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The Automatic Balance Mechanism of the Swedish Pension System

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The Automatic Balance Mechanism of the Swedish Pension System[1]

– a non-technical introduction

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Abstract

The new Swedish pay-as-you-go pension system has been designed to be financially stable, i.e. regardless of demographic or economic development it will be able to finance its obligations with a fixed contribution rate and fixed rules for calculating benefits. This type of financial stability inevitably entails a risk that the value of pensions will vary over time. To minimise this variability, while at the same time securing the financial stability of the system, it has indexing rules that are asymmetrically designed.

The aim of a stable pension level is attempted by basing the indexing of the systems liability on the growth in average income. As the growth in average income normally will deviate from the systems internal rate of return this index implies that assets may grow faster than liabilities, or vice verca. If and when liabilities should exceed assets, the basis for indexation is automatically switched to an approximation of the system's internal rate of return, thus automatically adjusting pension levels as well. The pension level is automatically re-established, as is growth in average income as the basis of indexation, as soon as this is possible without undermining the financial balance of the system. Only historic transactions are used to calculate the liability and the assets. The valuation of assets is performed by a new concept, *expected turnover duration.*

* Ole Settergren is a researcher at the Swedish National Social Insurance Board (NSIB). He has been responsible for developing the automatic-balance mechanism of the new Swedish old-age pension system.

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Introduction

Faced by largely the same demographic challenges as other OECD countries, Sweden opted in 1992/94 for a radical reform of its national old-age pension system.[2] Most of the legislation on the new system was passed in 1998. Parliament adopted the final legislation, providing for *the automatic balance mechanism*, in May 2001.[3]

Financially, two key principles have guided the decade of research and decision-making on the reform:

— For every krona paid in contribution to the system by or for an individual, that individual should receive the exact same amount of pension credit – i.e., no pension credit without a corresponding contribution.

— The financing of pension payments should be *guaranteed* by a fixed contribution rate.

This paper presents a non-technical explanation of the rules that are intended to ensure the financial stability of the system while also optimising its social-welfare effects. Section 2 provides an introduction to the basic forms of financing and calculating pensions. It also briefly describes the reform. Section 3 serves as a general background to the financial problems that the automatic balance mechanism manages. The main financial aspects of the new system are discussed in Sections 4–6.

From Defined Benefit to Defined Contribution

Traditionally pension systems are categorised into four generic types according to degree of funding and rules for accrual of pension credit. The four types are illustrated in Figure 1.

Degree of Funding

Systems with funded assets equal to or greater than the pension liability can be considered fully funded. Fully funded systems are represented by quadrants II and IV in Figure 1. Systems with zero or relatively limited funded assets in relation to pension liability are called *pay-as-you-go* systems; in Figure 1 these are represented by quadrants I and III.

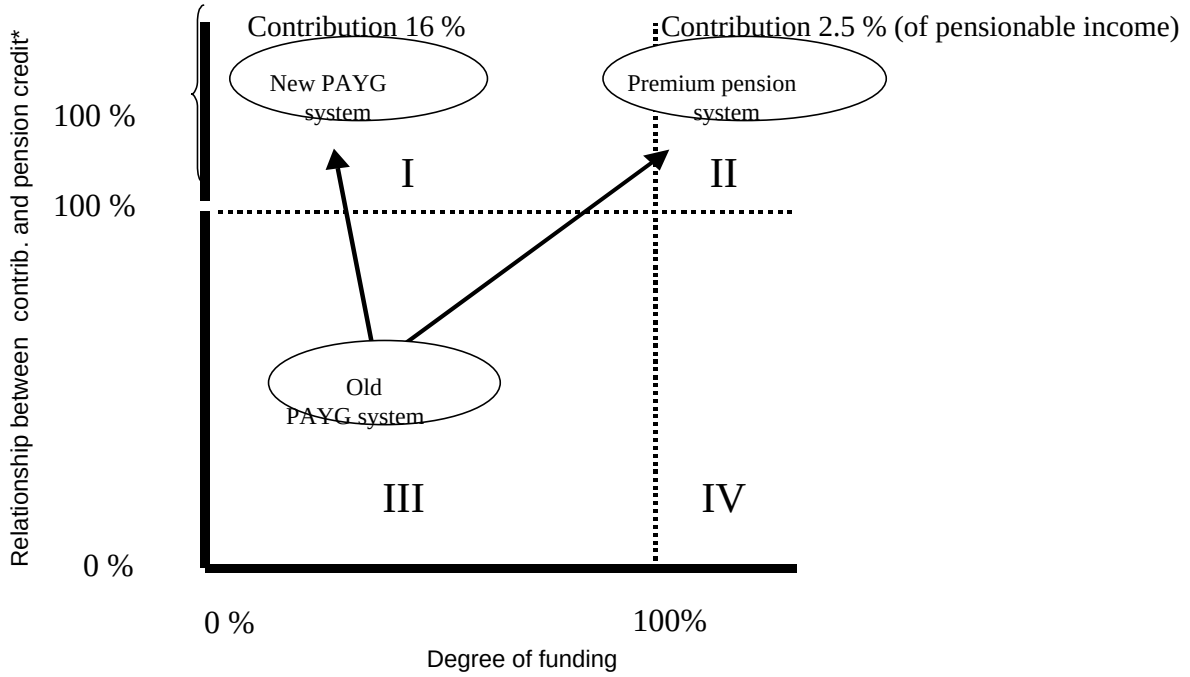
Several pension systems are treated as pay-as-you-go systems even though they possess a substantial fund. Such funds can be regarded as demographic and economic *buffer funds.* An example is the federal pension system in the United States – possibly the largest single economic transfer system in the world – which includes a substantial buffer fund. The Swedish pay-as-you-go systems, both the old and the new, also have a buffer fund.[4]

[2] The principal features of the new system were published in 1992. Parliament decided in 1994 that legislation should be drafted in accordance with the principles proposed in 1992. At about the same time, the Amato (1992) and Dini (1995) reforms of Italy were presented. The Italian reform is similar to the Swedish one.

[3] The process of pension reform has been consistently supported by some 85 % of the members of Parliament.

[4] Presently the Swedish buffer fund holds assets of roughly SEK 550 billion. This represents some 25 % of GDP, or four years of pension payments.

Figure 1. Four Generic Types of Pension Systems and the Direction of the Swedish Reform



* Even if pension credit exactly equals contributions for every individual, contributions will only equal expected pension benefits (as distinct from pension credit), for individuals whose "time-preference rate" in substituting income for pension equals the rate of indexing (compounding) of his/her pension claim (capital).

Relationship Between Contribution and Pension Credit

Pension systems in which every contribution gives rise to corresponding pension credit are called *defined-contribution* systems.[5] Private life insurance is normally of this type. Defined-contribution systems have traditionally been associated with fully funded schemes. In Figure 1 the defined-contribution schemes are represented by quadrants I and II. It may be argued that quadrant I does not really represent a genuine defined-contribution system, largely on the ground that the pension liability is not (fully) backed by funded assets and hence the return on contributions will normally differ from the market return on capital. To distinguish between defined-contribution systems that are fully funded and those that are financed on a pay-as-you-go basis, the latter are often called *Notional Defined Contribution (NDC)* systems.[6]

[5] The International Accounting Standards Committee, IAS 19 (revised 1998), states that under a defined contribution plan:

(a) the enterprise's legal or constructive obligation is limited to the amount that it agrees to contribute to the fund. Thus the amount of the post-employment benefits received by the employee is determined by the amount of contributions paid by an enterprise (and perhaps also the employee) to a post employment benefit plan or to an insurance company, together with investment returns arising from the contributions; and

(b) in consequence, actuarial risk (that benefits will be less than expected) and the investment risk (that assets invested will be insufficient to meet expected benefits) fall on the employee.

Recognising that governments normally can not be legally constrained in fulfilling "promises" made under a pay-as-you-go pension plan, the new largely unfunded Swedish pension system complies with the IAS definition, substituting *investment returns arising from the contributions* with "indexation of the contributions" (and *employer/enterprise* with "government/taxpayers", *employee* with "insured")

[6] Since there is nothing n*otional* about either the contribution or the pension credit resulting from it, the term "notional defined-contribution (NDC) system" is somewhat unfortunate.

Pension systems that allow discrepancies between the contribution paid by an individual and the pension credit that accrues in relation to that contribution are called *defined-benefit* systems.[7] Typically such systems define the benefit in terms of a percentage of final or late-career salary. Defined-benefit schemes may be either pay-as-you-go (III) or fully funded (IV). In a defined-benefit scheme, the relationship between contributions and pension credit can be zero, as in a flat-rate pension system, or 100 %. National pension schemes have universally been defined-benefit and financed more or less entirely on a pay-as-you-go basis. Schemes designed in this manner are found in quadrant III of Figure 1.

Differences in the Dynamics of Defined Benefit and Defined Contribution Systems

The demographic and economic developments that force changes in contribution rate or the value of pensions is here called *uninsurable risks*, it is more precisely defined in Section 3. A defined-contribution system (weather funded or *pay-as-you-go*) must assume uninsurable risk by adjusting the pension level. Increasing the contribution rate is not a viable response to a deficit.[8] A government run defined-benefit system can be designed to assume uninsurable risks by altering the contribution rate *or* by adjusting the value of pensions *or* by a combined adjustment of contribution rate and pension level.[9]

Since financially warranted adjustments in a government run defined-benefit scheme *can* be made either by changing the contribution rate or by changing the value of pensions, it is more flexible than a defined-contribution scheme. There are both positive and negative aspects to this flexibility. In practise government run defined-benefit schemes have not specified in the rules of these schemes how it will accommodate for uninsurable risks.

The Direction of Swedish Pension Reform

As is clear from Figure 1, Sweden has moved from a defined-benefit system to two types of defined-contribution systems. In the new system, 14 % of contributions (2.5/18.5) will go into individual financial accounts (fully funded), while the remaining 86 % (16/18.5) will be channelled into the new pay-as-you-go system. This paper will only discuss financial aspects of the pay-as-you-go system. For a description of the old and new systems, including the fully funded portion of the new system, see Palmer (2000).

The equivalent of 16 % of each individuals annual pensionable income,[10] will be credited yearly his or hers notional account. The corresponding amount is transferred to the systems buffer fund, which finances pension payments. The "interest" earned on the notional account is either

[7] The IAS states that under a defined contribution plan:
(a) the enterprise's obligation is to provide the agreed benefits to current and former employees; and
(b) actuarial risk (that benefits will cost more than expected) and the investment risk fall, in substance, on the enterprise. If actuarial or investment experience are worse than expected, the enterprise's obligation may be increased.

[8] In an NDC system, a temporary deficit can be remedied by increasing the contribution rate, but it is risky to do so. If the cause of the deficit in the first place continues, the deficit may become even larger than at the outset. In both a fully funded DC system and a NDC system the long-term pension level can be increased or withheld by increasing contribution rates, but not the pension level in the short term.

[9] Some analysts have considered the NDC "formula" to be a redressing of a career average defined benefit formula, see for example Cichon (1999). This view fails to recognise that uninsurable risks in a defined contribution plan must be, and in the Swedish NDC system is, assumed by the pension level, rather than by the contribution rate.

[10] The pensionable income consists to about 80 % of wages and salaries; some 20 % is pensionable incomes from social insurance, for example unemployment or sickness insurance. Government annually finances pension credits on such non-wage pensionable income.

the increase in average income as measured by an income index or an approximation of the internal rate of return in the system, as measured by the balance index explained in Section 5.

There is no formal retirement age in the new system. Pension credits will always be earned and added to the notional (as well as financial) accounts if the individual has pensionable income regardless of his or her age and irrespective of weather pension has begun to be drawn. Pension can be drawn from age 61 and upward, without upper age limit. Pension from the pay-as-you-go system is calculated at the duration of retirement by dividing the notional-account balance by a so-called annuity divisor.

The annuity divisor reflects the average life expectancy at retirement, which is calculated in the year the individual reaches the age of 65. A specific annuity divisor is determined for each annual cohort. If life expectancy increases, this implies that the same notional capital will produce a successively lower yearly pension for younger cohorts if conversion to an annuity (pension) is made at the same age. To maintain a fixed pension level when life expectancy increases, the withdrawal of pensions must on average every year be made at a slightly higher age. Further the annuity from the notional account is calculated at an interest rate of 1.6 %. The pension is subsequently indexed with the growth in average income or with the internal rate of return minus 1.6 %.

One important reason for changing to defined contribution systems was to establish a closer link between contributions and expected benefits. Thereby the negative effects of marginal tax rates would be lessened, work incentives would improve, and hopefully the legitimacy and credibility of the public pension system would be enhanced.

Uninsurable Risks and Financial Stability

Pension systems are instituted to distribute risk. Basically the risk is that of prolonged old age: i.e., of living longer than an average number of years with little or no income-generating capacity. However ingeniously pension insurance may be designed to accomplish its task of risk distribution, it will carry uninsurable risks at the aggregate level of all insured persons as a collective. The primary uninsurable risk arises from the fact that the payment of obligations incurred now and in the past will be made in the future; tomorrow's income from today's assets is always uncertain. [11] A second uninsurable risk of a pension system derives from its promise to pay a pension as long as the insured is alive. When the pension annuity is calculated, it is uncertain for how long it will have to be paid.

The downside of these uninsurable risks is that the contribution rate may be increased while the same pension benefit is maintained, or that the value of pensions may be reduced while the contribution rate is left unchanged. The existence of uninsurable risks may lead to significant and unwarranted inter-generational transfers of income.

A NDC system which index notional pension capital and pensions with the growth in average income produces a very stable ratio of average pension over average income. The average pension as a percentage of the average income of those working is referred to below as *the pension level*. Pensions will increase (decrease) at the same rate as average earnings.[12] Replacements rates will be rather stable over time.

[11] Often the value of assets is subject both to market and political risks, i.e., risks of changes in legislation that have retroactive effects, see Diamond (1997). Another risk, which in some situations can be substantial, is that of fraud.
[12] In the new Swedish system, however, a "guarantee pension level" will protect pensioners with the lowest pensions from the loss of purchasing power that other pensioners will suffer if average income growth is less than 1.6 %. The

Mainly for this reason, Swedish reformers have decided, as a general rule, to index notional pension capital and pensions[13] by the growth in average income, as measured by an income index.

Certain courses of demographic and economic development *may* make it impossible to achieve the dual goal of indexing the pension liability by the growth in average income *and* maintaining a fixed contribution rate. The social and political objective of a stable relationship between the average pension and average income is the principal source of the financial-instability problem. In the Swedish discussion on pensions, "uninsurable risk" has thus come to mean the risk of being unable to index notional pension capital and pensions by the growth in average income while also maintaining a fixed contribution rate.

Uninsurable risks are present whether a pension-insurance scheme is organised as a private or public system and whether it is funded or not.[14] By definition, an uninsurable risk cannot be avoided. However, a public pension system can and arguably should be designed to minimise the potential impact of uninsurable risks on the contribution rate and/or the value of pensions. A financially stable pension system is a comprehensive contract. Its rules extend to the manner in which it will deal with uninsurable risks. These rules may define under what circumstances, when, and by how much either the contribution (tax) rate or pension level must be changed. The new Swedish pay-as-you-go pension system is financially stable in the sense that legislation specifies the circumstances under which pension levels must be decreased and the way in which this is to be accomplished.[15] The legislation also provides for automatic re-establishment of the pension level after it has been decreased.[16]

Assets and Liabilities

The obvious way to secure the financial stability of any economic system is to make sure that its liabilities cannot exceed its assets. This is the way in which fully funded pension systems normally are designed. The problem with applying this simple principle to a pay-as-you-go pension system is the lack of an objective method of valuing its principal asset: that is, its assumed perpetual flow of contributions.

The valuation of the pension liability in pay-as-you-go systems entails the same general difficulty in choosing the "right" discount factor as in the case of funded insurance. Since there has been no method of valuing assets for comparison with a pension liability which is also of uncertain value, generally this liability in pay-as-you-go systems has been of limited interest.

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guaranteed pension is indexed by the change in the consumer-price index and is financed by general tax revenue, not by the contributions to the income-related system. The potential cost of this safeguard is thus borne by the taxpayers.

[13] The interest rate of 1.6 % used in converting the notional capital to a pension is subtracted when indexing pensions. This implies that the pensions of each cohort will grow 1.6 % slower than average income. However, since new cohorts will enter the group of retirees each year, the average pension for all pensioners as a collective will grow at about the same rate as average income.

[14] The source, character and magnitud of these risks dependent on the rules of the insurance and on how the scheme is organised, whether it is private or public, funded or unfunded.

[15] A lively debate has been in progress at least since 1994 on the merits of so-called notional defined-contribution systems (NDC). A major criticism of NDC's has been that they would not be financially stable (Valdés-Prieto 2000, Disney 1999), contrary to the more or less explicit claims of their advocates (Palmer 2000, Fox and Palmer 1999). This criticism of NDC's is unjustified, at least in the special case of the Swedish system. The general outline of the balance mechanism was described in Settergren (1997, in Swedish).

[16] Possible effects of the rules have been described in Settergren (2000). Available at www.rfv.se/publi/alder.

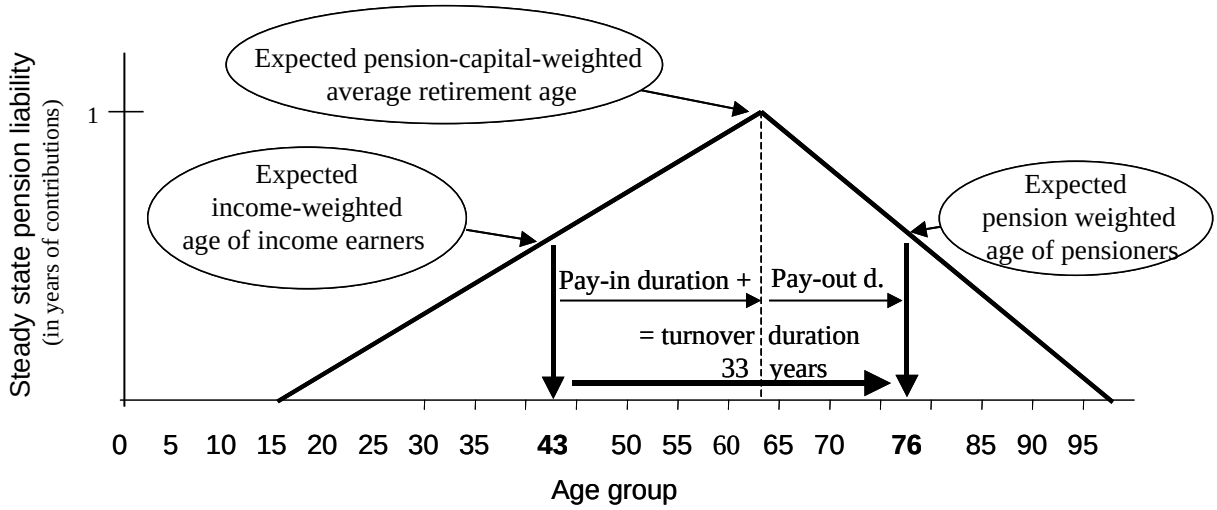
The automatic-balance mechanism is essentially a method of valuing contributions to a pay-as-you-go system. It makes it possible to compare assets and liabilities of such systems. The determinants of assets and liabilities are briefly explained below.

The Contribution Asset

The value of contributions to a pay-as-you-go pension system depends on the degree to which the contributions can finance, or amortise, the pension liability. The capacity of a given amount of contribution to amortize the pension liability depends in turn on the age-related income and mortality patterns of those covered by the system.[17] The age-related income and mortality pattern is referred to here as the *expected turnover duration* of the system.

Figure 2 illustrates the age-related distribution of the pension liability in the Swedish system that would accrue with the income and mortality patterns of 1998, assuming zero population growth. The expected income-weighted average age at which pension credit is received is 43. The expected pension-weighted average age at which pensions are disbursed is 76. Turnover duration is then approximately 33 years (76 - 43). Turnover duration is thus the sum of the *expected pay-in duration* and the *expected pay-out duration*.[18] In this particular case the turnover duration implies that contributions, in a steady state defined by the income and mortality patterns the year of measurement, would perfectly match pension payments while the pension liability is exactly 33 times contributions.

Figure 2. Illustration of the Turnover Duration Concept (Sweden 1998)



* The accumulated steady state pension liability is synonymous to the contribution asset.

Contributions multiplied by expected turnover duration indicate how large a pension liability can be financed by contributions given the income and mortality patterns prevailing in the period measured. Accordingly, the expected turnover duration can be used in determining the value of the contributions to a pay-as-you-go system, or *contribution asset*.

[17] This capacity is also influenced by the population growth rate (labour force growth rate). In the automatic balance mechanism, turnover duration will be calculated on the implicit assumption of zero population growth rate. This assumption simplifies the calculation and reduces the volatility of turnover duration and contribution assets. It implies, however, that assets will be (slightly) overestimated if population growth is negative, and vice versa. The interest rate of 1.6 % that is deducted when indexing pensions shortens the turnover duration.

[18] I am indebted to Eric Steedman, an actuary at Watson Wyatt in Stockholm, for the English translation of the expressions used in the Swedish legislation.

Contribution asset = contributions x *expected turnover duration* (1)

The contribution asset can be defined as the present value of a perpetual annual fixed contribution discounted by the inverse of the expected turnover duration (referred to below as turnover duration). The turnover duration is a somewhat complex concept, but calculating it is simple. The method involved resembles that used in determining life expectancy.[19] To my knowledge there has been no previous mention in actuarial or economic literature of either the existence or the importance of expected turnover duration in analysing the financing of pay-as-you-go systems.[20]

It follows from Eq. 1 that the asset of the pay-as-you-go system will grow with the growth of the contribution base (the contribution rate is assumed to be fixed). It also follows from Eq. 1 that growth in the contribution base is not the only factor affecting the return on contributions, contrary to common assumption.[21] Asset growth is also dependent on changes in the age-related income and mortality patterns that determine the capacity of contributions to amortise the pension liability, i.e. turnover duration. Further, the rate of return on the buffer fund, if there is one, should be taken into account in determining the growth in assets of a pay-as-you-go system. The capital market provides a valuation of the buffer fund on a daily basis. Thus, the assets of the pension system are defined and computable.

Assets = contribution asset + buffer fund (2)

The Pension Liability

The present value of the pension liability is the discounted flow of expected future pension payments represented by the pension liability at the time of measurement. If the notional pension capital and pensions are indexed at the internal rate of return of the system, the present value of the liability will equal the nominal pension liability. In a defined-contribution pension system, the nominal pension liability is easy to calculate. The pension liability (PL) can be thought to consist of two parts, the liability to those who have not yet started to draw their pensions (PL) and the liability to those who are already receiving pensions (PL_r), thus

$$PL = PL_w + PL_r \tag{3}$$

where,

$$PL_w = \sum NPC_i, \text{ for all individuals } i \tag{4}$$

$$PL_r = \sum P_a \times 12 \times G_a, \text{ for all age groups } a \tag{5}$$

NPC_i = notional pension capital of individual *i*, (closing balance at year end)

[19] The formula for calculating turnover duration in the Swedish system is found in Settergren (2000) pp. 93–96 (www.rfv.se/publi/alder) and in the Swedish Government proposal Regeringens proposition 2000/01:70, pp. 73–75.

[20] The concept of turnover duration was presented in Settergren (1999). Valdés-Prieto (2000) lists most of the "risk" factors of a NDC, all of which either are captured by the turnover duration or the other components of the balance ratio defined by Eq. 6 in Section 5. The article by Valdés-Prieto offers a good background to the problems managed by the automatic balance mechanism.

[21] The standard reference in this context is Paul Samuelson (1958) "An Exact Consumption Loan Model of Interest, With or Without the Social Contrivance of Money". In the pioneering work of Samuelson and those following him, for example Aaron (1966) and Buchanan (1968), a static demography and economy are assumed. Economists have not developed the framework needed to deal with divergence from a steady state in pay-as-you-go or partially funded systems.

P_a = pension payments (in December) to age group *a*
G_a = life expectancy (in years) for individuals that have reached age *a*, measured yearly[22]

Eq. 4 simply defines the pension liability to "workers" as the sum of the balance of each individual's notional account. Eq. 5 defines the pension liability to retirees as the sum of the products of the pensions payable to each age group times the life expectancy of that age group. The need for projections in estimating the present value of the pension liability is eliminated if it is assumed that the indexing of the nominal liability is equal to the internal rate of return of the system. Before that assumption is discussed, the components of the internal rate of return will be summarised and commented.

The Components of the Internal Rate of Return

The internal rate of return is the rate at which the pension liability must be indexed to assure that liabilities grow at the same rate as assets. Allowing for some simplifications, the internal rate of return of the pension system is a function of the following four factors: [23]

(a) +	growth of the contribution base
(b) +	change in age-related income and mortality patterns
(c) +	return on the buffer fund
⟶	*return on assets*
(d) -	impact of changes in life expectancy on pension liability
⟶	*internal rate of return*

(a) growth of the contribution base

The growth of the contribution base is the major determinant of the internal rate of return. This relationship is obvious, since disbursements in a pay-as-you-go system are entirely or largely financed directly by contribution revenue. If the labour force is reduced because of a decrease in the working-age population or a drop in labour-force participation, contributions will grow more slowly than average income. There will then be a danger that the indexation of the pension liability by growth in average income will exceed the internal rate of return of the system. If so, pension disbursements will sooner or later exceed the revenues of the system and the buffer fund will in time be depleted.

(b) change in age-related income and mortality patterns

Changes in age-related income and mortality patterns affect the liquidity of the system. The relevant age-related income and mortality patterns are measured by the turnover duration. If turnover duration increases, so does liquidity, and *vice versa*. The isolated present value effect on liquidity from a turnover-duration-change is equal to the change multiplied by contributions.

(c) return on the buffer fund

The return on the buffer fund naturally affects the internal rate of return.[24] The higher the return on the buffer fund, the greater the growth in the assets of the system – and vice versa. In

[22] It is the "life expectancy" of an average pension amount that is relevant, not the life expectancy of individuals; this is acknowledged in the legislation on the automatic balance mechanism. The pension liability is measured yearly with a three-year moving average of economic "life expectancy".

[23] The description disregards the effect that the population growth rate has on turnover duration, and it also ignores inheritance gains and administrative costs.

defined-benefit systems the return on buffer-fund assets may have implications for the contribution rate, but normally not for pension levels. In a defined-contribution pay-as-you-go system, the return on buffer fund assets may of course have an impact on the size of pensions, but normally not on the contribution rate. A low rate of return, mainly in relation to the growth in the contribution base, implies that the system may not be able to pay pensions that increase in step with the growth in average earnings. A high rate of return entails less such risk and may even provide coverage for "deficits" due to other uninsurable risks.

(d) impact of changes in life expectancy on pension liability

With changes in life expectancy, the internal rate of return will differ from the return on assets. An increase in life expectancy increases the pension liability. In almost all existing public pension schemes, the persistent strong increase in life expectancy is claiming a large share of the return on assets. In defined-benefit schemes this has normally implied higher contribution rates.[25] In a defined-contribution scheme the effect from an increase in life expectancy must in principle force a lower pension level – or a postponement of the retirement age.

The cohort-specific annuity divisors described in Section 2 absorb about two-thirds[26] of the risk that changes in life expectancy entail for the financial stability of the system. This effect is obtained by a successively higher divisor for every age, i.e. lower pensions if retirement age is not increased. Thus, one-third of the pension liability will still be affected by changes in life expectancy. The financial exposure to changes in life expectancy results from the fact that pensions already granted are not (directly) influenced by changes in life expectancy after an individual has reached 65.

The Automatic Balance Mechanism

As a rule, the pension liability of the Swedish pay-as-you-go pension system is not indexed by its internal rate of return. In response to this potential source of financial instability, the so-called automatic balance mechanism has been developed. The use of the balance mechanism implies that the assets and liabilities of the pay-as-you-go system are to be calculated and disclosed annually, thus providing the pay-as-you-go system with a *balance sheet*. The formula for calculating the assets and liabilities of the system is prescribed by legislation. Aside from the buffer fund, which is valued on the basis of capital-market transactions, the calculation is based exclusively on transactions which are recorded in the pension system. There is thus no element of forecasting in the calculation. The relationship between assets and liabilities is to be reported annually as a *balance ratio*:

$$\textit{Balance ratio}^{27} = \frac{\textit{Contribution asset} + \textit{Buffer fund}}{\textit{Pension liability}} \quad (6)$$

[24] In a pay-as-you-go system, the return on the buffer fund normally has only a limited effect on the return on total assets, since the buffer fund will normally represent only a small share of total assets. In Sweden, the assets of the buffer fund are presently equivalent to somewhat more than 10 % of the value of the contribution asset.

[25] This feature of a public old-age pension system is highly irrational if some share of the years added to life expectancy is healthy and potentially productive ones.

[26] About two-thirds of the pension liability in a mature system in a OECD country relates to persons who have not yet retired, one-third relate to pensioners.

[27] For purposes of illustration, the following figures can be used. Contributions are approximately SEK 145 billion; turnover duration is roughly 33 years (of which 22 are pay-in duration and 11 are pay-our duration). The resulting contribution asset is SEK 4,785 billion (145 x 33). The buffer fund is assumed to be SEK 550 billion. The pension liability is approximately SEK 5,300 billion. The balance ratio is then (4,785 + 550)/5,300 = 1.0066. (The GDP of Sweden in the year 2000 was approximately SEK 2 100 billion).

The balance ratio summarises the effect of all risk factors (*a*)–(*d*). Note that fund will be increased (or decreased) by contributions net of pension payments, in a defined-contribution system this increase/decrease will be equal in amount to the increase/decrease in the pension liability from new pension credit net of amortised pension liability.

When the balance ratio exceeds 1, the system has a surplus in the sense that it is expected to meet its obligation with a margin to spare. In that case the pension liability is less than the assets of the system. If the balance ratio is less than 1, the system is in a state of financial imbalance; the pension liability exceeds the assets which are to finance it. If this imbalance were allowed to persist, the buffer fund would be depleted.

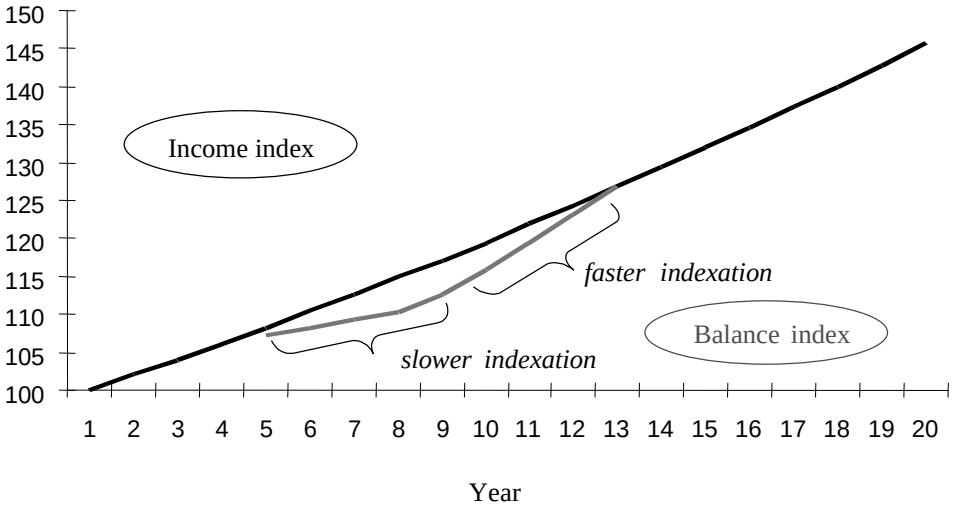
If the balance ratio falls below 1 the automatic balance mechanism is activated. It switches the indexation of pensions and notional pension capital to a new index series, called a *balance index*. The balance index is established by multiplying the income index by the balance ratio. The balance index henceforth increases with the growth in the income index times the balance ratio. When the balance ratio is below unity, pensions and notional pension capital will grow slower than average income. If the balance ratio exceeds 1 *in a period when the balance mechanism is activated,* the indexing of pensions and notional accounts will continue at the rate of growth in average income times the balance ratio. Then the pension liability (and pensions as well) will be indexed at a rate higher than the growth in average income. No further calculation of the balance index will be made after it re-attains the same level as the income index. The pension liability will then be indexed once again at a rate equal to the change in the income index (average income).

When the balance mechanism is activated and the system starts to index its liability by the balance index, the liability will be "compounded" at an approximation of the internal rate of return of the system. The rate is only approximate, since turnover duration is calculated on the assumption of zero population growth. As long as indexing is done by the balance index, the buffer fund will tend towards zero.[28] To prevent the liability from becoming more than insignificantly larger than assets, the system objective of keeping pensions increases in line with growth in average income is disregarded until the balance ratio permits it to be reinstated.

Figure 3 illustrates how balancing works in a scenario where it is first activated and later discontinued.

[28] However, if there are long-term strains on the system, such as a long-term population decrease, long-term deficits in the buffer fund can arise. For simulations of effects on the buffer fund when the balance mechanism is activated, see Settergren (2000).

Figure 3. Income index and the balance index



The Assumption Behind the Valuation of the Pension Liability

In Section 4 it was explained that the nominal pension liability is used as an estimate of the present value of the pension liability. This gives a correct *ex post* valuation of the liability only if the rate at which the liability is indexed, including the effect of changes in life expectancy, coincides with the systems internal rate of return. If this condition could be assumed to prevail, the automatic balance mechanism would be superfluous. The nominal valuation of the pension liability is not made on an assumption that the growth in average income, including the effect of changes in life expectancy, will equal the internal rate of return. Rather, the nominal valuation is based on the view that the relationship of the long-term growth in average income to the long-term internal rate of return cannot be sufficiently known to permit a rational wager on this outcome.

There are a number of good arguments for refraining from such a bet: a generally poor record of economic and demographic forecasts; the specific demographic situation of Sweden, with zero or slightly negative population growth; the possibility that political considerations may have an impact on the forecasts. Even if we thought that we could make good long-term forecasts, it might still be rational not to use them. There is a trade-off between a higher degree of sophistication in disclosing the financial position of the system and the real or perceived increased risks of manipulation that follow from it.[29] In the lack of forecasts and low degree of sophistication the method used for valuing the pension liability and assets resembles traditional accounting, and it has similar strengths and weaknesses. Note also that the valuation of the pension liability will only have a direct effect on the value of pensions when the balance mechanism is activated.

Risk Aversion and Asymmetric Financial Stability

The design of the Swedish system does not allow for uninsurable risks to be indiscriminately reflected in the indexation or calculation of pensions. These risks can only affect pension levels through their impact on the balance sheet of the system. As the system will accumulate assets in some circumstances, it will be able to sustain indexation exceeding the internal rate of return for

[29] The disclosure and governing of a public pay-as-you-go system suffers from what economists refer to as an agency problem.

some time without endangering the financial stability of the system. Deviations from the objective of the system – a stable pension level – are thereby reduced.[30]

The rules of the pension system allow for surpluses to accumulate, but exclude (substantial) deficits.[31] In this sense the design is asymmetric. A symmetrically designed pension system, one that always ensures a zero net present value and a balance ratio of unity, is irrational if the insured have any degree of risk aversion as regards their pension level. The insured are risk avert if they assign a higher negative value to a decrease in the ratio of their average pension to the average income, than they would assign a positive value to a corresponding increase in this ratio. Risk aversion implies that the cost of maintaining a buffer fund potentially larger than the fund required for a balance ratio of unity could be justified if the larger fund reduces the risk of variations in the ratio of average pension to average income. If the insured are assumed to be risk avert in this sense, their economic well-being is enhanced by the asymmetric design that has been chosen. Considering that a large share of individuals' total assets is invested in the national pay-as-you-go pension system, the value of the risk reduction produced by the combination of average-income indexing and automatic balancing may be considerable.

The risk reduction achieved by the asymmetric design of the pay-as-you-go system has been made possible by determining the time preference of the system in regard to contributions, as measured by the *expected turnover duration*. It has thereby been possible to value contributions and to generate balance statements for the system. Balance statements are at least as crucial for judging the solvency and credibility of pay-as-you-go pension systems as they are for determining the financial position of a business or any other organisation. The balance mechanism provides for what might be called actuarial accounting, a form of double entry bookkeeping for a pay as-you-go pension system.

[30] There is however an important inefficiency in the system. Pension credits that are earned after the balance mechanism is triggered, and thereby entirely or partially unaffected by a slower indexation receives the same faster indexation as all other notional capital and pensions when the balance mechanism strives towards the level of the income index. Technically this inefficiency could have been avoided, at the possible cost of increased complexity of the design.

[31] The government bill 2000/01:70 suggests the possibility of imposing a ceiling on the balance ratio. An appropriate level of the balance ratio for initiating positive balancing has not yet been proposed, nor has the necessary analysis been performed. Since this kind of positive balancing would still allow a balance ratio above unity, it would not change the general asymmetric design of indexing in the system.

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KÅPAN PENSIONER

Information about your pension insurance

...worth saving

A traditional pension insurance for you as a government employee

Kåpan Pensioner manages collectively agreed occupational pensions for people who are or have been government employees. We offer a traditional pension insurance with a guaranteed interest rate and good returns over time. Kåpan is a mutual insurance society. This means that the members own the business together. The society manages over SEK 75 billion for more than 700,000 members. We are a small insurance company with a major and important assignment.

We make long-term choices to optimise the balance between risks and returns. At the same time we keep our costs as low as possible and use limited resources on marketing. All in order to give you a good return on your pension capital at the lowest possible cost. When there is a surplus, everything goes back to you in the form of bonuses.

We conduct responsible investment management. We make investments on the basis of ethical standards and principles which are strongly rooted in Swedish society, based on decisions made by the Swedish Parliament and Government.

Kåpan was formed in 1992 by the parties to the government collective agreements. The name, Kåpan, is the Swedish acronym that stands for complementary retirement pension. It is also the family name of our various pension insurance products.

We have chosen to use Lady's Mantle as an illustration and symbol to bring a little colour and life to an otherwise rather unexciting communication.

Lady's Mantle (*Alchemilla vulgaris* L) is the generic name for a number of apomictic microspecies of the genus Alchemilla. The microspecies are distinguished primarily by the shape of the leaves.

Lady's Mantle is easily recognised from its unique fan shaped leaf rosette in the centre of which water drops collect in the early morning to form a shimmering pearl. The drops are formed during the night when the leaves exude water which has been taken up through the roots by guttation and is not dew.

KÅPAN PENSIONER

We do not spend money on marketing our operations but prioritise keeping our costs low.

Information about our activities is available on our website, kapan.se.

Information about your occupational pension with Kåpan Pensioner

When you are a government employee you belong to the PA 16 occupational pension agreement. This agreement means that you become a member of the Kåpan Pensioner insurance society as a result of your employer paying money towards your occupational pension. All our insurance products are defined contribution. This means that the total amount of contributions paid and the return we can offer you determine the size of the pension you will receive from us.

Your occupational pension varies a little depending on which section of the PA 16 occupational pension agreement you belong to. If you were born in 1988 or later, you belong to Section I. If your date of birth is before 1988, you normally belong to Section II.

Born 1988 or later, Section I

Kåpan Tjänste – complementary retirement pension

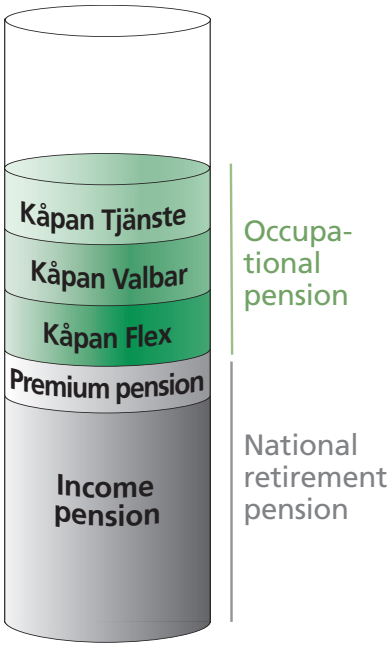
Kåpan Tjänste is a mandatory component where your employer pays in the equivalent of 2% on salary components up to 7.5 income base amounts and the equivalent of 10% on salary components in excess of 7.5 income base amounts. If your employer has signed a local collective agreement, the extra premium goes to this. From the age of 61 at the earliest you can withdraw this pension for life or for a limited period of at least five years.

Kåpan Valbar – elective pension

In addition to the mandatory component, you have an elective component that amounts to 2.5% of your salary on salary components up to 7.5 income base amounts and corresponds to 20% on salary components in excess of 7.5 income base amounts. You are free to choose which insurance provider should manage your money. If you choose us, this component is placed in Kåpan Valbar. People who do not make an active choice will also have their money managed by us. From the age of 61 at the earliest you can withdraw your pension for life or for a limited period of at least 10 years.

Kåpan Flex

Your employer pays in the equivalent of 1.5% of your salary to Kåpan Flex. From the age of 61 at the earliest, you can withdraw this pension for life or for a limited period of at least one year.



Born before 1988, Section II

Kåpan Tjänste – complementary retirement pension

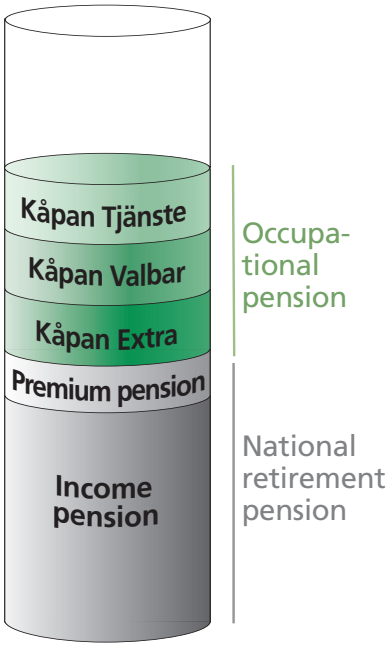
Your employer pays the equivalent of 2% of your salary to Kåpan Tjänste. Kåpan Tjänste is paid out automatically from the age of 65 and for five years. You can choose to withdraw this pension after, and in some circumstances before, you reach the age of 65. You can choose to withdraw your pension for a longer period and in exceptional circumstances for a shorter period.

Kåpan Valbar – elective pension

Your employer pays the equivalent of 2.5% of your salary to an elective component. You can choose which insurance provider should manage your money. If you choose us, the money is invested in Kåpan Valbar. People who do not make an active choice will also have their money managed by us. Kåpan Valbar is paid out automatically from the age of 65 and for life. You can choose to withdraw this pension later and under certain circumstances earlier than 65, but no earlier than 61. The pension can only be withdrawn for a shorter period before the age of 65.

Kåpan Extra – locally agreed occupational pension

If your employer has signed a local collective agreement, the extra premium is invested in Kåpan Extra. Kåpan Extra is paid out automatically from the age of 65 and for five years. You can choose to withdraw this pension later, and under certain circumstances earlier, than 65 but no earlier than 61. You can choose to withdraw this pension for a longer period and in exceptional circumstances for a shorter period.



Your savings with Kåpan are a traditional pension insurance

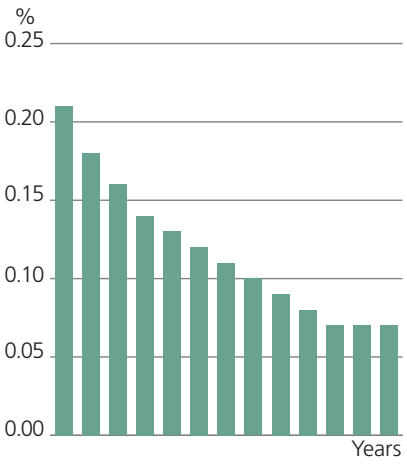
Your pension is determined in different ways

Your savings have different risks

1) Your risk capital is the bonuses you have received over the years in addition to guaranteed returns.

2) In a unit-linked insurance you risk your entire capital.

Development of our management costs



Saving for a pension can be done in many different ways, With us, you have a traditional pension insurance with special attributes. This means that when we receive a payment from your employer it goes to an insurance with us that gives you:

- Protection of your guaranteed capital, it does not reduce in size.
- Protection against high charges, until your pension is paid out.
- Protection if you live for a long time, which gives you a pension for life.

You can also choose to complement your insurance with repayment cover and decide whether your pension should be paid out for life or over a limited period. The purpose of this brochure is to provide you with basic information about what your insurance with us includes, what you will receive and the choices available to you.

Protection of your capital

The pension you will receive from us will depend on how much has been paid in premiums and your share of the surplus in the society. This is different from a defined benefit pension which is based on your salary in the years before you retire.

Every year you will receive guaranteed interest on the premiums paid on your behalf. So in other words, the paid-in capital is insured against reducing in size. The guaranteed interest rate that applies when a payment is made, means that you have a guaranteed rate on that particular payment, until your pension is paid out. The guaranteed rate also means that we who manage your capital must continuously balance the risk that the capital decreases against the goal of providing a high return.

If you compare a traditional pension insurance with a unit-linked insurance, you must remember that you risk losing your entire pension capital in a fund. This increased risk might give you a higher return but also reduce the amount of your capital and give you a lower pension.

Regardless of which of our pension insurance products you have, your guaranteed capital can never decrease but will increase all the time by at least the average guaranteed interest rate.

Protection against high charges

Your pension insurance includes protection against high charges. This means that we never make a greater charge on your guaranteed capital than what is specified in the society's statutes. As long as you have capital remaining in the society, you will have low charges on your insurance policies and the specified maximum level of costs applies until your pension is paid out.

The society is only available to government employees and does not compete in other collective agreement areas in the private market. This means, among other things, that we do not pay commission to insurance agents or use part of your capital for marketing. We constantly try to keep costs at a low level. This gives you a higher pension.

Protection if you live for a long time

When your pension is paid out you can decide if you want it paid for a limited time or for the rest of your life.

We use among other things life expectancy assumptions to decide the size of your pension each month. If you choose lifetime payments and live longer than expected according to our life expectancy assumptions you will continue to receive your payments, this is part of your insurance. So we guarantee that you will receive a pension from us every month for life regardless of how long you live.

Another part of the insurance is that a lifetime guarantee is linked to every payment in the same way as the guaranteed interest. This means that the assumptions we guarantee you when the premiums are paid in will not worsen and give you a lower pension even if the assumptions on life expectancy change.

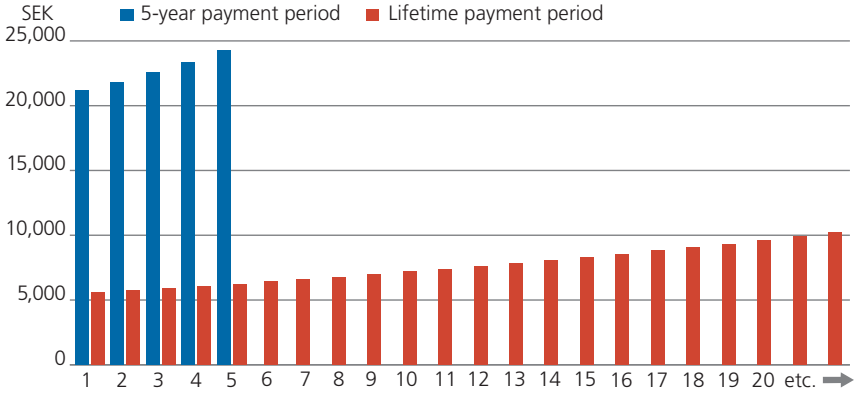
We apply gender-neutral life expectancy assumptions when we calculate your pension. This means that when we calculate your pension based on your pension capital, the level of your pension will be the same regardless of whether you are a man or a woman.

Lifetime or time-limited payments

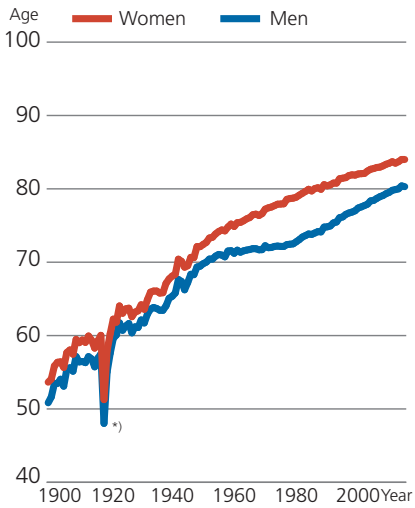
In most cases you can choose between lifetime or time-limited payments of your pension capital with us. When making this choice it is important that you review your pension in its entirety, for example by using the forecast at minpension.se. There are many things that you can take into account. The expected remaining lifetime for a member who reaches the age of 65 this year is about 22 years.

If you are thirty today, most people of your generation are expected to live to over 90. This means that a time-limited payment for five years will give you a higher pension during the relatively short part of your expected time as a pensioner. You should also include the possibility that you might have some earned income. This can have high marginal tax effects on your time-limited pension that might not arise when you choose a lifetime payment. If you are expecting a low pension, then you should take into account the effects of various forms of support and allowances when choosing how your pension should be paid.

Pension payments per year with a pension capital of SEK 100,000 and assuming a bonus interest rate of 5%



Average life expectancy 1900 – 2015



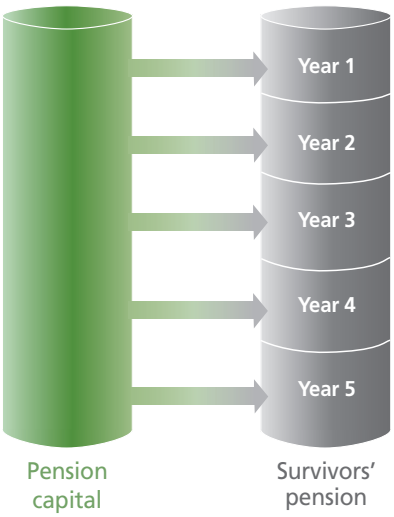
*) Influenza epidemic, Spanish flu.

Source: Statistics Sweden

You can also include repayment cover which means that your pension capital will be paid to your survivors if you die early. We explain what repayment cover is and how it works on the next pages.

Insurance with or without repayment cover

With repayment cover your pension capital is paid out as a survivors' pension



It is possible to include repayment cover in your insurance with us. Repayment cover means that your surviving beneficiaries can take over the rights to your pension capital if you should die early.

The capital is normally paid out for five years after your death. The amount of capital you have in each insurance is shown on your pension statement.

Surviving beneficiaries you can appoint are your family. Family means spouse, registered partner, cohabitant, children or foster children. You can also choose if you wish the capital to be paid to a former spouse, registered partner, cohabitant or the children of any of these people.

You can add repayment cover

You have the possibility to choose repayment cover regardless of the type of insurance you have. If you do not make an active choice, your insurance will not normally include repayment cover.

You can decide whether you wish to include repayment cover within six months from payment of the first premium for your insurance or within one year from the date you get married, cohabit or have children. If you choose to add repayment cover this includes your entire pension capital on that insurance. If you wish to add repayment cover without changes to your family circumstances, the cover will only apply to future premiums. In practice this means that you get a new policy with repayment cover where future premiums build up a pension capital with repayment cover.

You can remove repayment cover without having changed your family circumstances right up to the time that you start to withdraw your pension.

Repayment cover means that you reduce your future pension

If you choose repayment cover your pension will be lower. This is because by choosing repayment cover you waive your right to receive a part of the collective inheritance gain which continuously builds up in the society. The inheritance gain is the pension capital remaining in insurances without repayment cover following the death of the insured person. This capital is shared among all others in the society who have the same type of insurance.

The cost of repayment cover is not exact since it depends on future returns and the actual lifetime of insured persons in the society. The table on the left shows some examples of what repayment cover is expected to cost in terms of a lower pension from different ages if you choose repayment cover from the start and continue to be a government employee for the entire period until your retirement.

The inheritance gain is shared out annually which means that insurance without repayment cover receives extra funds in addition to the bonus interest which is added to all policies. If you have an insurance without repayment cover, you can see the amount of the inheritance gain on your insurance in your pension statement. If you have repayment cover there will be no figure in that column.

Repayment cover means that you get a lower pension

	Payment	
You are	For 5 years	For life [1]
25	- 6%	- 12%
55	- 4%	- 7%

[1] The figures are based on you being a new employee and continuing to work until 65.

Other types of insurance cover

When you are considering whether to include repayment cover in your insurance, you should start with your family situation. If you have a large pension capital, repayment cover can provide your family with some financial security. If you have dependents, for example, repayment cover can be especially important.

At the same time, repayment cover means that your own pension will be lower. It is important that you look at your entire insurance protection when you make a decision. So check what protection you have in the form of pensions and insurance from other pension providers in addition to Kåpan. If you die while you are a government employee, for example, according to collective agreement your family is entitled to payments for six years following your death. You family will also receive compensation from your occupational group life insurance. Read more about your insurance cover in the event of your death while a government employee at spv.se.

An alternative to repayment cover can be to take out a separate life insurance with an insurance company. This insurance will cost you in the form of premium payments in the short term but you will have these costs repaid in the form of a higher pension. Calculated on normal life expectancy and family situation, repayment cover usually costs more than a separate life insurance but, as stated, you pay at different times.

Contact our customer service if you wish to know more or make changes. You can also find forms on our website that you can print out, complete and send in.

Right of transfer for Kåpan Valbar

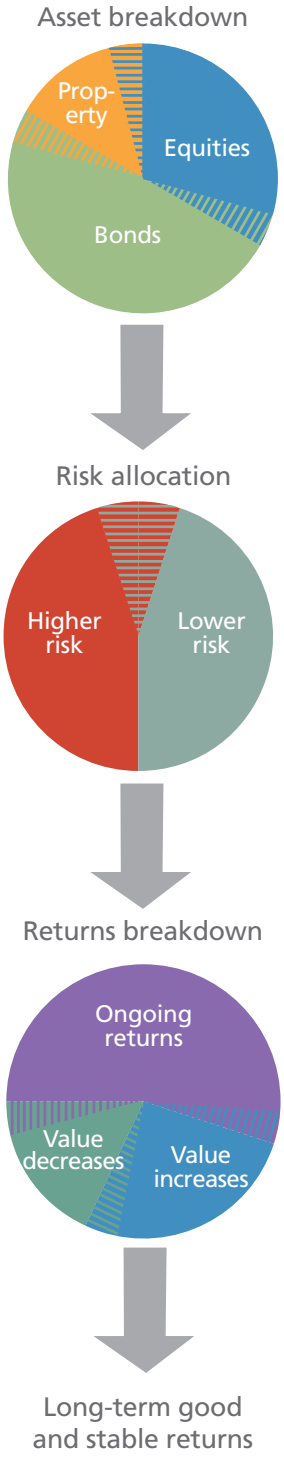
Right of transfer means that you can move the capital in a pension insurance between different insurance providers. Your Kåpan Tjänste insurance with us cannot be transferred to an insurance company or bank.

Your Kåpan Valbar insurance with premiums paid after 1 July 2016 has terms that allow transfer. When considering a possible transfer of your pension capital in Kåpan Valbar you should be aware that the only thing transferred is a capital sum, other insurance terms and conditions no longer apply which means that the value in these other conditions disappears.

If you change employer from a government to a non-government organisation, no further premiums will be paid into your pension insurance with us. The insurance remains active and will continue to increase with guaranteed and bonus interest until it is paid out as a pension. If you return to government employment, your insurance with us will resume.

Traditional pension insurance – long-term asset management

Our asset management model



The insurance premiums paid into the society together make up the assets that we manage. We have long experience of strategic investment management and our main goal is the creation of good long-term returns on your pension capital.

Insurance with a guarantee

A traditional pension insurance means among other things that the capital is guaranteed not to reduce in size. The guaranteed rate the society gives you on every paid-in premium over time is approximately 2% below the current level of government bonds, the "risk-free interest". It is the difference between these two interest rates which makes it possible for us to invest some of your capital in assets with a higher expected return but also a higher risk.

Solvency ratio – the balance between guarantee and surplus

The society builds up a common risk capital based on paid-in premiums and the surplus created by investment management over time. The extent to which the assets exceed the society's commitments to its members is called the solvency ratio. The society has an adequate solvency ratio but this varies between years in step with the value changes in assets and liabilities. If you would like to read more about the society's investment strategy and solvency ratio you can find the society's annual report on our website kapan.se.

Balance between risk and return

Managing assets within the framework of a traditional pension insurance relies on finding a balance between taking risks and expected returns. Capital is therefore invested based on the society's investment policy which has been produced by the society's Board. The policy states that investments shall be made in many different asset classes. Investments shall also be made in many different securities so that no single investment constitutes too big a risk. You can read more about our investment policy on our website kapan.se.

Investments in different asset classes

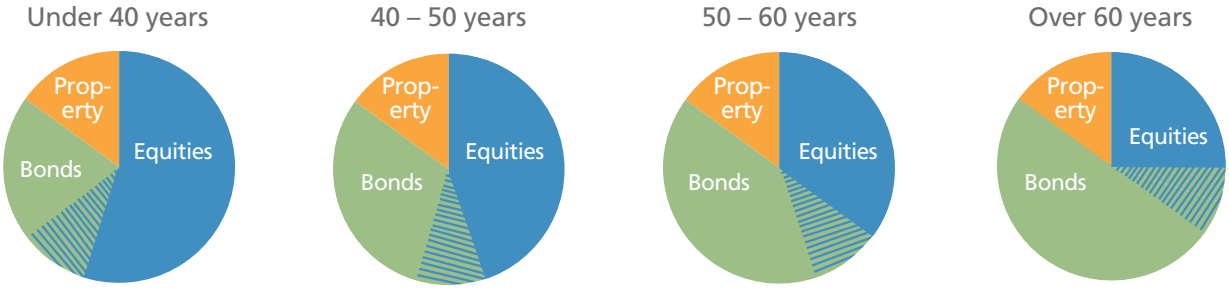
Based on the investment policy, we split the managed capital across three main investment areas, equities, bonds and property. Together these constitute a well-balanced portfolio. Fixed-income securities are expected to provide stable returns and performance over time. Equities are more risky investments which means that the performance can swing both up and down but are expected to give a higher return over time. Investments in real estate and similar assets provide a good complement to investments in equities and fixed-income securities. All assets are continuously given a market value so that we always have the value of the society's assets. The increase in value accrues to your insurance in the form of bonus interest.

Generation savings

In our management we also consider your age and how long it is to your retirement. If you are young and have a long time before you retire you will get a higher risk in your savings to give the possibility of a higher return. Investments with greater risk are expected to give a higher return over time than more stable investments, but value development can fluctuate considerably more during this time. This means in turn that the risk in your savings reduces in step with your approaching retirement. When you are older you get more stability in your savings.

We split the saved capital into four different age categories with different asset allocation between the three main investment areas. In the diagrams you can see what the overall allocation looks like depending on your age. The allocation can vary within a range set by the Board in the society's investment policy.

Asset allocation for different generation portfolios



Responsible investment management

The investment policy also regulates the ethical framework for investment management and is aligned with ethical standards and principles widely rooted in Swedish society based on decisions made by the Swedish Parliament and Government. Guidelines for management are the principles in the international conventions:

- UN Global Compact
- OECD guidelines for multinational enterprises
- Oslo and Ottawa conventions
- UN principles for responsible investment

We continuously check and assess different companies' work with sustainability and social responsibility. Since we are a small organisation with limited resources we use external partners to carry out analyses and evaluations of environmental and sustainability assessments at corporate level.

The overall aim is to contribute to and stimulate companies to continual improvements in the areas sustainability and social responsibility.

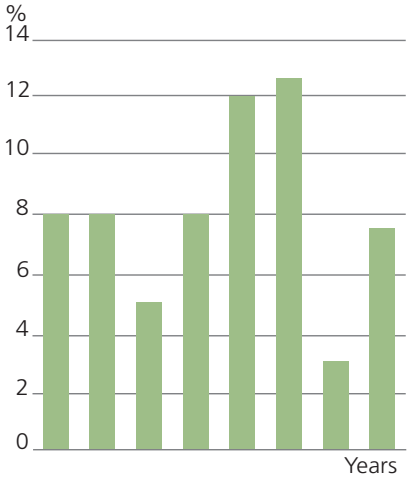
You can read more about our sustainability work in our sustainability report and our sustainability declaration on kapan.se.

Sharing the assets of the society

Your insurance with Kåpan Pensioner is a traditional pension insurance which means that we guarantee your capital. In addition to the guarantee you are entitled to your share of the society's assets since we are a mutual association. You get this by each insurance being given a bonus rate, which can also be called return interest, on your pension capital.

The bonus rate corresponds to the development of the value of the society's total assets. This means that your insurance with us has both a guaranteed capital and the capital which is calculated based on the bonus rate, which is your pension capital.

Bonus rate



Bonus rates can be both positive and negative

The bonus on which your pension capital is recalculated can be positive or negative at any given time. Normally your pension capital is more than your guaranteed capital and therefore the amount of your pension capital will determine the level of your pension. We add the bonus to all policies monthly. This means that your pension capital will change continuously in step with the development of the value of the society's assets.

We distribute the saved capital across different generation portfolios which take into account age and time remaining to retirement. This means that the bonus rates can differ. If you are under 40 you can expect to get a higher bonus rate than someone over 60 which reflects the difference in asset allocation across the corresponding portfolios. This also means that the rate can fluctuate more for younger pension savers since they have a higher proportion of equities in their savings.

The current bonus rate is shown on our website.

Bonus rates from gross to net – example

Bonus rate	6.0%
Tax on returns = 15% of government lending rate	0.1%
Deduction for our costs	0.1%
Bonus rate, net	5.8%

Bonus after tax and costs

The costs allocated to your insurance are partly the costs the society has for administration of all policies and partly the tax charged on savings in pension insurance, so-called tax on returns. This tax uses a standardised method based on the average government lending rate and is equally high in percentage points for all pension savers regardless of the size of the return.

The society's administrative costs in relation to managed capital are low and have gradually decreased over the years. These costs are taken from your pension capital as a fixed charge per insurance and a variable charge in relation to the amount of your pension capital. The starting point is that the society only makes a charge to cover the actual costs of running the business.

The society's assets become your pension capital

Put simply, your pension capital is your share of the society's assets. The method the society uses to share the surplus and costs of the insurance is usually called the contribution method. This means that the surplus and deficit as well as costs are allocated to an insurance to the extent that the insurance is assessed to have contributed.

How large a part of the society's assets is shared out as members' pension capital is called the funding ratio. The policy decided on by the Board means that the society's total assets shall normally be shared across all policies, i.e. a funding ratio of 100%.

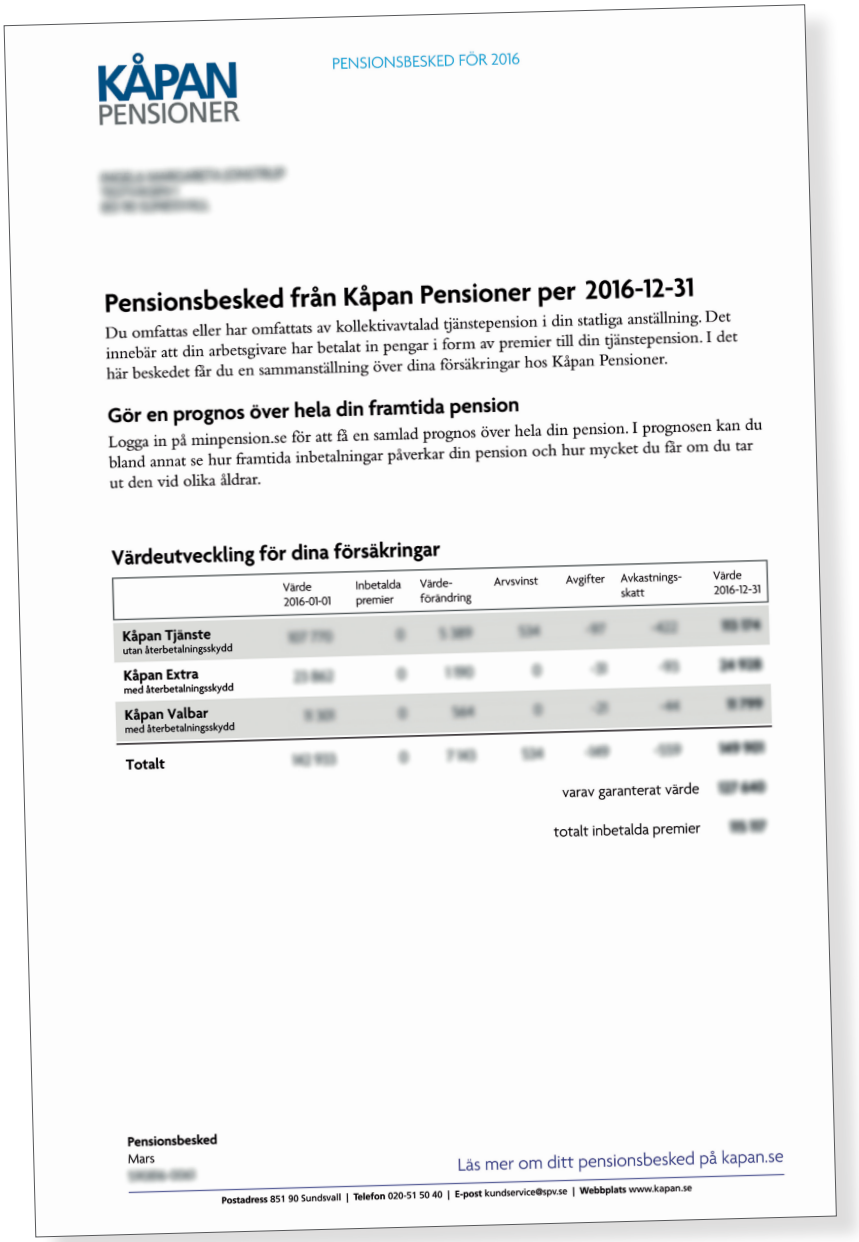
Your pension statement provides all information

Once a year you receive a summary of all your pensions with us. Your pension statement shows how much has been paid in as premiums during the year and how much the value has changed. The value change consists of the bonus interest during the year. You also get a summary of charges and tax on returns as well as any inheritance gain (if you do not have repayment cover).

You also get a complete overview of how much you have saved in your insurance over time. Your total pension capital consists of the premiums paid into your insurance and your value change. The value change consists of a guaranteed part and the bonus you have received. Your pension statement shows the amount of your guaranteed capital and your total pension capital. The bonus rate, as distinct from the guaranteed interest, can be reversed if the return on assets becomes too low in the future.

You can always log in to spv.se to see your most recent pension statement.

You can read more about your pension statement on our website.



KÅPAN PENSIONER

PENSIONSBESKED FÖR 2016

[redacted]

Pensionsbesked från Kåpan Pensioner per 2016-12-31

Du omfattas eller har omfattats av kollektivavtalad tjänstepension i din statliga anställning. Det innebär att din arbetsgivare har betalat in pengar i form av premier till din tjänstepension. I det här beskedet får du en sammanställning över dina försäkringar hos Kåpan Pensioner.

Gör en prognos över hela din framtida pension

Logga in på minpension.se för att få en samlad prognos över hela din pension. I prognosen kan du bland annat se hur framtida inbetalningar påverkar din pension och hur mycket du får om du tar ut den vid olika åldrar.

Värdeutveckling för dina försäkringar

	Värde 2016-01-01	Inbetalda premier	Värde-förändring	Arvsvinst	Avgifter	Avkastnings-skatt	Värde 2016-12-31
Kåpan Tjänste utan återbetalningsskydd	[redacted]						
Kåpan Extra med återbetalningsskydd							
Kåpan Valbar med återbetalningsskydd							
Totalt							

varav garanterat värde

totalt inbetalda premier

Pensionsbesked
Mars
[redacted]

Läs mer om ditt pensionsbesked på kapan.se

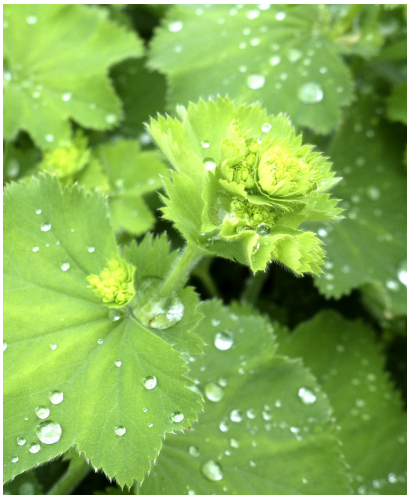
Postadress 851 90 Sundsvall | Telefon 020-51 50 40 | E-post kundservice@spv.se | Webbplats www.kapan.se

Information about your entire pension

Your pension comes from different sources. On minpension.se you can get an aggregated forecast for your entire pension. Log in with your electronic id or with the personal code you were sent in the orange envelope from the Swedish Pensions Agency.

In this brochure you will only find information about how your pension insurance with Kåpan Pensioner works, what choices you can make and what happens when you eventually retire.

When you start withdrawing your pension



There are many different alternatives when you start planning for your retirement. Your pension will normally come from several different sources and there are a lot of conditions and options to consider.

Well before you retire you should get some idea of the amount of your capital and roughly how much this will provide in pension every month. The easiest way to do this is to log on to the website minpension.se and see where you have your savings and how much they are.

The conditions for different insurances vary. Many conditions of your occupational pension are regulated by the underlying pension agreement between the parties to the collective agreements but some conditions are governed by current income tax regulations and our statutes.

Your insurance with us has different conditions depending on which insurance you have, but the following applies to everyone:

- The payment period can always be made for life before pension payments start
- When lifetime payments begin, repayment cover ceases when you reach 75
- You cannot stop payments once you have started to receive your pension
- Capital less than the price base amount may be paid as a one-time payment
- If you have a disability pension or temporary disability benefits you cannot start your occupational pension before the age of 65

There are several possibilities and limitations depending on which of Kåpan's pension insurances you have. But regardless of the insurance type we recommend that you contact us and tell us about your retirement plans and how you want your pension paid. You can contact our customer service by calling 020 51 50 40. Please have your pension statement to hand when you call us.

From pension capital to paid-out pension

When you have told us that you want to start taking out your pension we calculate a so-called forecast amount. The forecast amount is the amount of pension we will pay each month. It is based on the amount of pension capital and the length of time over which payments will be made.

When we calculate the forecast amount we take into account assumptions about future returns, tax and costs as well as life expectancy for the remaining insured period. The aim is to give you a relatively even pension payment. The assumptions are usually called forecast assumptions. The most important assumption is the forecast interest rate. We currently assume a forecast interest rate of 2% which comes from assumptions about our expected returns. You will still get a bonus rate on the capital that remains in the society. If the bonus rate is over 2%, your pension payments will increase.

We recalculate the amount paid out once a year as long as payments continue using the divisor that we use when calculating the monthly forecast amount.

This means that we divide your pension capital by the calculated devisor. If you have a five-year payment period, then the divisor when you retire is currently 56.52. If, on the other hand, you have payments for life then the divisor is 212.75. After one year we make a new calculation using the revalued pension capital and devisor for the second year.

To ensure that you always get at least the pension guaranteed by your insurance, we also calculate the guaranteed pension amount per month based on your guaranteed pension capital. We always pay you the higher of these two amounts.

Bank details

We pay your pension from the bank chosen by SPV. If you are already receiving payments from SPV or your salary from that bank, then your pension will be paid into the same account. If you have no registered account number, then you will receive a giro cheque. At the same time, you will have the possibility to register where you would like your pension paid in future. If you wish to use an account in another bank and would like your pension transferred there from the first payment, you should contact your bank and they will arrange the transfer. Read more about bank details on kapan.se.

Paying withholding tax

It is the National Government Employee Pensions Board, SPV, which pays your pension from us. Before they pay your occupational pension, we deduct tax.

If your payment is less than SEK 14,000 per month we deduct tax at 30%. If your pension is over SEK 14,000 per month we deduct tax according to the tax tables or any specific decision that applies to you.

If you receive a pension or salary from several sources your tax deduction can be too low. To avoid tax arrears, you can check with the Swedish Tax Agency if a sufficient total amount of tax is being deducted.

If you want us to deduct additional tax from your payments, contact SPV's customer service. If you want us to deduct less than 30% in tax we must have a decision for changed calculation of tax deduction (jämkning) from the Tax Agency.

Payment days

If you were born on days 1 – 15 of the month, we make payments on the 18th of the month. If you were born on days 16 – 31, we make payments on the 19th. If the payment day is a Sunday or an immediately following public holiday, then pensions will be paid on the next following weekday that is not a public holiday. If the payment day is some other public holiday, a Saturday or Midsummer's Eve then pensions will be paid on the immediately preceding weekday that is not a public holiday.

From pension capital to monthly payments – example

Time-limited payment, 5 years

Pension capital	100,000
Divisor	56.52
Monthly pension first year: 100,000/56.52 =	SEK 1,769

Lifetime payment

Pension capital	100,000
Divisor	212.75
Monthly pension first year: 100,000/212.75 =	SEK 470

More about the society

Strategic direction

The society is not open to everybody. Members can only comprise persons who are employed under collective agreements made between the parties in the government sector. This means that the society does not compete with other insurers in other agreement areas. We have therefore chosen to put limited resources into marketing and focus on providing information via the annual statement and our website. We also do not pay commission to banks or insurance agents for selling our products.

The intention is to create a good long-term return on members' pension capital at a low cost. We do this by focusing on one product, traditional pension insurance with guaranteed interest – a balanced and efficient form of saving. We do not put resources into creating many different savings alternatives. We try solely to achieve a good and efficient pension saving for our members.

The strategic direction is decided by the Board. The parties to the government agreement sector have given the society specific responsibility within the framework of the pension agreement since we are responsible for management of pension premiums for which there is no choice and premiums for those who do not make a choice. The overall judgement is that the society's method of working in combination with the legal structure of a mutual society is the best way to offer effective and stable long-term pension savings.

Regulations and governance

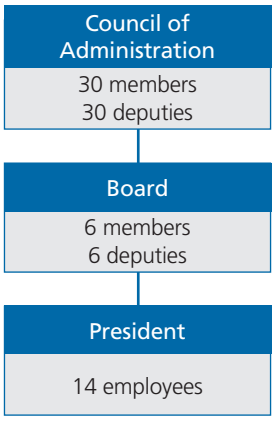
Kåpan Pensioner's highest decision-making authority is the Council of Administration. The Council of Administration has thirty members and the same number of personal deputies. Members are appointed by the parties in the government area with half being appointed by the Swedish Agency for Government Employers and half by the trade unions. This means that the Council of Administration represents employers and trade union members equally. Members of the Council of Administration must be members of the society.

The Council of Administration appoints in turn Kåpan Pensioner's Board which manages operations. The Board consists of six members and the same number of personal deputies. Here, too, half of the members are appointed by the employee side and half by the Swedish Agency for Government Employers. The same person cannot be a member of both the Council of Administration and the Board. For both boards, the mandate period is one year with the possibility of re-election.

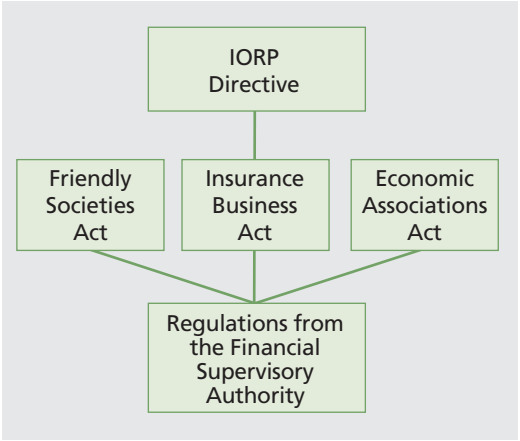
Kåpan Pensioner is an independent legal entity in the form of a mutual insurance society which is a specific form of an economic association. The business is regulated by a number of laws enacted by Parliament, among other things the Friendly Societies Act and the Economic Associations Act as well as a large number of regulations published by the Swedish Financial Supervisory Authority. The regulations are based on the EU's Institutions for Occupational Retirement Provision (IORP) Directive. The Financial Supervisory Authority exercises oversight of the business.

If you want to influence the society's operations and direction you can make your views known to your local trade union representative, the trade union main office or one of the members of the Council of Administration. The members of the Council of Administration are presented in the society's annual report which you will find on our website kapan.se.

Board and management



Regulations

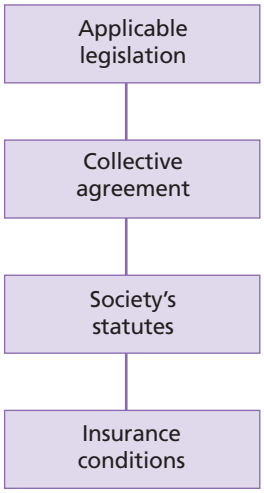


Insurance conditions are determined by the collective agreement and the society's statutes

The society's business is governed by statutes decided by the society's Council of Administration. The statutes provide the basic conditions for the business and what limitations apply.

The conditions for your pension insurance are based on the conditions in applicable collective agreements and statutes. Both the collective agreement and the statutes are comparatively difficult to read since they must be legally correct and use business terms which are specific to insurance operations. We have therefore produced conditions for each insurance which describe the conditions in a coherent manner. Not even these are particularly easy to read since they must be legally correct and concise. This is one of the reasons we are sending out this information so that you can more easily understand what it means to have insurance with the society. The statutes are available on our website and information on your applicable pension agreements will be found on arbetsgivarverket.se or on one of the trade unions' websites.

Your insurance conditions



The role of the insurance actuary

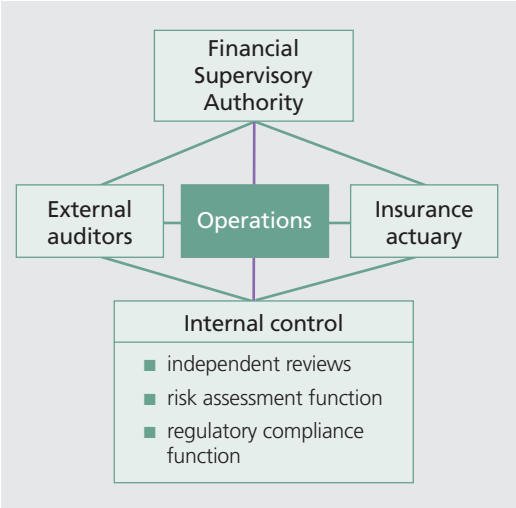
To ensure that we get our calculations right and the conditions of all our insurances are followed correctly, the society uses an actuary. The actuary is independently responsible to the Board and the Financial Supervisory Authority and is responsible among other things for calculating the value of your pension capital and the pension you get paid by us. The actuary's work is based on the society's actuarial guidelines adopted by the Board.

Auditing and internal control

The society's operations are continuously reviewed through internal controls which make risk assessments and specific analyses which are presented to the Board. Additionally, the Council of Administration appoints external auditors who review our investment management and ensure that we are following applicable accounting regulations. The auditors present the result of their review to the Council of Administration each year.

In all there are three levels of control in the society all aimed to ensure that we manage your capital well and that we pay you the correct pension.

Control and oversight



Future direction

The society's ambition is that we will provide a good alternative for those who do not actively choose a pension manager. Our intention is to be able to offer an alternative for the future with good expected returns and low costs.

KÅPAN PENSIONER

Customer service

Kåpan Pensioner and SPV have a common customer service to provide you as a government employee with an efficient and comprehensive service. If you have questions please call 020 51 50 40.

To get an overall view of our entire business as well as current financial information visit kapan.se.

■ 020-51 50 40 ■ kapan.se

Kåpan Pensioner cooperates with SPV

The society has a close cooperation with SPV covering among other things coordinated pension statements, coordinated websites and a common customer service and administration. The purpose of this cooperation is to give members better information about their government occupational pension at the same time as providing synergy gains and economies of scale which keep the society's costs at a low level.

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