individual's pension benefit is directly financed by her past accumulated contributions. The first investment selections in the Premium Pension plan took place in the fall of 2000, which is known as the "Big Bang" in Sweden's financial sector (Palme et al., 2007).

Institutional setting

The Premium Pension constitutes a relatively small portion of the new system: of the 18,5 % total contribution rate, 2,5 percentage points are allocated to individual financial accounts in the FDC scheme. A new government agency, the Premium Pension Agency[51] (PPM), was set up in 1998 to administer the plan and act as a clearing house.[52] It was also supposed to provide participants with sufficient information on investment possibilities, but also on the public pension system in general. The PPM was abolished on December 31 2009 and the agency's former administrative obligations were taken over by the new Swedish Pensions Agency.

Contributions are withheld by employers and submitted to the National Tax Authority. Since employers make monthly tax and and contribution payments, but only report information on individual earnings on an annual basis, individual pension rights cannot be established until each worker has filed her income tax returns. Once the income tax returns have been consolidated with the employers'

[51] *Premiepensionsmyndigheten*

[52] The clearing-house model was chosen to keep administrative costs down by drawing on economies of scale in administration.

reports, individual pension rights are determined and participants select how to invest their funds. The Swedish Pensions Agency keeps track of all individual accounts and execute desired portfolio investments. Individuals are allowed to change funds on a daily basis and can choose up to five funds from among registered domestic and international funds. The number of participating funds has increased from about 450 to 800 since the first investment selections were made in 2000. The reason for this excessive supply of pension funds, over which the average individual hardly can get an overview, is that the policy makers wanted to offer investors a broad choice in the Premium Pension. The savers would also benefit from a large variety of funds, as they are expected to put together a diversified portfolio suitable for retirement savings of their own (Sundén, 2006). Therefore, any fund company licensed to do business in Sweden is allowed to participate in the system, but must first sign a contract with the Swedish Pensions Agency that specifies reporting requirements and the fee structure[53].

Benefits in the Premium Pension Plan are paid out annually and can be withdrawn from age 61, independently from or in conjunction with claiming NDC annuity. At retirement, the Premium Pension can be drawn as either conventional insurance or fund insurance. In both forms of insurance, the value of the pension account is divided by an annuity divisor, in the same way as with the inkomstpension. But for the Premium Pension, unlike the *inkomstpension*, the annuity divisor is based on forecasts of future life expectancy. If the Premium Pension is drawn in the form of conventional insurance, the pension is calculated as a guaranteed life-long annuity payable in nominal monthly instalments. The Swedish Pensions Agency assumes responsibility for the investment as well as the financial risk. Fund insurance means that the pension savings remain in the Premium Pension funds chosen by the insured. Variations in prices of these funds affect the value of the following year's Premium Pension (Pensionsmyndigheten, 2012a).

Similar to the *inkomstpension*, the Premium Pension puts the risk on the side of benefits. Worker choice in the Premium Pension may thus be seen as another unnecessary source of risk for the elderly. However, the Premium Pension can also be seen as a risk-spreading device, since it implies that the rate of return on at least some part of an individual's total contributions to the public pension system is not dependent on the notional interest in the NDC scheme, namely the average wage growth.

In contrast to the *inkomstpension*, the Premium Pension includes a survivor insurance component. At retirement, an individual who fulfills certain relationship criteria chooses whether to participate in this insurance program or not. The survivor insurance implies that all assets in the individual pension account will be paid out as long as someone in the partnership lives. Participation does not reduce the value of the Premium Pension, but the monthly pension amount that

[53]The total fee in the Premium Pension consists of two parts: a money management fee and a fixed administrative fee charged by the PPM, currently 0,12 % of individual assets. Since the administration of the accounts is handled by the agency, the actual costs for fund managers should be lower than the costs for administrating normal funds. They must therefore rebate to the Swedish Pensions Agency a share of the fees, which for an average participant results in a total cost of approximately 0,3 % of assets, or more than SEK 2000 million.

is paid out will decrease as a result of participation. The size of the decrease depends positively on the age difference between the partners. The Premium Pension also allows for joint-life annuitization (with spouses or children) and transfers of pension rights between spouses. Neither of these options are available in the *inkomstpension*.

It seems rather arbitrary that the FDC scheme provides more options when it comes to pension claiming than the NDC scheme. The policy makers want individuals to think of the accounts in the NDC and FDC schemes as belonging to themselves. An individual can at any time observe her notional (and financial) pension wealth and a prognosis of how much he/she will receive from the public pension scheme after retirement. An important question is then to what extent the policy makers can and should put restrictions on how the pension can be claimed.

The Default Fund

All individuals cannot be expected to participate actively in a mandatory financial defined contribution scheme, which is why the government must offer passive savers a default option. When the Premium Pension was launched a default fund, called *Premiesparfonden*, was set up to handle contributions paid by participants who did not choose any other fund. Initially, reformers had suggested that the default should be a low-risk fund mostly invested in interest-earning assets. However, policy makers were concerned that such a a strategy would have a negative effect on the distribution of benefits, as an adverse selection of low-income earners into the default was a likely scenario. The asset composition of the default fund was thus constructed to achieve a high long-run rate of return at an overall low risk level. From 2000 to the end of 2009, the average rate of return of the default fund exceeded the average rate of return in the Premium Pension scheme by 1,8 % (AP7, 2013b). During this period, Sweden underwent two major economic downturns, the IT-crisis in 2001 and the financial crisis in 2008, which caused large fluctuations in the default fund, as shown by table A.6 in the appendix.

The default fund, *Premiesparfonden*, was abolished in May 2010 and was replaced by an equity fund, the *AP7 Aktiefond*, and an interest-earning fund, the *AP7 Räntefond*. These two funds make up the basis of what the government offers passive savers and participants who want to make an active choice but also desire government involvement in the management. The equity fund and the interest-earning fund can be combined in different ways to accommodate the risk preferences of the individual. The contributions of the default savers are invested in the so called *AP7 Såfa*, which automatically changes the risk composition of the portfolio with the age of the individual. Until the individual turns 55, all contributions are invested in the equity fund to allow for a high rate of return. As retirement draws nearer, the risk level is automatically adjusted downwards by letting the share of total portfolio assets invested in the interest-earning fund rise. This default fund design helps overcome the potential problem of adverse selection of low-income workers into a low-risk default fund. By exposing all default fund participants to a higher risk, policy makers also hoped to increase the number of "active" savers. The goal of the new default fund is to achieve a rate of return that exceeds the average rate of return of the private funds within the Premium Pension. Between its introduction in May 2010 and March 2013, *AP7 Såfa* increased 30,6 %, almost 15 percentage points more than the private funds in the Premium Pension during the same period (AP7, 2013a). Although measured during a very short time period, this suggests that being a passive saver does not seem to be a very bad idea at all.

The relative success of passive savers and the gradual realization that making investment decisions is complicated, have had a profound impact on individual investment behavior as well as on the way the Premium Pension is promoted by the government. When the Premium Pension was launched, the government encouraged participants to make active choices. Participants were in fact given the impression that their opportunity to affect their pension benefits was given up by investing in the default fund. As a result, more than two-thirds of participants made active choices, of which 75 % invested in equity funds and on average chose 3,4 funds (Palme et al., 2007). The share of pension savers that actively choose their own portfolio mix in the year they become eligible has declined steadily ever since, reaching 18 % in 2001, 8 % in 2005 and 1,5 % in 2011. At the end of 2011, 58 % of all pension savers had at some point made at least one active investment choice, the rest having their assets in the default fund (Pensionsmyndigheten, 2012b).

Various reasons for the drop in the share of new savers that make an active investment choice, which, according to some people, threatens the legitimacy of the Premium Pension, have been proposed. The most popular reasons that have been put forward are the excessive amount of selectable private funds, gradually reduced media exposure of the Premium Pension and the fact that new entrants after 2000 are mostly young workers who are far from retirement. Furthermore, the steadily increasing number of passive savers, referred to as "idlers"[54], may result from the fact that the default fund has performed better than the average portfolio and also charges relatively low management fees. Since the Premium Pension was launched right before the outbreak of the IT-crisis in 2001, large groups of workers experienced poor outcomes during the system's first several years and the default plan looked as a better alternative than an active investment strategy. This development underscored the the importance of a well-designed default plan. Rather than encouraging participants to make active portfolio choices, the authorities nowadays focus on the long-run performance of the default fund and improving the financial knowledge of the public so that participants can make good investment choices (Sundén, 2006).[55]

Transition rules

Historically, it has always been easier to move from a fully funded scheme to a PAYG scheme than vice versa. A financial defined contribution scheme requires a full working life to come into full effect, whereas benefits from a PAYG system

[54] *Soffliggare*

[55] For more information on investment behavior in the Premium Pension, see Engström and Westerberg (2003), Palme et al. (2004) and Säve-Söderbergh (2012).

basically can be withdrawn as soon as the system has been put in place. In Sweden, the fully funded component that was introduced in 1913 (*avgiftspension*) was gradually reduced and completely abandoned in 1948. However, the new notional defined contribution (NDC) concept helps overcome the political and financial problems that are associated with a switch from a PAYG to a DC pension system, since an NDC scheme can be introduced fully at any time. The two most important design issues in introducing an NDC scheme are the conversion of rights acquired from the previous system and the speed of conversion.[56]

Since accounts are not financial in the NDC framework, it is possible to convert rights acquired from previous years of coverage in a PAYG, non-financial defined benefit- scheme directly into NDC rights. The major issue is then how rights acquired in the old system are to be recognized in the new system, which also raises the question of what are acquired rights and how these are treated fairly. Palmer (2006) outlines two principles for such conversion:

- *Acquired rights principle* - A fair transition to a new system preserves acquired rights.
- *Contribution principle* - A fair transition to a new system gives rights based on individual contributions already paid, including a relevant rate of return. This is the NDC princple.

The first principle was rejected by the Swedish policy makers, because it would preserve the tax on future generations generated by a steady increase in longevity that was embodied in the defined benefit ATP scheme. Such conversion principle would be highly inconsistent with one of the major objectives of the pension reform, namely to abolish the tax on future generations implied by increasing life expectancy. The contribution principle honors contribution payments actually paid prior to the time of conversion. Consequently, the initial value of earned pension rights in the NDC scheme, referred to as *initial capital*, equals what individuals have paid in contributions. Of the five countries that introduced NDC in the 1990s, three (Sweden, Poland and Latvia) chose to calculate initial capital and were thus able to embark on a relatively rapid transition to an NDC pension system, whereas the other two (Kyrgyz Republic and Italy) did not, and instead chose a slow pace of transition.

In Sweden, the calculation of initial capital was based on computerized records of individual earnings from 1960. These records were used to create individual notional accounts from earnings histories and an index based on the covered wage per capita was used to create account values. A contribution rate of 18,5 % applied for historical accounts from 1960 to 1994, similar to the present contribution rates to the Premium Pension and the *inkomstpension* combined.

The second major issue in NDC conversion is how fast the new pension scheme should be phased in. Policy makers face an important trade-off when choosing the length of the transition period. A short transition period will alleviate the burden of future generations of workers, The transition to the new system will take place over 16 years. The first cohort to participate in the system is the

[56]See Palmer (2006) for a detailed discussion on issues and models of conversion to NDCs.

group born in 1938; it will receive one-fifth of its benefit from the new system and four-fifths from the old system. Each cohort thereafter will then increase its participation in the new system by 1/20, so that those born in 1954 or later will participate only in the new system. In 2040, benefits will be completely paid from the new system Sundén (2006).

Other properties of the new pension system

Survivor benefits

In the previous pension system, the survivor benefits were integrated parts of the *folkpension* and the ATP. In the new public pension system, only the Premium Pension explicitly contains a survivor component. Instead, today's survivor benefits are grouped together and are commonly referred to as *survivor pension*[57]. Apart from the widow pension, which is being phased out since 1990, the survivor pension contains two different benefits: the child benefit and the "conversion" pension[58]. The child benefit is paid out to children under 18 who have lost their father or mother or both parents. The size of the child benefit is based on the deceased parent's potential pension right earnings within the NDC scheme. The conversion pension is paid out to registered partners or married individuals under 65 whose husband or wife has died. To be eligible, the recipient must have lived together with her partner during the last five years and also housed a child under 18, of whom someone in the partnership was in custody.

Housing supplement

The housing supplement consists of two parts: the *housing supplement*[59] and the *special housing supplement*[60]. Approximately 250 000 pensioners receive one or both supplements, which to many constitute an important share of total pension income. Both supplements are exempt from tax and are financed by general tax revenue. The BTP targets low-income individuals who have turned 65 and claimed full public pension. The BTP is means-tested and is reduced against income that exceeds 2,17 BA (SEK 7957 per month) and 1,935 (SEK 7095 per month) BA for unmarried and married pensioners respectively. The main determinants of the size of the housing supplement are the housing costs and the pension income, but bank assets that exceed SEK 100 000 will also reduce the BTP. Currently, the maximum monthly benefit amounts to SEK 4820 and SEK 2495 for respective group. The SBTP supplements the BTP and is paid out to pensioners whose net of housing cost income is below some threshold that marks a reasonable standard of living. Housing supplements have existed in some form since 1936 and provide an efficient method for politicians to affect the living standard of the current pensioners. Increasing the generosity of the housing supplements is politically relatively easy and can be done to mitigate discontent with the functioning of the public pension system in general. In 2012, the government decided to increase the monthly BTP by SEK 170 for both married

[57] *Efterlevandepension*
[58] *Omställningspension*
[59] *Bostadstillägg för pensionärer (BTP)*
[60] *Särskilt bostadstillägg för pensionärer (SBTP)*

and unmarried pensioners, of which the latter are expected to receive another SEK 170 in 2013. This measure was taken to mitigate the negative effects of the recent activations of the automatic balance mechanism on the economic situation of low-income pensioners and on the political support for the government.

Extra support for elderly

Another component of the basic pension protection is the *äldreförsörjningsstöd* (ÄFS). This means-tested supplementary benefit was introduced in 2003 and targets individuals who have no or very low pension income. 80 % of the recipients of ÄFS are born abroad and have not lived in Sweden sufficiently long to claim a full minimum guarantee. The remaining share consists mainly of individuals with very low levels of pension income due to early withdrawal or self-employed who have not contributed to the public pension system.

Disability insurance

As described in section 4.3, the eligibility rules in the Disability Insurance Program were changed numerous times from 1960 until the introduction of the new pension system in the 1990s. During this period, the DI became an increasingly popular pathway to retirement and was referred to simply as *early retirement*[61]. Following the reforms in 1991 and 1997 that aimed at reducing the number of disability pensioners and increasing the labor force participation among elderly, a major revision of the disability insurance was implemented in 2003. Since the disability rules had been coordinated within the *folkpension* and the ATP pension scheme, the disability insurance program had to be adjusted according to the design of the new pension system. The disability insurance was transferred from the pension to the sickness insurance scheme. Early retirement exists no more and is instead referred to as *Sickness and Activity Compensation*[62]. A major critique against the old DI program was that it created very weak incentives for DI recipients to return to work. To help solve this issue the reform introduced different rules for individuals aged 19-29 and 30-64, which emphasized that the DI was not meant to provide lifelong benefits, particularly not for the young. Furthermore, the rules for calculating the earnings-related benefit were changed and meant to insure current income rather than historical income. The reform successfully ended the long-lasting upward trend in the number of new disability pensions, which dropped sharply in 2003. Since then, the number of Sickness and Activity Compensation recipients has declined by more than 150 000 as shown by table A.7.

[61] *Förtidspension*

[62] *Sjuk- och aktivitetsersättning.*

Chapter 7

Occupational Pension Reform - a Delayed Spillover Process

The four major agreement-based occupational pension schemes have undergone significant and many changes during the last two decades. Most importantly, all schemes have changed from being defined benefit to being fully defined contribution or a mixture of the two. Each scheme also includes a fully funded defined contribution component, clearly inspired by the FDC component in the public pension system. The occupational pension schemes have thus been reformed in the same direction as the public pension system. Although the direction of reform has been the same across sectors, the timing has been different. Some of the schemes were reformed early in the 1990s, whereas some underwent major changes 10-15 years later. It is clear that the structure of the new public pension system, to some degree, necessitated changes in the occupational pension schemes to maintain previous retirement standards and to adjust coordination technicalities. However, the reforms were foremost implemented to overcome the problems that were associated with the defined benefit design, including labor market distortions, arbitrary redistribution and underfunding, as discussed in section 5.4.

These issues have been dealt with quite successfully, but further refinements are necessary. Labor market rigidities and employer uncertainty about the size of the pension fees still arise because of the provision of defined benefit pension rights above the income ceiling. The occupational pension schemes also inhibit the government's objective to make people work longer by reinforcing the norm of retiring at the age of 65. The formal retirement in all schemes is 65 and they provide very weak incentives to continue working after this age. These problems will become more apparent over time, as the relative importance of occupational pensions is projected to increase in the future. After a brief overview of the size and the relative importance of occupational pension, I will outline the main characteristics of the four major agreement-based occupational pension schemes, which are also summarized in tables 7.4 and 7.5.

7.1 The role of occupational pensions

Around 90 % of the total work force today are covered by the four major occupational pension schemes Pensionsåldersutredningen (2012). Almost half of these work in the public sector as illustrated by table 7.1.

Table 7.1: **Number of people in the work force that are covered by collective agreements, 2010 (in thousands)**

	White-collar workers	Blue-collar workers	Local government emloyees	Central government employees	Total
Number of people	754	1 188	1 030	245	3217
Share of all (%)	23	36	33	9	100

Source: Pensionsåldersutredningen, 2012

Agreement-based occupational pensions are constructed and thought of as supplements to the public pension system, as they provide pension benefits above the income ceiling in the public pension system.[1] The occupational pension therefore plays a more important role for total retirement wealth for individuals with earnings above the ceiling than for those below. These are typically men (as illustrated by figure 5.1), central government employees and white-collar workers in the private sector. The occupational pension is not only important to specific income groups, but its relative importance has increased over time and is projected to increase in the future across sectors for both genders (Flood, 2004).

For men born in the 40s, one-third of total pension income comes from occupational pension, which is 11 percentage points higher than for men born in the early 30s (table 7.2). The corresponding increase for women is 7 percent. The increase mostly stems from the fact that more and more people have income that exceeds the income ceiling in the public pension system. A parallel explanation is the increased labor force participation among women since the 1970s. Moreover, all four major occupational pension schemes have been converted, or are under way of being converted, from defined benefit to defined contribution. If the rate of return in fully funded systems is expected to exceed the rate of return in the NDC component in the public system, which is indexed to the wage growth, the relative importance of occupational pensions will continue to increase in the future. Only 2,5 % of the wage is allocated to the individual account in the public pension system compared to at least 4 % in the occupational pension schemes

[1]The only exception to this feature is the first pension scheme for blue-collar workers, STP, which replaced 10 % of earnings up to 7,5 BA and nothing above that. This scheme was abolished in 2006 and replaced by a DC scheme, in which contributions are paid even above the income ceiling.

for earnings below the ceiling. Table sec 7.2 also shows that private retirement savings have become more important as a source of pension income over the last 15 years.[2]

The differences in relative importance of occupational pension between different sectors under the current rules are presented in table 7.3. The calculations are based on hypothetical, "typical" individuals and are constructed as to illustrate the effects of the design of the occupational pension schemes on financial incentives.[3] For low and median income earners, defined as individuals with earnings below the income ceiling, the occupational pension amounts to 10-20 % of total gross pension at the age of 65. The replacement rate for income above the ceiling is higher in the the defined benefit schemes (ITP2, PA-03 and KAP-KL). The design of the occupational pension schemes thus most likely affects the labor supply decision of high income individuals the most.

Table 7.2: **Occupational, public and private pension as a share of total pension income for individuals between 65 and 69 years of age**

Year	Cohorts aged 65-69	Public pension		Occupational pension		Private pension	
		Men	Women	Men	Women	Men	Women
1996	1927-1931	74,4	80,6	20,3	15,6	5,3	3,8
2002	1933-1937	67,9	76,2	24,2	15,6	5,3	3,8
2006	1937-1941	64,0	72,1	27,7	19,0	8,1	8,9
2007	1938-1942	62,2	70,3	29,4	20,3	8,4	9,4
2009	1940-1944	54,5	62,0	29,6	21,6	15,9	16,4
2010	1941-1945	53,3	60,7	31,2	23,0	15,5	16,3

Source: Pensionsåldersutredningen, 2012

7.2 Central government employees

Up until 1991, central government employees were covered by SPR[4] that was directly coordinated with the public pension system. SPR was replaced by a predominantly defined benefit *net* pension scheme called PA-91, which in turn was replaced by PA 03 in 2003. PA 03 is in effect today and accrues to cohorts born after 1943. The new pension scheme is phased in over 30 years, which means that the first cohort that receives benefits only from PA 03 will be those

[2]Private retirement savings are usually referred to as the third major source of pension income next to the public pension and the occupational pension. Savings in private retirement accounts are subject to special tax-treatment. First of all, private pension savings are exempt from income taxation, implying that contributions are deducted from the income tax base. Income tax will instead be paid on the ensuing pension payments. Contributions to personal pension plans are limited to SEK 12 000 per year. See Järliden Bergström et al. (2010) for more legislative details on private retirement savings and taxation issues that are being discussed.

[3]See Pensionsåldersutredningen (2012) for more details on how these measures are created.

[4]*Statens allmänna tjänstepensionsreglemente*

Table 7.3: **Occupational pension as a share of total gross pension for individuals under current rules. Pension when retiring at age 61,65 and 70 respectively, for low, median and high income earners born 1949**

	White collar ITP2	Central gov. PA-03	Local gov. SAF-LO	Blue collar KAP-KL
Low income earners				
61	25	24	12	21
65	21	19	10	16
70	21	19	11	18
Median income earners				
61	22	20	12	19
65	21	19	12	18
70	19	16	11	16
High income earners				
61	50	50	18	45
65	48	47	17	45
70	43	30	17	44

Source: Pensionsåldersutredningen, 2012

born in 1973. In fact, the transition period is almost twice as long as that of the new public pension system, which affects only 16 age cohorts. PA 03 contained a larger defined contribution component than its predecessor PA-91 and whereas PA-91 provided defined benefit pension rights both below and above the income ceiling, although with different rates of return, the defined benefit component in PA 03 only accrues to earnings above the ceiling. The following sections discuss the defined contribution and defined benefit components in PA 03 in greater detail.[5]

Defined contribution component

The defined contribution component in PA 03 consists of two parts: individual old age pension[6] and supplementary old age pension[7]. The total premium amounts to 4,5 % of the pensionable income[8] up to a ceiling of 30 income base amounts (IBA), and is paid into The National Government Employee Pensions Board (SPV), the administrative body. Of the total premium, 2,5 % and 2 % is allocated to the individual pension and the supplementary pension respectively. The individual pension is earned from the age of 23 to 65 and is paid lifelong

[5]The implementation of PA 03 in 2003 also implied a reinstatement of a part-time pension scheme that originally came into force in 1976, but that was abolished in 1992. I refer to (Pensionsåldersutredningen, 2012) for more details on this pension scheme.

[6]*Individuell ålderspension*

[7]*Kompletterande del, Kåpan*

[8]All wage paid, other cash pay benefits including overtime compensation and benefits in kind.

from 65. The pension scheme is financial defined contribution (FDC), which means that the employee can decide how to invest the contributions. Unlike the FDC scheme in the Premium Pension, most occupational FDC schemes offer investment choices that guarantee the individual at least the sum of her lifetime contributions.[9] There are also investment choices with higher risk and no guaranteed rate of return.[10] The supplementary pension, Kåpan, is also FDC and was actually introduced already in 1992 as part of PA-91. The premium to Kåpan has since then been increased from 1,7 to 2 %. In constrast to the individual pension, the employee does not choose the management of the contributions, which are instead automatically invested in a traditional low-risk pension insurance fund.

Defined benefit component

The defined benefit pension is paid to those who have earnings above the income ceiling of 7,5 IBA. The rate of return in the defined benefit pension is 60 % of the pensionable income between 7,5 and 20 IBA and 30 % of the pensionable income between 20 and 30 IBA. The size of the pension benefit is calculated on the basis of the pensionable income during the five calender years immediately preceding the year of retirement. The pension is calculated according to equation 7.1, where w_i denotes the pensionable income related to IBA i:

$$PA\ 03_{DB} = 0,60 w_{7.5-20\ BA} + 0.30 w_{20-30\ BA} \tag{7.1}$$

These rate of returns are somewhat lower than in the old PA-91 scheme, as seen by comparing table 5.2 and table 7.5, which summarize the main characteristics of the two pension schemes. Moreover, PA 03 does not provide defined benefit old age pension for individuals with earnings below 7,5 IBA. The reduction in the defined benefit portion was compensated by the aforementioned extensions of the defined contribution component. Since it takes time for an FDC scheme like Kåpan and the new individual pension to generate significant pension benefits, a sudden reduction in the defined benefit pension, as implied by the switch from PA-91 to PA 03, would disfavor older cohorts that only can earn individual pension and Kåpan for a relatively small number of years. Therefore, the rates of return in the defined benefit component are gradually reduced over a 30-year period.

7.3 Local government employees

Local government employees were covered by the same pension scheme as central government employees until the introduction of PA-KL in 1985. PA-KL remained in force for 13 years and was the last occupational pension scheme that was directly coordinated with the public pension system, that is, the last *gross* pension scheme. Due to severe problems with underfunding, PA-KL was in great need of reform in the beginning of the 90s. Just like the public pension system, a switch from defined benefit to defined contribution was deemed necessary to

[9] *Traditionell pensionsförsäkring*

[10] *Fondförsäkring*

maintain long run financial sustainability. In 1998, PA-KL was replaced by a pension scheme called PFA-98, which remained in force until 2006.[11] The reform was the most important local government occupational pension reform undertaken so far and meant that all employees born 1938 and later switched from defined benefit to defined contribution for earnings below 7,5 BA. PFA-98 was negotiated at the same time as the new public pension scheme was decided upon and it is an adaptation to the new public pension. The negotiation of a new plan was probably initiated in part because of changes in the accounting rules for municipalities which forced them to enter pension rights as a liability in the balance sheet (Jennergren, 2000).

PFA-98 was very similar in design to PA 03, the present occupational pension scheme for central government employees. For earnings below the ceiling of 7,5 income price base amounts (higher price base amounts (HBA) before 2002), the pension was entirely defined contribution. The contribution was paid by the employer and differed slightly over time and depending on the employer, time and tenure, but centered around 3,4-3,5 % for wage portions below the income ceiling and 1-1,1 % for earnings above. From 2003, the whole premium is paid into an individual FDC scheme, where the individual can choose freely between different fund managers and the risk level of the investment choice (Glans, 2009). Individuals earning above the ceiling get an additional defined benefit pension, which is 62,5 % of earnings between 7,5 and 20 BA and 31,25 % of earnings between 20 to 30 BA and is calculated according to equation 7.2:

$$PFA\ 98_{DB} = 0,625w_{7.5-20\ BA} + 0.3125w_{20-30\ BA} \tag{7.2}$$

The size of the pension is based on the average of the best five years of the last seven years immediately preceding the year of retirement.

PFA-98 was replaced by a new agreement called KAP-KL in 2006. The new pension scheme is also a mixture of defined contribution and defined benefit, but the reform implied a further reduction of the defined benefit component. Over a transition period of 22 years, cohorts covered being those born between 1946 and 1967, the rates of return in the defined benefit pension are reduced to 55 % and 27,5 % for earnings between 7,5-20 IBA and 20-30 IBA respectively. The defined contribution pension can be withdrawn from age 55 and the defined benefit pension from 61, but the standard retirement age is 65. The premium for the defined contribution component has been raised to 4,5 % for earnings below 30 IBA. The fact that contributions will be the same above and below the ceiling, as opposed to under the previous pension scheme, means that contributions will be increased markedly above the ceiling. The associated increase in the defined contribution pension for individuals with earnings above the ceiling counteracts the reduction in the replacement rate of the defined benefit pension.

[11] See Glans (2009) for a comprehensive overview of this pension reform and its effects on retirement behavior.

7.4 Privately-employed white-collar workers

The collective agreement covering privately-employed white-collar workers was last among the four major agreements to switch from a defined benefit to defined contribution pension scheme. The original ITP scheme, strangely enough referred to as ITP2, implemented in 1960, was defined benefit and was replaced as late as in 2006 by a new pension scheme agreement called ITP1. The reform marked a complete switch from defined benefit to defined contribution. The supplementary defined contribution scheme called ITPK, introduced in 1977, exists alongside the new pension scheme (see section 5.3 for more details on ITPK).

The new pension scheme came into effect in January 2007, but its transition period is long. Those born in 1978 or earlier who are covered by ITP2 will continue to be so, whereas those born in 1979 or later will be fully covered by the new ITP plan. The premium to be paid by the employer is 4,5 % of the fixed cash gross salary up to 7,5 IBA and 30 % on salaries over that ceiling. The motivation for the high fee above the income ceiling is to maintain the replacement rate of the old ITP scheme, which replaced 65 % of earnings above the income ceiling in the public pension system. The pension is earned between 25 and 65 years of age and pensions can be paid from age 55, but the standard retirement age is 65. As in the other DC occupational pension schemes, employees choose how to place their contributions in the new ITP scheme. At least 50 % of the premium has to be placed in a traditional management fund with guaranteed interest and the rest can be invested according to the preferences of the employee (Pensionsåldersutredningen, 2012).

The occupational pension schemes for white-collar workers are special in two senses. Firstly, the transition period to the new DC scheme is much longer than in any other occupational pension scheme. ITP1 will not come into full effect until the cohort born in 1979 retires. This means that the problems associated with defined benefit plans will plague the labor market for white-collar workers for a long time ahead, which will be further discussed in section 7.6. Secondly, the large share of individuals with income above the ceiling makes the provision of pension rights above the ceiling particularly important. Around 50 % of all workers covered by the ITP plan in the age span 40-60 have earnings above the income ceiling, which is substantially higher than among any other group of workers discussed here. Since both the old and the new DC scheme "more or less" remove the income ceiling by providing substantial pension rights for earnings above 7,5 IBA, the observed inequality in retirement wealth across groups of workers is likely to continue to grow in the future.

7.5 Privately-employed blue-collar workers

Between 1973 and 1996, blue-collar workers were covered by STP, a defined benefit pension scheme that provided 10 % of earnings up to 7,5 BA. In 1996, STP was replaced by a new pension scheme called SAF-LO, which implied a switch from a pure defined benefit to a pure defined contribution scheme. Those born 1968 or later are fully covered by the new pension scheme and those born between 1932 and 1968 are subject to special transition rules. Premium payments take place through the employer setting aside 4,5 % of gross income up to 7,5 IBA. For wage portions above the ceiling, the premium is set at 30 %.[12] SAF-LO is therefore similar in construction to the new pension scheme for white-collar workers, ITP1. In contrast to the new pension schemes for local and public employees, the pensions schemes for workers in the private sector do not contain any defined benefit component. The pension is earned from the age of 25 until the age of 65, after which pension can be earned under special agreement between the employer and the employee.

Table 7.4: **A comparison of the present occupational pension schemes for workers in the private sector**

	White-collar (ITP1)	Blue-collar (SAF-LO)
In effect	2007 -	1996 -
Type	DC	DC
Public pension coordination	Net pension	Net pension
Cohorts covered	1979 -	1968 -
Transition rules for	-	Cohorts born 1932-1967
Pension earned	From age 25 to 65	From age 25 to 65
Financing principle	Premium reserve system	Premium reserve system
Financing rules	Payroll fee (4,5 % for earnings below 7,5 IBA, 30 % above 7,5 IBA)	Payroll fee (4,5 % for earnings below 7,5 IBA, 30 % above 7,5 IBA)

7.6 Current issues

Two issues with the design of the current occupational pension schemes stand out in the debate. The first issue is how occupational pensions affect the actual retirement age. Certain institutional arrangements in the occupational pension schemes might counteract the incentives created by the reformed public pension to work after the age of 65. The second issue concerns labor market mobility, which is likely to be reduced as a result of defective and non-comprehensive coordination of earned pension rights between different collective agreements and the associated costs with changing employer born by the employee.

[12]The initial premium in 2006 was 3,5 %. Between 2008 and 2012, the premium was raised gradually from 3,9 to 4,5 %. During the same period, the premium for wage portions above the ceiling was gradually increased from 6,0 to 30 %.

Labor market mobility

A debated topic is the extent to which defined benefit schemes reduce labor market mobility. Labor market mobility might be affected negatively by a defined benefit pension scheme in two ways.

Firstly, defined benefit schemes typically entail a high degree of uncertainty for the employer about the size of the pension premium. As discussed in section 5.4, the premium paid by the employer generally increases with the age of the employee, which could potentially create a "lock-in" effect. Given the higher costs, employers may have financial incentives to offer early retirement to their older workers and substitute them with younger personnel. Furthermore, a solution involving an early retirement pension for an older worker is in many cases financially favorable for the employer compared with continued employment. Thus, although older employees in Sweden are protected via seniority rules ("lastin first-out"), employers have in the case of redundancy great financial possibilities to persuade an older worker to retire "voluntarily" by the use of early retirement packages (Hallberg, 2011).[13]

Secondly, in the years preceding retirement, an employee's decision to stay with a given employer or not depends on the possibility to transfer earned pension rights from the old job to a new one. Most pension schemes use a formula to determine the amount of benefits, and the formula often increases benefits very rapidly in the final years before the specified retirement age. Such plans are said to be "backloaded" (Gustman and Steinmeier, 1995). If pension rights are not portable, or only partially portable, the individual sustains a large "capital loss" if he/she changes job. Usually, occupational pension rights are portable in the case of employer switches within the same sector. They are also in many cases, but not always, transferable across sectors (Hallberg, 2011). A defective coordination structure between the major occupational pension schemes can thus cause lower pensions for the individual and reduce social welfare through reduced labor market mobility. If the individual faces substantial financial disincentives to change employer, he/she might prefer early retirement to continued service with the present employer.

Long transition periods imply the problems associated with a defined benefit structure will plague the labor market for several decades ahead. Even the new occupational pension schemes for public employees are defined benefit above the income ceiling. However, the labor supply decision for high income earners and hence also the demand for high skilled labor will always be distorted, since the occupational pension schemes for public employees provide defined benefits for individuals with earnings above the income ceiling, that is, those for whom occupational pension is very important.

[13]Hallberg (2011) analyzes the prevalence of early retirement packages and concludes that retirement does not seem to be a voluntary one-sided decision by the employee and that many employers actually benefit financially from "buying out" older workers.

Retirement age

Increasing the actual retirement age is a central policy objective around the world, including Sweden. In 2011, a special investigator[14] was assigned by the government to investigate the effects of different institutional pension arrangements on old-age labor supply and identify obstacles and opportunities for longer working lives. The Retirement Age Commission[15] pays special attention to the effects of the occupational pensions on individual's retirement behavior, both because they make up a significant share of an individual's total pension income and because they are converting slower or to a lesser degree into defined contribution than the public pension system.

The reformation of the public pension system in the 1990s and the years after that brought many changes to age-related regulations in order to increase labor supply among elderly.[16] There is a substantial risk that the rules and regulations of the occupational pension schemes might counteract the enhanced financial advantages of postponing retirement in the reformed public pension system (Pensionsåldersutredningen, 2012).

Firstly, even though most current occupational pension schemes do not contain a formal retirement age, they presuppose a "normal" retirement age of 65. The size of the pension in all defined benefit components, those which are being phased out as well as those that will remain in the future, is calculated based on the income during the years prior to retirement. Since income earned after the age of 65 does not matter for the size of the pension, the individual faces a pension accrual discontinuity at 65 and is highly disincentivized to work after this age. The 30-year employment requirement for full pension also reduces the financial incentives to work longer. This "65-norm" is built in even in the defined contribution components of the new occupational pension schemes. Typically, pension rights are only earned until the age of 65. Pension rights can be earned after 65 only under special agreements between the employee and the employer (Pensionsåldersutredningen, 2012).

Secondly, early exit from the labor market might also be encouraged by rules governing how and when the occupational pension can be withdrawn and the duration of withdrawal. Unlike the public pension, the occupational pension does not have to be withdrawn over the whole life. This, in combination with the possibility of early withdrawal, imply that an individual can retire early and finance the first years out of the labor force by the occupational pension. The financial room for early retirement created in this manner is particularly relevant for high income earners.

Thirdly, many individuals prefer to work part-time in the years prior to retirement. However, since "backloading" pension schemes induce a large capital loss on individuals that choose to reduce the number of hours worked in the years prior to retirement, individuals that are covered by defined benefit occupational

[14] *Särskild utredare*

[15] *Pensionsåldersutredningen*

[16] The lowest age for early withdrawal was raised from 60 to 61. The lowest age for withdrawal of the minimum guarantee was raised from 60 to 65. Since 2001, employees have the right to remain employed until the age of 67 (prop. 2000/01:78).

pensions are not likely to do this. Instead, they would either continue work full-time until the age of 65 or quit working completely, unless there are some special regulations that mitigate the negative effects of part-time work on the size of the pension.

As the partial pension program in the public pension system was abolished in 2001, the rules for part-time work and retirement in the occupational pension schemes become extra important. White collar workers and public employees have access to agreement-specific early retirement options. With the agreement of the employer, a public sector employee aged 61-65 can claim a partial pension benefit and still receive the same pension that he/she would have received in case of continued full-time employment. White collar workers can avoid the consequences of reduced labor supply on the size of the pension benefit by so called paid-up wage policies[17]. These partial pension schemes are particularly beneficial to high income earners. If an individual's pensionable income exceeds the income ceiling in the public pension system even after entering the occupational partial pension program, the public pension is left unaffected. In general, the net effect on total labor supply of partial pension arrangements is ambiguous, since some individuals that would have exited the labor force completely in absence of the rules will work some hours, whereas some that would have worked full time will work less. However, the partial pension solutions just discussed are believed to have an overall negative effect on labor supply. This results from the fact that high income earners are able to work part-time without sustaining any, or very limited, capital loss, both in terms of occupational and public pension, and that they generally exhibit higher old-age labor force participation rates (Pensionsåldersutredningen, 2012).

[17] *Lönesänkningsfribrev*

Table 7.5: **A comparison of the present occupational pension schemes for local and central government employees**

	Central government (PA-03)	Local government (PFA-98)	Local government (KAP-KL)
In effect	2003 -	1998-2005	2006 -
Type	DC and DB	DC and DB	DC and DB
Public pension coordination	Net pension	Net pension	
Cohorts covered	1942 -	Cohorts born after 1938 and whose employment ended before 2005-12-31	1947 -
Transition rules for	Cohorts born 1942-1972		Cohorts born 1947-1966
Employment requirements for full pension	30 years (after age 28)	30 years (after age 28)	30 years (after age 28)
Base for calculation	Average of the 5 years before retirement (plus DC part)	Average of the best 5 of the last 7 years before retirement (plus DC part)	Same as PFA-98
Rate of compensation	DB part: 60 % 7,5-20 IBA 30 % 20-30 IBA DC part: Investment return	DB part: 62,5 % 7,5-20 BA 31.25 % 20-30 BA DC part: Investment return	DB part: 55 % 7,5-20 IBA 27,5 % 20-30 IBA DC part: Investment return
Financing principle	DC part: premium reserve DB part: PAYG	Same as PA-03	Same as PA-03
Financing rules	Payroll fee (4,5 % for DC part)	Payroll fee (3,5 % for earnings below 7,5 BA, 1,1 % above 7,5 BA)	Payroll fee (4,5 % for all earnings)

Chapter 8

Conclusion

The public pension system, as we think of it today, has existed for about 100 years. The pension system that was legislated in 1913 and implemented in early 1914 was in fact the world's first pension system to cover a whole population, i.e. the first to introduce the principle of universality. Other contemporary public pension systems around the world typically excluded the non-working population and only made certain subgroups or professions eligible for old-age income. The first public pension system had two components, a funded, defined contribution part and a supplementary means-tested part. The main stated purpose of the pension system was to alleviate old-age poverty and make less people dependent on poverty relief arranged by the financially strained municipalities.

However, the history of the Swedish pension system dates further back than this. The designers of the 1913 public pension system were not only influenced by government-administered pension systems in other countries, of which Bismarck's pension system in Germany proved the most important, but also by domestic profession-specific pension arrangements. Most of these arrangements that existed before the 1913 reform accrued to state and public sector employees. Private workers had to rely on their employer for old-age income. The first major private sector pension scheme that covered white-collar workers in different professions was introduced in 1917, whereas blue-collar workers had to wait until 1973 for a similar arrangement.

In 1935, the Social Democratic government replaced the funded component in the public pension system with a universal flat-rate benefit financed according to the pay-as-you-go principle. The means-tested benefit was made more generous and differentiated according to living costs in different municipalities. The purpose of the reforms was to speed up the poverty reduction process among the elderly, since the pension system so far had failed to provide satisfactory replacement rates.

The next major reform was legislated in 1946 and implemented in 1948. With the goal of more or less eliminating poverty among pensioners, the Social Democratic government significantly raised the basic pension, reduced the relative importance of the means-tested component, and transformed this into a means-tested housing supplement. The pension reform marked an important step away from the Bismarckian insurance design with little redistribution to a Beveridgean pension system characterized by the "same-for-all" principle with a high degree of redistribution.

As soon as the *folkpension* came into force in 1948, it became obvious that the real value of the flat-rate benefit of SEK 1000 had decreased as a result of an increase in the general price level. An intense debate on how to secure a stable economic environment for pensioners precipitated the 1950 parliamentary bill that marked a first step in the implementation of an automatic indexation mechanism. The bill implied that the pension benefits were to be tied to the current inflation rate.

The price-indexed *folkpension* had indeed raised the general living standard among the elderly, but still provided quite modest replacement rates. Facing a confined public pension system, large labor market groups tried to find private complementary solutions, most notably by supplementing the basic pension with private occupational pension agreements. Some labor market groups, most notably white-collar workers and central government employees had successfully included pensions in their negotiations with the employers, whereas the majority of the working population only had their basic pension to live off as pensioners. Large differences in real retirement income between different income groups and professions emerged as a result and the issue of how to supplement the public pension system with some kind of earnings- related pension scheme became important on the policy agenda.

After several government investigations and reports, starting in 1947, a national referendum in 1957 and an extraordinary election in 1958, the decision was eventually taken in 1959 about the design of the earnings-related, supplementary pension system - the ATP scheme.

ATP was a mandatory PAYG scheme covering all employees. During the first decades after its creation, significant funds were built up in order not to depress national savings. The scheme can therefore be viewed as partially funded. ATP was defined benefit and provided benefits based on an average of the earnings of the 15 most successful years. Payments were financed by mandatory proportional payroll taxes, which were subject to many changes before the ATP scheme was abolished in 1999.

The implementation of the ATP scheme was a great success for the Social Democrats. It was the last major and the most important building block in the Swedish welfare state. The 1960 reform was unconventional in the sense that one party alone was responsible for the design and the implementation of a major pension system. All previous major pension reforms had namely been legislated with overwhelming majority in the parliament. ATP rapidly received widespread support as the new system had a direct and strong impact on the financial situation of the current elderly through generous transition rules and the gradual extensions that were made.

However, in the beginning of the 1980s, a new debate on the need for pension reform arose. Deteriorating fiscal balances and sluggish growth had exposed the financial instability inherent in the current pension system, which also had adverse effects on private saving, labor supply and income redistribution. The reform process began already in 1984 when the government set up the Pension Commission tasked with evaluating the ATP scheme and providing an overview of its rules. The Working Group on Pensions continued the work of the Pension Commission and presented a reform proposal that was accepted by the parliament in 1994. The four bourgeois parties and the SAP that stood behind the reform wanted to reform the pension system as to ensure long-run financial stability, provide a tighter link between contributions, and benefits and provide incentives to work longer. The reform process was characterized by a high degree of consensus-seeking and work efficiency.

The reform implied that the basic pension and the ATP scheme were replaced with a new scheme combining a funded defined contribution (FDC) component with a PAYG non-financial defined contribution (NDC) component. The earnings-related components are supplemented by the minimum guarantee. The new rules for pension entitlements were implemented in 1999, and the first payments from the new pension system were paid in 2003.

The funded component, the so-called Premium Pension, was one of the most controversial elements of the pension compromise. The introduction of mandatory individual accounts were opposed by the SAP, but the bourgeois parties argued it would increase overall savings, allow participants to take account of the higher return in the capital markets, and contribute to financial stability in the pension system. The NDC scheme, the *inkomstpension*, mimics a fully funded defined contribution scheme in that it accumulates a notional balance for each worker that increases each year by taxes paid and a notional interest rate. At retirement, this balance is converted into an annuity based on the life expectancy of that cohort and the same notional interest rate. The notional interest rate is set administratively, not by returns realized on assets held, and follows the average wage growth rate. Contrary to the FDC scheme, annual contributions are used to finance current pension benefit obligations as in any PAYG system. The NDC scheme is partially funded (a buffer fund of assets) and makes use of an automatic balance mechanism to preserve financial stability. The contribution rates for the Premium Pension and the *inkomstpension* are 2,5 % and 16 % of earnings respectively.

The development of the occupational pension schemes has closely followed that of the public pension system. After the implementation of the occupational pension scheme for blue-collar workers in 1973, all four major labor market groups were covered by agreement-based occupational pension schemes that were either directly or indirectly coordinated with the public pension system. The occupational pension schemes that existed alongside ATP were defined benefit and predominantly pay-as-you-go.

When plans for an abolishment of the ATP scheme were drawn up in the beginning of the 1990s, a reconstruction of the occupational pension schemes became necessary. There was also a growing awareness of the problems associated with some of the features of those schemes. The characteristics of these problems were very similar to those of the ATP scheme, since the occupational pension schemes and ATP were quite similar in design. They provided strong incentives to retire early, 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) and were institutionally quite complex.

In the last two decades, the four major agreement-based occupational pension schemes have undergone many significant changes. The occupational pension schemes have been reformed in the same direction as the public pension system. Most importantly, all schemes have been changed from defined benefit to defined contribution or a mixture of the two. At least some share of each scheme is fully funded defined contribution, a trend clearly inspired by the introduction of the Premium Pension in the public pension system. Some of the schemes were reformed early in the 1990s, whereas some underwent major changes 10-15 years later. Two of them provide defined benefits above the income ceiling in the public pension system, whereas the other two are purely defined contribution. The occupational pension schemes are still constructed and thought of as supplements to the public pension system and generally play a more important role for total retirement wealth for individuals with earnings above the ceiling than for those below.

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Appendix

Time lines

Table A.1: **Important events in the history of the public pension system**

Year	Event
1913	Universal pension system implemented
1935	Universal basic pension, *folkpension*
1937	Regional heterogeneity in pension benefits - predecessor to housing supplements
1946	Big increase in pension generosity - increased basic pension
1959	ATP decided upon
1969	Special supplement introduced
1976	Retirement age lowered from 67 to 65
1976	Partial pension introduced
1991	More restrictive disability pension
1994	General proposal of new pension system passed by parliament
2001	First pension payments from new system
2001	Right to work until the age of 67
2010	Automatic balance mechanism activated for the first time

Table A.2: **Important events in the history of occupational pension schemes**

Year	Event
1907	Pension act for permanent central government employees
1917	First major private sector pension scheme (SPP)
1934	Non-permanenent civil servants covered by state pension scheme
1959	New gross pension scheme (SPR) for central government employees introduced
1960	ITP scheme for white-collar workers introduced, premium reserve system
1973	First occupational pension scheme (STP) for blue-collar workers
1991	New net pension scheme (PA-91) for central government employees
1996	First occupational pension scheme with no DB component - SAF-LO for for blue-collar workers
1998	DC scheme (PFA-98) for local government employees (DB over income ceiling)
2003	DC (PA-03) for central government employees (DB over income ceiling)
2006	New scheme for white-collar workers (ITP1) with no DB component

Table A.3: **Major public pension system reforms**

Year	Commissions	Political color	Main components	Type	Contribution rate	Replacement rate	Financing rules	Indexation
1913	Old-age insurance commission, 1907	Conservative government	1. Avgiftspension	DC	At most 1,1 %, ind. contribution	30%/24% of total contributions, men/women	Premium res.	
		Unanimity	2. Pensionstillägg	Means-test, DB		SEK 150/140, men/women	Tax/PAYG	
1935	Pension insurance commission, 1928	SAP government Unanimity	1. Allmän folkpension 2. Pensionstillägg	Universal flat-rate benefit	1%, inc. tax	SEK 100+ 10% of total contr.	Tax/PAYG/ premium res.	
1946 (1948)	Social welfare commission, 1937	SAP government Unanimity	1. Allmän folkpension	Universal flat-rate benefit	1% (1946) - 4% (1959), inc. tax	SEK 1000	Tax/PAYG	Prices (1950)
			2. Means-tested housing supplement					
1959 (1960)	Åkesson commission, 1947	SAP government Referendum	1. Folkpension	Universal flat-rate benefit	4 % (1959) - 5,86% (1994), inc. tax	90%/70% of 1 BA unmarried/married	Tax	Prices (1968)
	Public pension commission, 1956	One vote majority	2. ATP	Suppl. earnings-related, DB	3% - 11 % Payroll fee	60% of wage during 15 best years	PAYG	Prices
1994 (1998)	The pension commission, 1984	Right-wing government Compromise	1. Garantipension	Universal minimum guarantee	7%, general contr., deductible State old-age contribution	2,13/1,9 BA, singles/couples	Tax	Prices
	Working group on pensions, 1991	Unanimity Implemented under SAP	2. Inkomstpension	NDC	10,21%, payroll fee		PAYG	Real wage growth
	Implementation Group, 1994	government	3. Premiepension	FDC			Fully funded	Return on investments

Table A.4: **Eras of different eligibility rules in the Disability Insurance**

Period	Medical reasons	Possibility to take labor market and social conditions into account	Favorable rules for older workers	Labor market reasons
-1962	Yes	Very small	No	No
1963-70 (June)	Yes	Some	No	No
1970 (July)-72 (June)	Yes	Yes	Yes, aged 63-66	No
1972 (July)-74 (June)	Yes	Yes	Yes, aged 63-66	Yes, aged 63-66
1974 (July)-76 (June)	Yes	Yes	Yes, aged 60-66	Yes, aged 60-66
1976 (July)-91 (Sept)	Yes	Yes	Yes, aged 60-64	Yes, aged 60-64
1991 (Oct) -96	Yes	Yes	Yes, aged 60-64	No
1997-	Yes	Very small	No	No

Source: Palme and Svensson, 2010

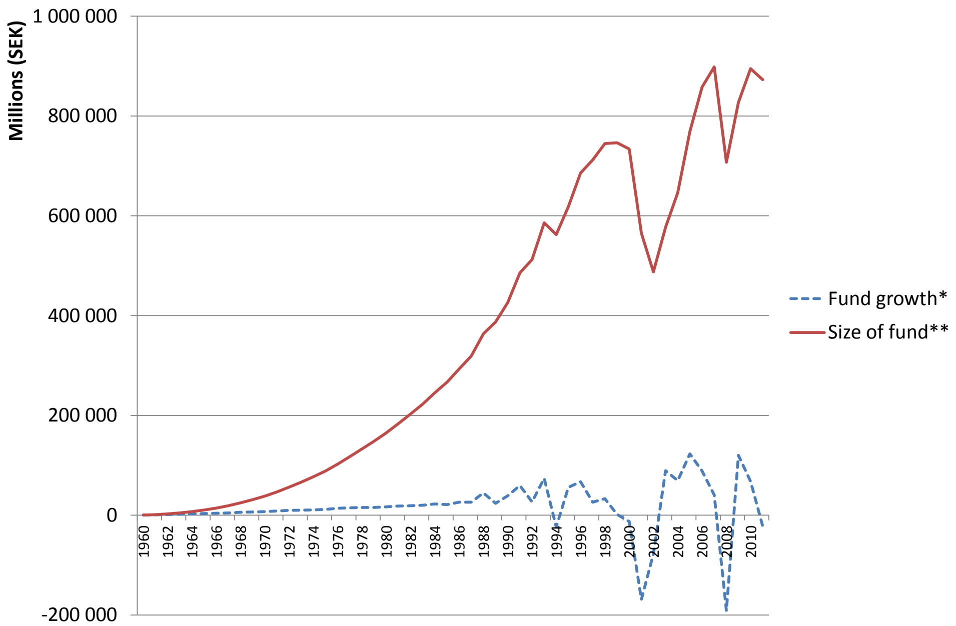
Table A.5: **The development of the Swedish partial pension scheme**

Date	Event
July 1, 1976	The part-time pension system started - possible to get a part-time pension from 60 years of age - the replacement rate was 65 % of the loss in earnings - the minimum reduction was 5 hours - remaining working time had to be at least 17 hours and not more than 35 hours - financed by a special payroll fee
January 1, 1980	Possible for self-employed to get a part-time pension; working hours had to be reduced by at least half
January 1, 1981	The replacement rate decreased to 50 per cent
July 1, 1987	The replacement rate increased to 65 per cent
July 1, 1994	Several types of restrictions - the minimum age increased to 61 years - the replacement rate decreased to 55 per cent - the maximum reduction of working hours was set to 10 hours
January 1, 1999	The special payroll fee was discontinued
December 31, 2000	Last day for the start of a new part-time pension

Source: Palme and Svensson, 2010

Figures and tables

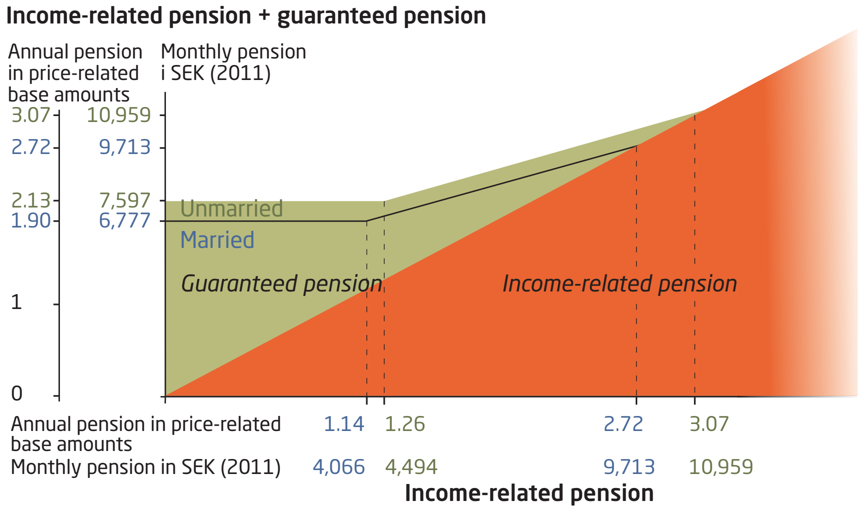
Figure A.1: **Annual growth and total asset value of the National Pension Funds 1960-2011**



* Revenues minus costs; in essence contributions minus pension payments.
** Measured at the end of each year.

Source: Swedish Pensions Agency, Statistics

Figure A.2: **Reduction of the minimum guarantee against the earnings-related *inkomstpension***



Note: Reproduced from Orange Annual Report 2011 with permission from the Swedish Pensions Agency

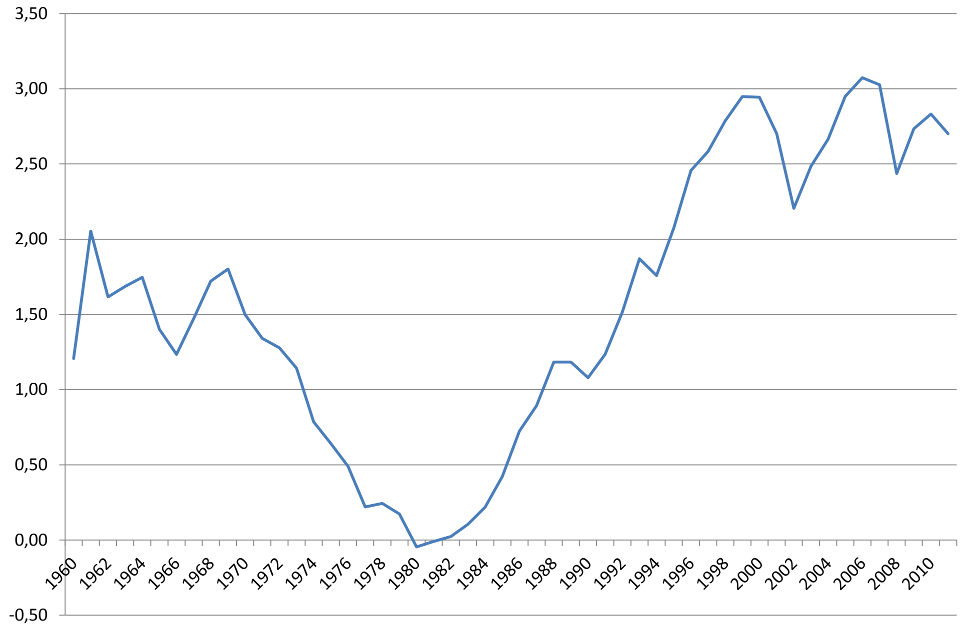
Table A.6: **Rate of return of the *Premiesparfonden****

Year	Rate of return (%)
2009	35,1
2008	-36,2
2007	4,7
2006	10,5
2005	25,1
2004	10,1
2003	18,7
2002	-26,7
2001	-10,6

Note: *The *Premiesparfonden* was the original default fund in the Premium Pension System. It was administrated by the government and replaced by the *AP7 Såfa* in 2010.

Source: AP7, 2013

Figure A.3: **Real return on National Pension Funds 1960-2011 (%)**



Source: Swedish Pensions Agency, Statistics

Table A.7: **Number of individuals receiving Sickness and Activity Compensation, 2005-2011**

Year	Nr of individuals
2011	400 380
2010	442 812
2009	498 301
2008	531 519
2007	551 746
2006	554 897
2005	556 789

Note: The Sickness and Activity Compensation was introduced in 2003 and replaced the old Disability Insurance Program.

Source: The Swedish Social Insurance Agency, 2013

Table A.8: **Price base amounts (BA) 1960-2013**

Year	Period	Base amount (SEK)	Year	Period	Base amount(SEK)
2013		44 500	1978	feb-mar	12 200
2012		44 000	1978	jan	11 800
2011		42 800	1977	sep-dec	11 800
2010		42 400	1977	jul-aug	11 500
2009		42 800	1977	apr-jun	11 100
2008		41 000	1977	jan-mar	10 700
2007		40 300	1976	dec	10 700
2006		39 700	1976	jul-nov	10 400
2005		39 400	1976	mar-jun	10 000
2004		39 300	1976	jan-feb	9 700
2003		38 600	1975	oct-dec	9 700
2002		37 900	1975	jul-sep	9 400
2001		36 900	1975	jan-jun	9 000
2000		36 600	1974	dec	9 000
1999		36 400	1974	apr-nov	8 500
1998		36 400	1974	jan-mar	8 100
1997		36 300	1973	aug-dec	7 900
1996		36 200	1973	feb-jul	7 600
1995		35 700	1973	jan	7 300
1994		35 200	1972	jul-dec	7 300
1993		34 400	1972	jan-jun	7 100
1992		33 700	1971	dec	7 100
1991		32 200	1971	mar-nov	6 900
1990		29 700	1971	feb	6 700
1989		27 900	1971	jan	6 400
1988		25 800	1970	aug-dec	6 400
1987		24 100	1970	mar-jul	6 300
1986		23 300	1970	jan-feb	6 000
1985		21 800	1969	aug-dec	6 000
1984		20 300	1969	jan-jul	5 800
1983		19 400	1968	mar-dec	5 800
1982		17 800	1968	jan-feb	5 700
1981	jun-dec	17 300	1967	apr-dec	5 700
1981	mar-may	16 700	1967	jan-mar	5 500
1981	jan-feb	16 100	1966	may-dec	5 500
1980	nov-dec	16 100	1966	jan-apr	5 300
1980	jul-oct	15 400	1965	sep-dec	5 200
1980	mar-jun	14 900	1965	jan-aug	5 000
1980	feb	14 400	1964	nov-dec	5 000
1980	jan	13 900	1964	jan-oct	4 800
1979	oct-dec	13 900	1963	jan-dec	4 700
1979	jun-sep	13 500	1962	jan	4 500
1979	jan-may	13 100	1961 jan	4 300	
1978	apr-dec	12 600	1960	jan	4 200

Note: The BA (*prisbasbelopp*) was used as an indexation measure in the ATP scheme from 1960 to 1996. It is still used to determine the size of the guaranteed minimum in the present pension system. The BA reflects the inflation rate in the economy. Before 1999, the price base amount was referred to simply as the base amount.

Source: Statistics Sweden, 2013

Table A.9: **Higher price base amounts (HBA) 1996-2013**

Year	Higher price base amount (SEK)
2013	45 400
2012	44 900
2011	43 700
2010	43 300
2009	43 600
2008	41 800
2007	41 100
2006	40 500
2005	40 300
2004	40 100
2003	39 400
2002	38 700
2001	37 700
2000	37 300
1999	37 200
1998	37 100
1997	37 000
1996	36 800

Note: The higher price base amount (*förhöjt prisbasbelopp*) has been used as an indexation measure in the ATP scheme since 1996. It reflects the potential value of the price base amount (BA) in absence of deficit restrictions.

Source: Statistics Sweden, 2013

Table A.10: **Income base amounts (IBA) 1960-2013**

Year	Income base amount (SEK)
2013	56 600
2012	54 600
2011	52 100
2010	51 100
2009	50 900
2008	48 000
2007	45 900
2006	44 500
2005	43 300
2004	42 300
2003	40 900
2002	38 800
2001	37 700

Note: The IBA (*inkomstbasbelopp*) is used as an indexation measure in the present NDC scheme. It reflects the average wage growth in the economy.

Source: Statistics Sweden, 2013

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