# ORANGE REPORT

## Annual Report of the Swedish Pension System 2007

### Agreement on the Legacy

Cristina Husmark Pehrsson and Tomas Eneroth agree on the future of the pension system

### The Information Challenge

How do you inform an entire population about something when you cannot tell them what they want to know?

# Contents

**Welcome to the Orange Report – the annual report of Sweden's national pension system for 2007, this country's largest balance sheet, totalling more than SEK 7 000 billion.**

Since the Swedish economy is doing well, so are Sweden's pensioners and pension savers. With incomes rising at a healthy rate in recent years, the return earned on pension accounts, like the return on the pensions now being paid, is high. In 2008, adjustment indexation is raising pensions in real terms for the seventh year in a row. With the cumulative increase due to adjustment indexation, earnings-related pensions are up by 16 percent since 2002; the old method of indexation by the development of prices would have increased them by 11 percent.

But there is less positive news about last year's result; the inkomstpension showed a loss of SEK 82 billion, reducing the system's results brought forward to just SEK 18 billion, or 0.26 percent of the pension liability. The principal reasons for the negative result are the following: contributions and pension credit for recipients of sickness or activity compensation were temporarily lowered in 2007; as measured by the system, the increase in average income has been faster than the increase in total income; and turnover duration – the average length of time that one krona is expected to remain in the system – has decreased. Future results will be positively impacted by the restoration, effective in 2008, of the contribution and pension credit earned for sickness and activity compensation.

At the same time, the financial position of the inkomstpension has been improving for several years in the projections that the Swedish Social Insurance Agency (SSIA) is required to prepare. The main reason is that the population increase, because of higher immigration, has exceeded forecasts. It is assumed in the projections that the growing population of working age will soon lead to higher employment, and this will strengthen the pension system.

The SSIA has two main priorities for pensions, aside from the obvious ones of properly managing inkomstpension accounts – roughly 6 million of them – and paying pensions on time to our 1.7 million pensioners. The first priority is to work together with the Premium Pension Authority (PPM) to improve and simplify information on pensions, not only about the national pension, but also in general for Sweden's pension savers and pensioners. For this purpose, our most important tool is the many meetings between the SSIA and customers, as well as our contribution to the development of minpension.se, the pension website. Our second area of focus is on reducing costs for pension savers. Here, too, I hope that the SSIA and the PPM can do more than just cut their own costs. Through information, and in other ways, we want to make people more cost conscious and to improve competition in the pension industry.

The Orange Report tells about all this and much more. For instance, we have interviewed Cristina Husmark Pehrsson, the Minister for Social Insurance, and Tomas Eneroth, spokesman (at the time) for the Social Democratic Party on social insurance policy, about their views on the "legacy" of the pension reform. We have also interviewed a number of our colleagues around the world about their efforts to inform pension savers and pensioners-to-be. I hope that all readers will find this report instructive and interesting. I would appreciate any comments you may have on the report. Please send them to me at: curt.malmborg@forsakringskassan.se.

*Curt Malmborg*
*Director General*

# Agreement on the Legacy

Cristina Husmark Pehrsson (Moderate Party) and Tomas Eneroth (Social Democratic Party) agree on the future of the pension system

BY JOHAN SCHÜCK, COLUMNIST, ECONOMIC AFFAIRS, DAGENS NYHETER
PHOTOGRAPHY: CAMILLA SVENSK

There is agreement between Minister for Social Insurance Christina Husmark Pehrsson (Moderate Party) and Vice Chairman Tomas Eneroth* (Social Democratic Party) of the Parliamentary Committee for Social Insurance – this is quite evident when they meet to discuss current issues in the area of pensions. The dispute over the pension contribution and thus the level of pensions for former disability pensioners has been settled. Now both want to look ahead in a search for shared solutions rather than confrontation.

"We have learned a lesson, which is to be clearer. Some portions of the five-party agreement on the pension system were not written clearly enough, but leave room for interpretation. That is why the Government and the opposition could differ on what is and what is not covered by the agreement on pensions. We have to avoid that kind of ambiguity in the future," says Cristina Husmark Pehrsson.

She is referring primarily to the work of the Pensions Group, where the five parties supporting the pension reform are represented, that has picked up where the former implementation group left off. In the new group, Cristina Husmark Pehrsson and Tomas Eneroth intend to work together, even if play can sometimes get rough in parliamentary debates. But neither of them seems to have any doubts:

"I am quite hopeful that we can have real debates and agree on where we differ and where we see eye to eye. We are both former scouts and should be able to handle this situation. I am not worried about it, especially since the issue in dispute last year has been settled," declares Tomas Eneroth emphatically.

With the deadlock on pensions now broken between the Alliance Government and the Social Democrats, there is a lot of catching up to do. Part of it will involve restoring the previous atmosphere of collaboration – here Cristina Husmark Pehrsson and Tomas Eneroth assure us that they are well on the way – and making progress toward agreement on various issues. Like any other complicated apparatus, the pension system needs maintenance if it is to function in the long run.

"Right now we are where we should have been a year ago. But the good thing is that we have tested the pension agreement and seen that it holds up.

* Subsequent to the interview, Tomas Eneroth assumed a new position as Vice Chairman of the Parliamentary Committee on Business and Industry. He has been replaced on the Social Insurance Committee by Veronica Palm (Social Democrats).

"All five parties are firmly convinced and concerned about continuing to take proper care of the pension system. But the system is a complex one, and those entrusted with managing it must be highly knowledgeable," notes Cristina Husmark Pehrsson.

The baton has been passed to the next generation in all five parties – the Social Democrats, the Moderates, the Centre, the Liberals and the Christian Democrats – since the pension agreement was reached in the 1990's. At that time there was a group of politicians who could reach out across the aisle and agree on a common solution. That group is gone, and others have replaced them, as was evident after the election in 2006.

"When a new crew takes over, the parties face several key requirements. In respect to pensions, one has to have good relations with other parties while also keeping the support of one's own party group. There is a need for mutual trust between representatives of the various parties – together with a legitimacy that comes when all are backed by their own party groups. My impression is that the changeover has gone well," observes Tomas Eneroth.

The pension system itself is robust, even in bad times; on this point Cristina Husmark Pehrsson and Tomas Eneroth agree. In that sense there is no cause for concern about the system as such, which has built-in safeguards. These include balancing, sometimes referred to as the "brake," which means that in situations of financial adversity old-age pensions will be indexed at a somewhat lower rate.

The system as such is self-regulating, but this means that growth and employment will have a critical impact on future pensions. Thus, it makes a big difference that the statistics on sickness absence are on the way down and that more older people are working. "Then the Pensions Group will have to discuss how to deal with developments like the increase of a year in the average life span over the past decade," Cristina Husmark Pehrsson explains.

According to Tomas Eneroth, the problem is what would happen to the legitimacy of the pension system in the mind of the Swedish people if balancing were activated. He is thinking of the public debate that would arise, with the danger that people would be frightened and many feel compelled to buy private pension insurance. Some opinion leaders and private insurance companies would take advantage of such a situation.

"With hindsight, it's easy to see that the word "brake" should never have been used, as it is misleading. Balancing is actually an adjustment mechanism that keeps the pension system in line with the development of the labour market.

"Whoever comes up with a better term – adjustment or something like it – should get the Nobel Prize!" exclaims Tomas Eneroth.

A prize competition is what Cristina Husmark Pehrsson and Tomas Eneroth end up suggesting. In addition, they recommend a better pedagogical approach that clearly explains how the pension system works and what future pensions will be based on. Members of the Swedish Parliament – especially the many new ones on the Committee for Social Insurance – should be educated about the system, while the public also needs more information.

"The Orange Envelope about the individual's national pension has meant quite a lot; I can see that with my own children, who are in their 30's and have begun talking about these matters. Many people are now aware of the significant financial consequences of drawing a pension at

# ”Whoever comes up with a better term should get the Nobel Prize!”

age 61 rather than age 70. But there is another current discussion about drawing private pensions too early; here even better information on the national pension is needed,” says Cristina Husmark Pehrsson.

But future pensioners may not agree with politicians on the desirability of working until a later age. Tomas Eneroth notes that we are facing a new situation today, when there are many 60-year-olds with the will and energy to embark on the great new project of their lives after retirement. By contrast, another sizable group, consisting largely of women in the care and personal service occupations, are worn out even before they reach 60 and for that reason need to retire.

”The challenge is thus that the same pension system must be responsive to many different situations. Enabling a 65-year-old to work another year is important, but so is meeting the needs of a 59-year-old whose working years are at an end. Meeting these diverse requirements, however, calls for changes outside the scope of the pension system, like improved rehabilitation and a broader range of options for working fewer hours,” notes Tomas Eneroth.

There is no disagreement with Cristina Husmark Pehrsson here, either. The Government is working hard on precisely this problem and is proposing an appropriation of SEK 3.4 billion for rehabilitation and company health care, she assures us. In her opinion, the growing prevalence of disability pensions in previous years is closely linked to the fact that far too little was done about a work environment where many people were stuck, with no opportunity to assume new duties.

A broader-based approach is thus needed, but still, the Pensions Group is where joint solutions are to be found on all matters affecting the pension system. Also referred to the Group are all questions to which Cristina Husmark Pehrsson and Tomas Eneroth have no ready answer, whether they concern changes in the size of the guaranteed pension or the level of the ceiling on earned income.

Clearly, however, neither of them wants to rule out categorically any future transfer of funds from the pension system to the national treasury. But at the same time, both Cristina Husmark Pehrsson and Tomas Eneroth underscore that this question is not even on the table and should be no cause for concern about future pensions.

# The Orange Envelope and its Equivalent in Other Countries

| | Sweden | Chile | Finland | France | Germany | USA |
|---|---|---|---|---|---|---|
| **Retirement age** | Flexible from 61 on | 60 for women<br>65 for men | 62 to 68 | From 60 on | 63 to 67 (see table in article) | 62 to 67 (see table in article) |
| **Target group for annual statement** | All who have earned pension credit<br>Projections for those aged 28 and above | Age 20 and above<br>Projections for those aged 30 and above | All aged 18–67, except pensioners<br>Projections for those aged 50 and above | In 2008*:<br>those born in 1950, 1951, 1958 and 1963<br>Projections for those born in 1950 and 1951 | Age 27 and above, with at least five years of pension credit<br>Projection | Age 25 and above<br>Projection |
| **How often is the statement issued?** | Annually | Annually | Annually | Annually | Annually | Annually |
| **Is the pension system described in the annual statement?** | Yes | No | Yes | No | Yes | Yes |
| **Does the annual statement include benefits other than the old-age pension?** | No | No | No | No | Yes, disability pension | Yes, disability pension and survivor benefits |
| **How are contributions to the pension system reported?** | Total paid-in contributions plus latest year's contributions equals cumulative value | Opening balance plus monthly contributions less deduction for costs equals cumulative value | Not shown | Annual income and pension points earned | Total contributions by the insured, by employers and by third parties equal contributions during working life | Pension qualifying income per year |
| **Are projections shown in current prices?** | Yes | Yes | Yes | Yes | Yes | Yes |
| **How is the insured's future income progression calculated in the projections?** | Same as latest income in 0-growth scenario<br>Same as latest income +2 percent per year in scenario of 2 percent growth | Same as latest income | Average of income in last 5 years | Same as latest income | Average of income in last 5 years<br>General growth in earnings of 1 and 2 percent, respectively | Same as latest income |
| **Does the projection include a "guaranteed pension"?** | Yes | No | No | No information | No | No |
| **Assumed rate of return on funded contributions** | Real return of 3.5 percent in 0-growth scenario; 5.5 percent in scenario of 2-percent growth | Real return 5 percent per year | Not applicable | Not applicable | Not applicable | Not applicable |
| **Cost per annual statement** | 0.50 € | No information | 3 € | 0.71 € | No information | 0.24 € |

* Phase-in of the annual statement in 2007–2011, thereafter a statement of credit earned every five years beginning at age 35 and a projection every five years beginning at age 55.

# The Information Challenge

How do you inform an entire population about something when you cannot tell them what they want to know?

BY INGRID KINDAHL, REPORTER ON ECONOMIC AFFAIRS

In that question you can see a dilemma that has resurfaced every year since the Orange Envelope was first sent out to the Swedish population. But the problem does not just lie here. In a growing number of countries, pension authorities are realizing that citizens are entitled to information about their pension credits and to a projection of how large their pension may be.

The difficulties of providing mass information about pensions are on several levels. It is a matter of telling citizens how the pension system works, an especially difficult task in countries with great disparities in education among different social groups. In Chile and the United States, for example, pension authorities have largely given up any ambition of educating citizens at the social levels with the least schooling, and are concentrating instead on the middle-income groups. In Chile, the only country with a pension system where the entire contribution is invested in funds chosen by the insured, an effort has been made to provide a good alternative for those selecting no fund rather than to keep trying to comply with a seemingly impossible obligation.

Most countries also prepare individual pension projections, an easier task with a defined-benefit pension system. But the task is all the more difficult in countries like Sweden which have switched to a defined-contribution system. Sweden is one of few countries, if not the only one, where very young people also receive a projection showing the expected size of their pension. For a number of reasons, most other countries have declined to provide projections for young people.

The main reason is that information on pensions is associated with a notion of educating the populace, or even of contributing to their upbringing. One main purpose of a mass mailing is to urge citizens to supplement their public or national pensions with private pension insurance, and/or to work more. Many countries are grappling with the same problems as Sweden: the average life span is growing longer, and a diminishing number of young people are charged with supporting a growing number of older citizens. The solution is to try to keep people working as long as possible. The annual pension statement is an appropriate vehicle for conveying this message. But if the statement includes a pension projection that a 20-year-old could misinterpret, the effect may be the opposite of what was intended. That conclusion has been reached in Finland, for instance.

Chile has had a fully funded pension system since 1981, but only recently has the country begun to inform its citizens in greater detail on the five funds in which they may opt to invest their pension money. The reason why this has taken so long is related to the limited number of funds from which to choose. In Sweden, the design of the system, with an enormous selection of PPM funds, adds a dimension to informing citizens, who need help in finding their way through the maze of funds from which to choose. So far, Sweden is one of relatively few countries in this situation.

But perhaps not much longer. Several countries are about to reform their systems. And warnings that the current system is not stable are an important element of

the pension information provided in the United States. Similar notes of caution can be found in the German and French pension statements.

If and when these reforms are carried out, pension authorities in the countries concerned will face new trials and perhaps turn to Sweden again as a source of inspiration and guidance. Sweden has spent nearly ten years grappling with the difficulties of providing mass information on something as complicated as the pension system, and several scholarly articles have already been published on the subject. The most recent of these is "Between Educating the People and Giving Them Investment Advice: New Perspectives on the Pension System (Mellan folkbildning och fondrådgivning: Nya perspektiv på pensionssystemet)" – Institute for Futures Studies, January 2008, Urban Lundberg, ed.

How well are pension statements received by citizens in various countries? Quite favourably, according to pension authorities themselves. In France and Germany, pension authorities refer to high attention ratings, as is also the case in Chile and the US, where the least-educated groups are disregarded. The question is whether these high figures are credible. Most citizens think that pensions are a difficult and boring subject. At least until retirement day appears on the distant horizon.

# Information Tailored to Middle-Income Earners

Back in 1981, Chile was the first country in the world to adopt a fully funded pension system. Ever since, its pension managers have been sending out information no less than four times a year to all citizens with employers who have paid premiums, and once a year to those outside the labour market. But only in 2005 did Chile begin including pension projections in the information provided.

The information sent out is individual and includes accumulated pension amounts, the average earnings of the last six months – the basis for the projection – and the number of times in the last 12-month period that premiums have been paid in.

Then two questions are answered: how large will my pension be if I retire at 60 and no further premiums are paid in? and: how large will my pension be if I retire at 60 and my employer continues to pay premiums at the present rate? The answers are given in monetary amounts per month.

In very fine print one can also read that the annual rate of return is assumed to be 5 percent.

In addition, citizens are informed of their right to a guaranteed pension and of where to turn if they wish to make extra contributions and/or to postpone their retirement age.

Different information letters are sent to women and men. The Director of Research at the Chilean Pension Authority (Superintendencia de Administradoras de Fondos de Pensiones), Gonzalo Reyes Hartley, explains that women have a longer life expectancy than men, that they retire earlier (the retirement age is 60 for women and 65 for men) and that on average they earn less than men, with smaller pension premiums paid in as a consequence. At the same time, Mr. Reyes Hartley emphasizes, the information is individual.

In other respects, the Chilean pension statement stands out as a marvel of clarity. Anyone with a little previous knowledge of pension systems can easily read the information, even with a limited Spanish vocabulary. And according to Gonzalo Reyes Hartley, considerable effort went into making the statements comprehensible. Focus groups were formed to review a draft design in advance of the latest change, when the projections were added.

"The first focus group consisted of people at the lowest levels of society. The idea was that if they understood, everyone would understand. Unfortunately, as it turned out, they could hardly absorb any information at all, even though we had worked very hard to simplify it as much as possible," Mr. Reyes Hartley noted.

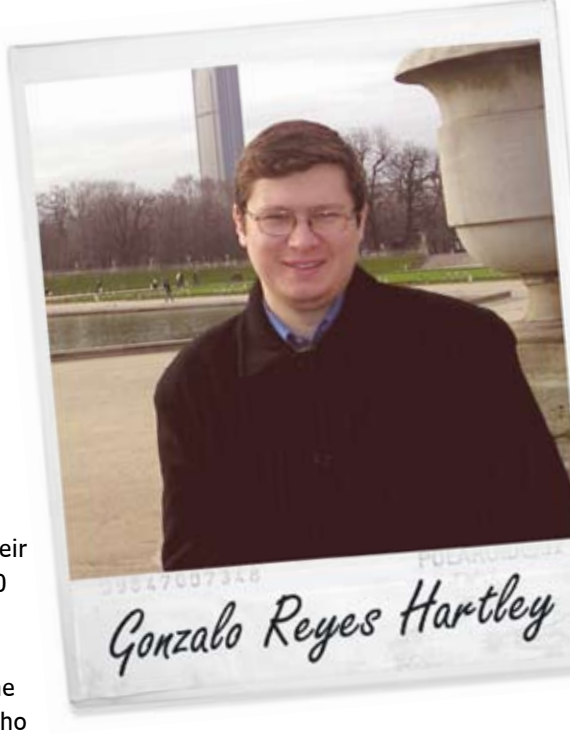
The action taken was not to change the presentation of the information, but to form a new focus group, consisting this time of middle-income earners. Now the reactions were quite different – the information proved very easy to understand.

"So what we now send out has been tailored to middle-income earners. We discarded the idea of trying to reach all groups with information about the pension system. It just couldn't be done," explained Mr. Reyes Hartley.

The information mailed out is as simple and concise as possible. But for the interested and knowledgeable citizen, there are good ways of finding out more. At the website www.safp.cl, which was launched in November, 2007, those who wish can delve deeper into the details of the pension system; they can also simulate their own pension scenarios with the aid of calculators.

The latest addition to the wealth of information concerns the five funds where pension savers can invest their money. Quite recently the website was upgraded, making it possible to compare these funds with each other and to find out who the managers are, what their planning philosophy is, what administrative costs are deducted and what other funds they manage.

Pension savers are fully free to choose among the five funds, with profiles that differ in regard to the mix of stocks and interest-bearing securities. The pension money of those choosing no fund is invested in the fund or funds that best match the saver's age and income. As these parameters change, changes in the distribution of funds are made automatically.




The Chilean pension system is mandatory for all employees. This means that some 50 percent of the 8 million work-fit citizens of working age contribute to the system in that their employers pay 10 percent of their payrolls as premiums. For the self-employed, who make up between 25 and 30 percent of the labour force, the national pension system is voluntary. The number electing to participate is estimated at only 5 percent.

# First Time for the White Envelope in Finland

Finland is now proceeding with its first systematic distribution of information to the public on their future pensions. All who are at least 18 but have not yet reached 68 will receive a white envelope with a history of their pension credit. Every single employment relationship is shown, as are the earnings credited. The reason why it has taken so long to start providing this information is that Finland's pension system was reformed as recently as 2005.

All who have reached age 50 also receive a projection of their future pensions. However, there is no data on the amounts of the premiums paid in by employers. Such information has been considered irrelevant by the Finnish Centre for Pensions (Pensionsskyddscentralen), the reason being that paid-in contributions do not affect the amount of a pension, since the pension system is entirely defined-benefit. Officials have assumed that the insured will more likely be interested primarily in what they will receive.

The Finnish Centre for Pensions (Pensionsskydds-centralen) has sent representatives to Sweden for a study visit and reviewed the Orange Envelope and the information provided to future Swedish pensioners. On a couple of points, they have chosen to do things differently from Sweden. First, the colour chosen in Finland is white. The reason is that white is viewed as signifying that the content is important and official in nature, whereas a brightly coloured envelope might be lost in a heap of advertising material. The other main departure from the Swedish information model concerns pension projections.

"We thought it would be smartest to avoid providing projections for young people. There is a substantial risk that any projections would be wrong. Also, for young people the amounts involved are very minor and may give the impression that working does not pay," says Riitta Korpiluoma, Director at the Finnish Centre for Pensions.

One purpose of the pension reform was to give citizens an incentive to postpone their retirement age. Projections of poor pensions could have the opposite effect, in the view of Finland's pension authority.

The pension system in Finland has been highly simplified compared to the old system. For example, it is easy for individuals to calculate roughly how large their pensions will be. Until age 53, it consists of 1.5 percent of each year's earnings. At age 55, the pension is 1.9 percent of annual earnings, and once the individual reaches 63, the percentage is 4.5. Those who have saved their earnings statements over the years can easily check whether all employers are included in the list and whether periods of employment and total earnings are correct. Through simplification and information, the pension authorities hope to raise the general level of knowledge about the pension system. Previous opinion polls have indicated that about 20 percent of the population know how the pension system is designed.

"We want to raise that figure, but we have not set any specific information target. After the first distribution of the White Envelope, there will be further opinion surveys, where we hope to find that the level of awareness has been raised. But from the Swedish experience we realize that we should not expect any major changes," says Riitta Korpiluoma.

In the new system there is the right to appeal a decision by the pension authority and to report employment that is not included on the list. But based on previous experience, no rush to take advantage of these new features is expected. Letters were also sent out under the previous pension system, around 400 000 compared to almost 3 million this time. In the old model, about 1.7 percent of those reached by the information contacted the authorities with questions or requests for changes. Roughly the same frequency of questions and complaints is expected now.

In the future, Finland's pension information will need improvement, in regard to the pensions of central government employees, for instance. For the next few years, these employees will not receive a White Envelope. The reason is that the central government as an employer has been providing information over the Internet for some time, and has dismissed the idea of a letter as old-fashioned. Of course all the information is available to any citizen on the Internet, and with a calculation function that enables the user to prepare personal pension projections. The Finnish Centre for Pensions has submitted a proposal where citizens in the future could decline to receive a White Envelope and instead obtain all information from the Internet.

Also, there is no information about the guaranteed pension, called the "folkpension" in Finland. As the level of this pension is dependent on income, half of all pensioners receive no guaranteed pension.

The Finnish pension system is partly funded and partly a pay-as-you-go system. But it is entirely defined-benefit, thus facilitating projections. The insured have no say in how their moneys are invested. Surpluses from the funded part of the system are used to smooth out differences in contributions between good and less prosperous years.

# France now Beginning to Provide Mass Information

In 2007 information on France's national pension system was sent out on a mass scale for the first time. All citizens born in 1957 and 1949 received letters with information on their pension credit and a projection of future pension disbursements.

Subsequently, everyone turning 35, 40, 45 and 50 will receive information on pension credit. In addition, projections will be provided to all reaching 55. This supplementary information will also be sent out every five years until retirement.

The first mailing was preceded by two years of intensive preparation by the pension authority, Caisse Nationale d'Assurance Vieillesse (CNAV), for there are no fewer than 36 different pension agreements in France, and previously there was no co-ordination between them. It was thus necessary to collect addresses and a considerable quantity of information from employers, a task that proved to require considerable time and labour.

The information mailed out to citizens is detailed. There is an example of a woman born in 1957 who receives a statement of no less than seven pages. The first page is designed as a personal letter to the insured, in which she is told what will be reported on the remaining six pages and who are responsible for the mailing. Page 2 is probably the easiest to read – here there is a projection in euros per month in two different scenarios: retirement

at 60 and 65, respectively. Explanations follow showing how the figures were arrived at. They are based partly on the assumption that the current income will remain the same for the rest of the individual's working life, partly on a number of hypotheses about the development of the country's economy. But the hypotheses themselves are not presented. This is followed by a report on the number of working periods in which pension credit has been earned. The credit is not shown in monetary terms, but in thirds of a year and in points.

Otherwise the letter contains a list of employers and earnings year by year, followed by explanatory text in which the insured is urged to check the data provided and to contact the authority in case of any errors.

The information distributed is supplemented by a website, www.info-retraite.fr, where anyone can perform calculations and simulate the effect of different retirement ages and levels of income. On the web there is also a lot of information on the pension system itself. France uses a pay-as-you-go system, but discussions are in progress on the question whether the demographic trend may force the country to adopt a fully or partly funded system in the future. The Government considers it important to prepare citizens for such a change. Consequently, the differences between a defined-benefit system and a premium-based one are clearly explained, as are the advantages and disadvantages of each.

It is said that the principal purpose of the enhanced information is to urge citizens to find their projections and to supplement their public pensions, if necessary, with private pension insurance.

According to Chantal Jaffeux, Director at CNAV, surveys have shown that the information sent out has been well received by the public. There are figures showing that 91 percent of those asked had read the information mailed to them; half had skimmed through it, half had examined it in detail.

But even those who had just given the information a cursory glance and then put it aside had read some of it. And 90 percent found the information easy to understand, according to Mme Jaffeux.

Since those who receive the mailing are urged in the letter to contact the authority if they discover any errors, a call centre was set up and opened a few days before the first mailing reached its addressees. The centre had to receive 35 000 calls, a low figure in light of the 1 700 000 letters sent out. The explanation:

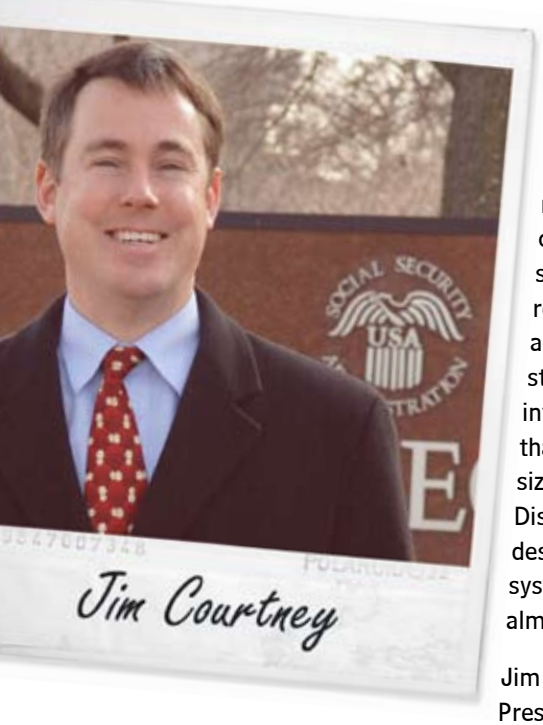
"Prior to the first mailing, we kept a very low profile in our publicity. Since we were afraid, quite simply, that we would be swamped by phone calls, we avoided all kinds of campaigns. We did not have the resources to handle a flood of calls," explains Mme Jaffeux.


# Many Errors Corrected

Not unexpectedly, the United States is a giant in information on pensions, at least in terms of quantity. Citizens receive 145 million pension statements each year, or 500 000 per day, from the printer in Miamisburg, Ohio. Everyone who has reached 25 receives a two-page report with data on pension credit and general information on how the pension system works. Persons who have reached age 55 are sent an additional two pages with projections of the expected amount of the pension. The information also includes a specification of pension-qualifying income earned in each year of work.

The printed information is supplemented by a highly informative website where anyone who is knowledgeable and interested can find all kinds of information about the pension system and other social security systems.

The US has a pay-as-you-go system and thus does not need to consider return on capital when projections are




made. But the current pension system is not regarded as stable, and pension statements contain information on how that can affect the size of a pension. Discussions on the design of a new system are going on almost constantly.

Jim Courtney, Vice President for Communications of the Social Security Administration, the US pension authority, believes that citizens generally understand the information that is sent out. With focus groups, the statements have been tested from time to time for ease of understanding ever since they were first distributed in 1999. Special attention has been paid to wording, and over the years there have been certain changes and simplifications – though no major ones.

It is important that the information be easily understandable, particularly considering that the authority's data on individuals not infrequently contain errors. Citizens have the right to appeal and to request changes if they discover that the data on pension-qualifying earnings, for example, are wrong. And such corrections are made fairly often, according to Mr. Courtney.

There is no longer any specific information target. There used to be one, but it proved very difficult to live up to.

"Previously, we tried to measure how well the public received the information, but we have stopped doing that. Now our objective is vaguer – to raise the level of awareness of how the pension system works. We fully realize that if and when we reform the system, information will be one of our greatest challenges," says Jim Courtney.

That is no obstacle to setting a high level of ambition. The pension authority (Social Security Administration) has three objectives for public relations, although their attainment is not measurable. They are as follows:

Information should give citizens an incentive to check their data from time to time and to correct them when necessary. It should encourage citizens to review their personal finances and their overall saving. It should prompt them to examine their insurance coverage in the event a family breadwinner should get sick or die prematurely.

In addition to the printed letter and the highly informative website, the personnel of the Social Security Administration play an active part, by writing articles in the local press throughout the country, for example.

"In my opinion, the result of our efforts has been that people know more about the pension system in general and about their own pensions today than they did ten years ago," concludes Jim Courtney.

### Higher Retirement Age

| Birth cohort | Age in years + months | | |
|---|---|---|---|
| | United States | Germany | Sweden* |
| 1937 | 65 | 65 | 65 |
| 1938 | 65 + 2 | 65 | 65 + 2 |
| 1939 | 65 + 4 | 65 | 65 + 2 |
| 1940 | 65 + 6 | 65 | 65 + 3 |
| 1941 | 65 + 8 | 65 | 65 + 3 |
| 1942 | 65 + 10 | 65 | 65 + 4 |
| 1943 | 66 | 65 | 65 + 5 |
| 1944 | 66 | 65 | 65 + 6 |
| 1945 | 66 | 65 | 65 + 8 |
| 1946 | 66 | 65 | 65 + 9 |
| 1947 | 66 | 65 + 1 | 65 + 10 |
| 1948 | 66 | 65 + 2 | 66 |
| 1949 | 66 | 65 + 3 | 66 + 2 |
| 1950 | 66 | 65 + 4 | 66 + 2 |
| 1951 | 66 | 65 + 5 | 66 + 4 |
| 1952 | 66 | 65 + 6 | 66 + 6 |
| 1953 | 66 | 65 + 7 | 66 + 8 |
| 1954 | 66 | 65 + 8 | 66 + 9 |
| 1955 | 66 + 2 | 65 + 9 | 66 + 10 |
| 1956 | 66 + 4 | 65 + 10 | 66 + 11 |
| 1957 | 66 + 6 | 65 + 11 | 67 |
| 1958 | 66 + 8 | 66 | 67 |
| 1959 | 66 + 10 | 66 + 2 | 67 + 1 |
| 1960 | 67 | 66 + 4 | 67 + 1 |
| 1961 | 67 | 66 + 6 | 67 + 2 |
| 1962 | 67 | 66 + 8 | 67 + 2 |
| 1963 | 67 | 66 + 10 | 67 + 3 |
| 1964 | 67 | 67 | 67 + 3 |
| 1970 | 67 | 67 | 67 + 7 |
| 1980 | 67 | 67 | 67 + 11 |
| 1990 | 67 | 67 | 68 + 2 |

* Sweden is a special case in that there is no legislated retirement age in the earnings-related pension system. However, the 65-year limit has been retained in certain associated systems. The age indicated here is the retirement age required to maintain a generally unchanged pension level. Unlike the information on "necessary retirement age" in the table on page 35, consideration is given here to the phase-in of the new system by twentieths for birth cohorts 1938–1954.

# Germany's Pension System Facing Change

Since the reform of the German pension system was launched in 1992, citizens aged 27 and above have received an annual letter containing information on their pension credit earned up to that time, a projection of their future pensions in two different growth scenarios and their retirement age. The latter differs according to generation, as Germany has decided in recent years to raise the retirement age step by step.

The letter also contains information on the contributions paid in on behalf of the individual. The amounts are specified both in euros and in pension points, the basic parameter in the projection.

In addition, individuals are informed on the potential effect of inflation on their future pensions. The effect is illustrated in a specific calculation showing the change in the value of 100 euros by the time of the individual's retirement, assuming an inflation rate of 1.5 percent.

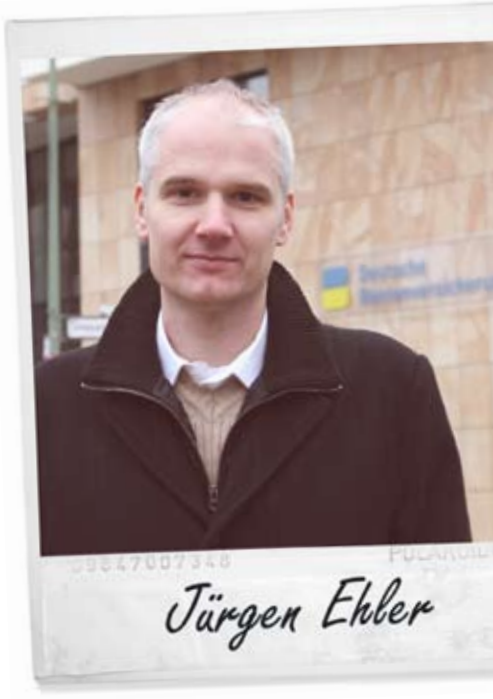
Germany has a pay-as-you-go system where employers and employees each provide half of the pension contribution. Not even in its present form, after several successive changes since 1992, is the pension system considered robust enough to ensure the social security of citizens following retirement.

"One of the main reasons for sending out information is therefore to show in black and white that the public pension will not be sufficient, and that everyone will need to supplement it with private pension insurance," says Jürgen Ehler at Deutsche Rentenversicherung Bund, the German pension administration.

The reasons for the shortcomings of the German pension system are well known: Fewer and fewer work-fit people of working age are having to support a growing number of the elderly and ailing.

"Contributions to the old pension system were rising at an accelerating rate, and something had to be done to stop that tendency. Now the increases in premiums have come to a halt, but this also means that pension disbursements will be lower in the future," explains Jürgen Ehler.

At present, Germans who retire receive a public pension just over 50 percent of their earned income. This figure is expected to drop to around 44 percent for those retiring in 2030.



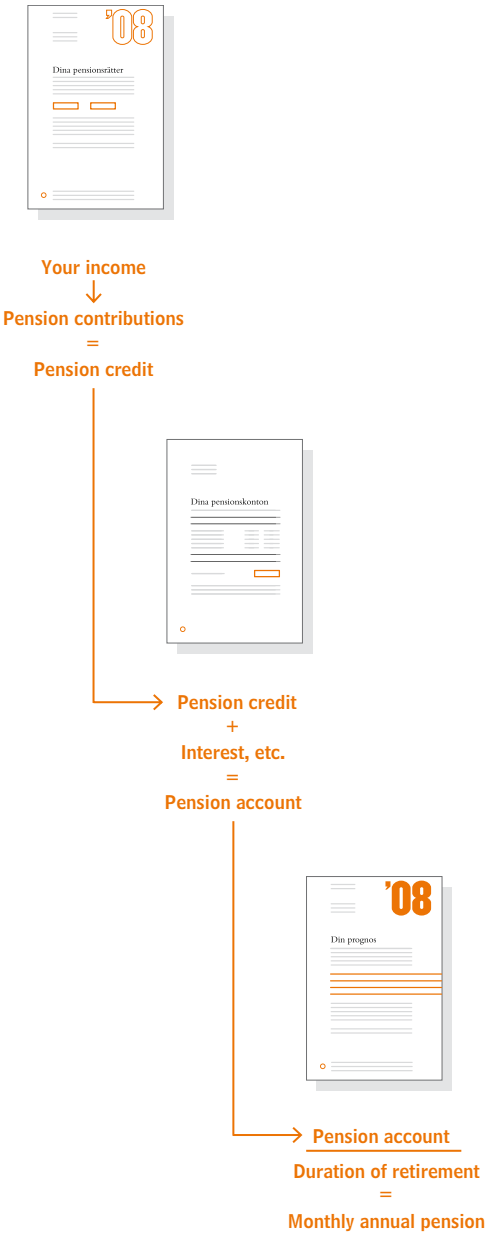

The information from the pension authority has been found to be easily understood by the public. Studies have been conducted to measure whether the message has been received, and the figures show that the material is widely and well understood. According to Dr. Ehler, only 2 percent of German citizens report that the information is too complicated for them to understand. Consequently, there are no plans to improve or otherwise change the information provided.

It makes no difference whether the recipient of the information is a man or a woman, young or old. The only distinction is that those born before 1946 receive a projection based on the assumption of zero growth. Those born between 1947 and 1951 receive two projections: one is based on zero growth, the other on the assumption of 1-percent growth. Persons born after 1951 also receive two projections, with respective growth assumptions of 1 and 2 percent.

As in many other countries, the system in Germany allows individuals to correct any mistakes in the information in their pension statements, and provides ample opportunity via a website, www.drv-bund.de, for them to obtain more detailed information on the pension system in general and their own pensions in particular.

In the pension letter, German citizens are urged to put their own affairs in order and to open private pension savings accounts. The government encourages this partly by offering tax deductions for pension saving, and partly through a private individual pension plan, the "Riester-Rente," which entitles the individual to a more generous tax reduction than other saving programmes.

New reforms are on their way in Germany. They are intended to create a more sustainable pension system.




# How the National Pension System Works

*The national public pension is based on straightforward principles. The outline shown in the margin should enable the reader to grasp its essential features. For anyone wishing to understand the system more thoroughly, it should suffice to read this section.*

## Almost Like Saving at the Bank ...

The national pension system works much like ordinary saving at the bank. The comparison applies to both earnings-related parts of the system, the inkomstpension and the premium pension. Each year pension contributions are paid by the insured, their employers and in certain cases the central government. Contributions are recorded as pension credit in the "bankbook" of the insured – i.e., the respective accounts for the inkomstpension and the premium pension. Savings accumulate over the years with the inflow of contributions and at the applicable rate of "interest". The statement sent out each year in the "Orange Envelope" enables the insured to watch their own inkomstpension and premium pension accounts grow from year to year. When the insured individual retires, the stream of payments is reversed, and the inkomstpension and premium pension are disbursed for the remaining lifetime of the insured.

## ... but Entirely a Form of Pension Insurance

One feature of pension insurance is that savings are blocked; it is impossible to withdraw all or any part of them before the minimum age for receiving a pension. That age is 61 years for both the inkomstpension and the premium pension.

Pension insurance is intended to redistribute assets from individuals with shorter-than-average life spans to those who live longer. The pension balances of deceased persons – so-called *inheritance gains* (see Appendix A) – are redistributed each year to the surviving insured in the same birth cohort. Also after pension withdrawal begins, assets are redistributed from those with shorter-than-average life spans to those who live longer. This is done by basing monthly pensions on average life expectancy but paying them out as long as the insured lives. Consequently, total pension disbursements to persons who live for a relatively short time after retirement are less than their pension savings, and those who live longer than average receive more than the value of their own pension savings.

The balance of an insured's pension account consists of the sum of her/his pension credit (contributions), accrued interest and inheritance gains. A charge for administrative costs is deducted from the account each year.

## One Krona of Pension Credit for Each Krona Contributed

The pension contribution is 18.5 percent of the pension base. The pension base consists of pension-qualifying income and pension-qualifying amounts. In addition to earnings, benefits from the social insurance and unemployment insurance systems are treated

**Proportion* Granted a National Pension at Different Ages, Percent**

| Birth cohort | Age at first withdrawal 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 |
|---|---|---|---|---|---|---|---|---|---|
| 1938 | 3.7 | 2.3 | 2.3 | 2.1 | 77.4 | 4.0 | 3.2 | 0.8 | 0.3 |
| 1939 | 4.0 | 1.9 | 2.1 | 2.3 | 75.9 | 6.3 | 2.3 | 0.8 | |
| 1940 | 3.1 | 2.2 | 2.5 | 3.2 | 76.2 | 4.9 | 2.5 | | |
| 1941 | 3.0 | 2.3 | 3.1 | 3.7 | 73.3 | 6.1 | | | |
| 1942 | 3.6 | 3.0 | 3.5 | 3.9 | 71.0 | | | | |
| 1943 | 4.0 | 3.0 | 3.5 | 5.1 | | | | | |
| 1944 | 4.7 | 3.3 | 4.5 | | | | | | |
| 1945 | 5.1 | 4.1 | | | | | | | |
| 1946 | 6.0 | | | | | | | | |

* The proportions are for new retirees in relation to the potential number of retirees as of December 2007. Individuals who have drawn only a premium pension are not included in the table. The ages are as of December 31 of the year concerned.

as income. Pension-qualifying amounts are a basis for calculating pension credit but are not income, properly speaking. Pension credit is granted for pension-qualifying amounts for sickness and activity compensation, years with small children (child-care years), studies and compulsory national service. The maximum pension base is 7.5 income-related base amounts (SEK 344 250 in 2007). Pension credit is earned at 16 percent of the pension base for the inkomstpension and 2.5 percent for the premium pension.[1]

## Who Pays the Contribution?

The insured pays an individual pension contribution to the national public pension of 7 percent of her/his earnings and any benefits received from the social insurance and/or unemployment insurance schemes. The contribution is paid on incomes up to 8.07 income-related base amounts[2] and is paid in together with the withholding tax on earnings. The individual pension contribution of 7 percent is not included in the pension base. Annual earnings are pension-qualifying when they exceed the minimum income for the obligation to file a tax return, which as from 2003 is 42.3 percent of the current price-related base amount.[3] When an individual's income has exceeded this threshold, it is pension-qualifying from the first krona.

For each employee, employers pay a pension contribution of 10.21 percent of that individual's earnings.[4] This contribution is also paid on earnings exceeding 8.07 income-related base amounts. Since there is no pension credit for earnings above 8.07 income-related base amounts, these contributions are in fact a tax. They are therefore allocated to the central-government budget as tax revenue rather than to the pension system.

For recipients of pension-qualifying social insurance or unemployment insurance benefits, the central government pays a contribution of 10.21 percent of these benefits to the pension system. For persons credited with pension-qualifying amounts, the central government pays a contribution of 18.5 percent of the pension-qualifying amount to the pension system. These central government contributions to the old-age pension system are financed by general tax revenue.

The total pension contribution is thus 17.21 percent, whereas the pension credit and the pension contribution are 18.5 percent of the pension base. The reason for the difference is that the contribution base is reduced by the individual pension contribution of 7 percent when pension credit is calculated.[5] This means that the maximum pension base is 93 percent of 8.07, or 7.5 income-related base amounts. The maximum pension credit in 2007 was SEK 63 686.

## Where Does the Contribution Go?

Of the pension contribution of 18.5 percent, 16 percentage points are deposited in the four buffer funds of the inkomstpension system: the First, Second, Third and Fourth National Pension Funds.[6] Each fund receives one fourth of contributions and finances one fourth of pension disbursements. The monthly pension disbursements of the inkomstpension system thus come from the buffer funds. In principle, the same moneys that were paid in during the month are paid out in pensions.

The premium pension contribution, 2.5 percent of the pension base, is invested by the Premium Pension Authority (PPM) in interest-bearing assets until the final tax assessment is complete. Only then does the PPM know how much premium pension credit has been earned by each insured. When this amount has been determined, the PPM purchases shares in the funds selected by the insured. Contributions of insured persons who have not selected a premium pension fund are invested in the Premium Savings

[1] Pension credit for the premium pension may be transferred between spouses. Pension capital transferred is currently reduced by 14 percent. The reasons are the assumption by the PPM that more such transfers will be made to women than to men, and the fact that women on average live longer than men, with the result that pensions based on transferred credit are likely to be disbursed for a longer period.

[2] For 2007, 8.07 x 45 800 = SEK 370 413.

[3] For 2007, 0.423 x 40 300 = SEK 17 047.

[4] Self-employed persons pay an individual pension contribution of 7 percent and a self-employment contribution of 10.21 percent.

[5] 0.1721/0.93 = 0.185

[6] In addition, there is the Sixth National Pension Fund, which is an asset in the inkomstpension system but provides no contributions and pays no pensions.

Fund. At the end of 2007 the premium pension system included 785 funds, administered by 86 different fund managers. When an insured person retires, the PPM sells shares in the retiree's funds, and the proceeds are paid out as a pension.

**Funds in the Premium Pension System, 2007**

| | Number of registered funds, 2007 | Managed capital, billions of SEK Dec. 31, 2007 | Dec. 31, 2006 | Dec. 31, 2005 |
|---|---|---|---|---|
| Equity funds | 582 | 163 | 141 | 99 |
| Mixed funds | 49 | 10 | 9 | 7 |
| Generation funds | 31 | 35 | 31 | 23 |
| Interest funds | 122 | 13 | 7 | 5 |
| Premium Savings Fund (an equity fund) | 1 | 87 | 79 | 58 |
| Total | 785 | 308 | 267 | 192 |

## Interest on Contributions That Gave Rise to Pension Credit

Savings in a bank account earn interest, and the national public pension works in the same way. The interest on the inkomstpension account is normally determined by the growth in average income. Average income is measured by the *income index* (see Appendix A). The equivalent of interest on the premium pension account is determined by the change in the value of the premium pension funds chosen by the insured.

Thus, the interest earned on pension credit depends on the development of different variables in the general economy. The inkomstpension account earns interest at the rate of increase in incomes – in the price of labour, to put it another way. The development of the premium pension account follows the tendency on financial markets, which among other things reflects the price of capital. Neither of these rates of interest is guaranteed; they may even be negative. Through apportionment of contributions to separate subsystems where the rate of return depends on somewhat differing circumstances, risks are spread to some extent. Since 1995, the average rate of return in the inkomstpension system, measured as the capital-weighted rate of return, has been 3.1 percent. The average annual variation in the rate of return, as measured by the standard deviation, has been 1.1 percentage points. Since the first payments into the premium pension system in 1995, the average return of the premium pension system, after deduction of fund-management fees, has been 5.8 percent. The annual variations in this rate of return, as measured by the standard deviation, have been 14.3 percentage points.

**Annual Income Indexation and Return on Premium Pension System, Respectively, 1995–2007, Percent**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Income indexation | 1.8 | 1.8 | 2.8 | 3.4 | 1.7 | 1.4 | 2.9 | 5.3 | 3.4 | 2.4 | 2.7 | 3.2 | 4.5 |
| Return, premium pension system* | 4.6 | 4.6 | 4.6 | 5.0 | 3.7 | 0.7 | –8.6 | –31.1 | 17.7 | 7.9 | 30.5 | 12.2 | 5.6 |

* Capital-weighted return (internal rate of return).

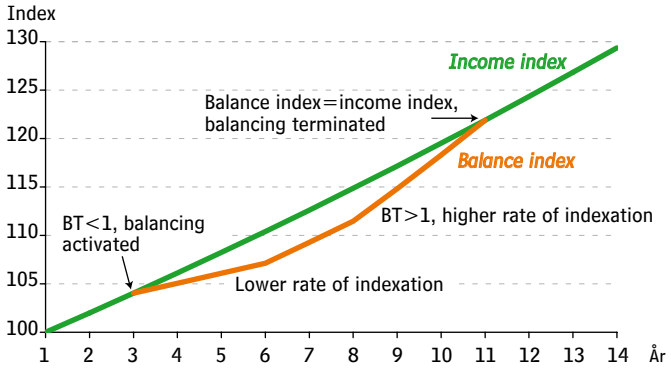
## A Rate of Interest Other Than the Income Index – Balancing

Under certain demographic and economic conditions, it is not possible to earn interest on the inkomstpension account and the inkomstpension at a rate equal to the growth in average income and at the same time to finance payments of the inkomstpension with a fixed contribution. In order to maintain the contribution rate at 16 percent, income indexation must be suspended in such a situation. This is done by activation of so-called balancing.

Dividing the assets of the system by the pension liability, we obtain a measure of the financial position of the system, the *balance ratio*. If the balance ratio exceeds one (1), assets are greater than liabilities. If the balance ratio is less than one, liabilities exceed assets, and balancing is activated. When balancing is activated, pension balances and pensions will be indexed by the change in a *balance index* instead of the change in the income index. The balance index changes as a result of the change in the income index and in the balance ratio.

An example: If the balance ratio falls below 1.0000 to 0.9900 while the income index rises from 100.00 to 104.00, the balance index is calculated as the product of the balance ratio (0.9900) and the income index (104.00), for a balance index of 102.96. The indexation of pension balances is then 2.96 instead of 4 percent.[7] Indexation of pensions is reduced to the same extent.

**Balancing**




If the balance ratio exceeds 1.0000 during a period when balancing is activated, pension balances and pensions will be indexed at a rate higher than the increase in the income index. When pensions regain the value that they would have had if they had been indexed only by the change in the income index – that is, when the balance index reaches the level of the income index – balancing is deactivated, and the system returns to indexation solely by the change in the income index.

[7] The balance index for the next year is calculated by multiplying the balance index (102.96) by the ratio between the new and the old income index, multiplied in turn by the new balance ratio.

## Pensions Reduced by Costs of Administration

The costs of administering the inkomstpension are deducted annually from pension balances through multiplication of these balances by an administrative cost factor (see Appendix A). This deduction is made only until the insured begins to withdraw a pension. At the current level of costs, the deduction for costs will reduce the inkomstpension by approximately 1 percent compared to what it would have been without the deduction.[8]

In a similar manner, the costs of administering the premium pension are deducted each year from premium pension capital. In this case, however, the deduction continues to be made after the insured begins to draw a pension. The current level of costs is 0.46 percent per year. However, costs of administration are expected to decrease and to average 0.34 percent for the next 31 years. At this level of costs, the deduction for administrative costs will reduce the premium pension by an average of about 10 percent from what it would have been without any cost deduction.[9]

[8] On average, 1 krona (SEK 1) remains in the system for about 21 years before payout commences. Annual administration costs of 0.04 percent reduce the inkomstpension to $(1-0.0004)^{21} \approx 99$ percent of what it would have been with no cost deduction.

[9] The average time during which the deduction for costs is made is 31 years. Administrative costs of 0.34 percent per year reduce the premium pension to $(1-0.0034)^{31} \approx 90$ percent of what it would have been with no cost deduction.

## How is the Inkomstpension Calculated?

The inkomstpension is calculated through dividing the pension balance by an annuity divisor (see Appendix A) at the time of retirement. Divisors are specific for each birth cohort and reflect the remaining life expectancy when a pension is first withdrawn as well as an interest rate of 1.6 percent. The remaining life expectancy is an average for men and women. Owing to the interest of 1.6 percent, the annuity divisor is less than life expectancy, and the initial pension is higher than it would have been otherwise.

As an example, suppose that the annuity divisor is 16 and that an individual at age 65 has an inkomstpension account balance of SEK 2 million. That individual's inkomstpension will then be SEK 125 000 (SEK 2 million/16) per year, or SEK 10 400 per month.

The inkomstpension is recalculated annually by the change in the income index less the interest of 1.6 percentage points credited in the annuity

divisor,[10] so-called adjustment indexation. In other words, pensions will only be unchanged in real terms if wages and salaries go up by precisely 1.6 percent *more* than inflation. For example, if wages and salaries rise by 2 percent more than inflation, pensions will increase by 0.4 percent in real terms. If wages and salaries increase by 1 percent more than inflation, pensions will decrease by 0.6 percent in real terms. When balancing has been activated, the balance index replaces the income index in the indexation of pensions.

[10] It is somewhat misleading to state "minus"; the inkomstpension is recalculated by the ratio between the new and the old income index, divided in turn by 1.016.

## How is the Premium Pension Calculated?

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. Interest is currently credited at 2.2 percent in conventional insurance and 3.9 percent in fund insurance, after deduction of 0.1 percent for PPM costs.

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. In this case the PPM sells the insured's fund shares and assumes the responsibility and the financial risk. The pension is calculated to provide an assumed nominal return that is presently –0.1 percent after the deduction for costs. The amounts disbursed may be greater because of so-called rebates if the conventional life-insurance operation reports a positive result (see Appendix A).

Fund insurance means that the pension savings remain in the PPM funds chosen by the insured. The amount of the premium pension is recalculated once each year based on the value of fund shares in December. In each month of the following year, a sufficient number of fund shares are sold to finance payment of the calculated premium pension. If the value of the fund shares increases, fewer shares are sold; if it decreases, more shares are sold. Variations in prices of fund shares affect the value of the following year's premium pension.

The premium pension may include a survivor benefit for the period of disbursement. This means that the premium pension will be paid to either of two spouses or cohabitants as long as one of them survives. If the survivor benefit is elected, the monthly pension will be lower.

## Guaranteed Pension[11]

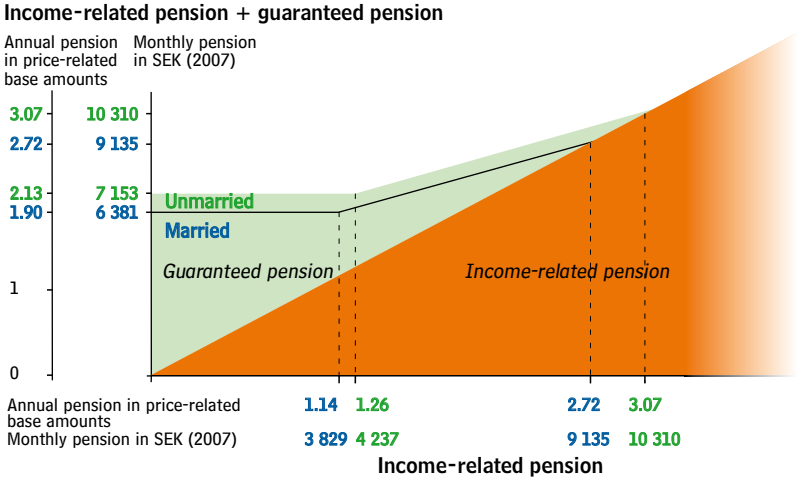
The guaranteed pension provides basic social security for individuals with little or no income. Residents of Sweden are eligible for a guaranteed pension beginning at age 65. To receive a full guaranteed pension, an individual must in principle have resided in Sweden for 40 years after age 25. Residence in another EU/EES country is also credited toward a guaranteed pension.

In 2007 the maximum guaranteed pension for a single pensioner was SEK 7 153 per month (2.13 price-related base amounts[12]) and for a married pensioner, SEK 6 381 per month (1.90 price-related base amounts). The guaranteed pension is reduced for persons with an earnings-related pension. 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 10 310 or more received no guaranteed pension in 2007. For a married pensioner the corresponding income limit was SEK 9 135.

[11] These provisions concern the guaranteed pension for persons born in 1938 or later. For older individuals, other rules apply.

[12] In 2007 the price-related base amount was SEK 40 300.

An example: A pensioner living alone has an earnings-related pension equivalent to 2.26 price-related base amounts. The guaranteed pension is reduced by the full amount of income up to 1.26 price-related base amounts. The remainder of (2.13–1.26 =) 0.87 price-related base amount is reduced by 48 percent of the income above 1.26 price-related base amounts, or by 0.48 price-related base amount, for a guaranteed pension of 0.39 price-related base amount. The total annual pension will then be 2.65 price-related base amounts.




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 percent of the pension base, rather than 16 percent. One reason for these provisions is that they are considered to simplify administration of the guaranteed pension. When the premium pension has become more substantial, the rules may be revised.

The guaranteed pension is financed directly by the tax revenue of the central-government budget and is therefore not included in the income statement and balance sheet of the pension system.

## ATP

Persons born before 1938 have not earned either an inkomstpension or a premium pension. Instead they receive the ATP, which is calculated by pre-existing rules. The level of the ATP pension is based on an individual's income for the 15 years of highest income, and 30 years with income are required for a full pension.

For persons born in 1938–1953, there are special transitional provisions. These individuals receive a portion of their earnings-related old-age pension as an ATP and the rest as an inkomstpension and a premium pension. The younger the individual, the smaller the proportion of the ATP. Persons born in 1938 receive 80 percent of their ATP; those born in 1939 receive 75 percent of their ATP, etc. There is an additional guarantee that the pension received will not be less than the ATP earned by the individual through 1994 – the year of the decision in principle to adopt the pension reform. Those born in 1954 or thereafter earn their entire pensions under the provisions for the inkomstpension and the premium pension. Beginning with the year when the individual reaches age 65, the ATP is adjustment-indexed in the same manner as the inkomstpension. For pension withdrawals before the year when the individual turns 65, the ATP is price-indexed.

# Costs of the Old-Age Pension System

The income statements of the inkomstpension and the premium pension show the costs reported by the SSIA, the PPM and the National Pension Funds in their own income statements as "costs reported gross."[13] The capital management costs of the National Pension Funds and PPM funds that are reported "net,"[14] that is, as negative revenue or as a lower return on funds, are not shown directly in the income statements of these authorities and not shown at all in the income statement of the pension system.

In this section, costs reported gross and net are compiled, as are transaction costs that can only be captured partly in the accounts of the National Pension Funds and the PPM. The purpose is to provide a fuller picture of the total costs of the old-age pension system.

Up through 2007, costs reported gross in the Orange Envelope were deducted from each inkomstpension and premium pension account, respectively. But beginning in 2008, in order to furnish the insured with better information on costs, the management fees charged to the individual's premium pension return are included in the cost deduction from the premium pension account in the Orange Envelope.

As far as the insured is concerned, the respective effects of costs reported net differ for the premium pension and for the inkomstpension.

Since all costs of the premium pension system decrease either the return or the premium pension account through a cost deduction, they have the same negative consequence for the insured – they reduce assets and thus future premium pensions.

On the other hand, the costs reported net by the National Pension Funds do not affect the cost deducted from the pension account, and normally[15] not the indexation of pension capital and pensions, either. Thus, the only consequence of the costs reported net by the National Pension Funds is that fund assets are slightly less than they would have been without these costs. Since only system assets, not liabilities, are reduced by these costs, their impact on the result of the system is negative. This means that costs reported net have a negative effect on the balance ratio. But this effect is minor, as costs reported net are quite limited in relation to the pension liability.

## Accounting for Total Costs

The total costs to the pension system of insurance administration and capital management were just less than SEK 5 billion, of which SEK 2.1 billion are reported in the income statement of the pension system. This amount of SEK 2.1 billion represents the total costs of insurance administration (1 119) and capital management costs reported gross (971). See the table Costs of the Old Age Pension System.

For the inkomstpension, costs reported in the income statement for 2007 totalled SEK 1 772 million, of which 801 were for insurance administration and 971 were capital management costs reported gross. In principle – there are discrepancies due to periodization, for instance – this amount (1 772) is the one charged to the inkomstpension accounts of the insured in the Orange Envelope. In addition to the SEK 971 million, the National Pension Funds sustained costs in the form of commissions and result-based fees/costs of SEK 803 million, as well as transaction costs of SEK 435 million. Thus, the total costs of the inkomstpension were SEK 3 010 million.

The income statement of the premium pension shows administrative costs of SEK 313 million. That sum does not include SEK 5 million for management of conventional insurance, reported net through reduction

[13] The term "costs reported gross" applies here to such costs as those reported by the National Pension Funds, the SSIA and the PPM as costs in their income statements.

[14] The term "costs reported net" applies here to costs like those reported by the National Pension Funds as brokerage commissions and result-based charges/costs, and by the PPM as the net of the items designated capital management costs of administration and rebates, management fees.

[15] Only if balancing is activated do costs reported net by the National Pension Funds affect indexation of pensions.

of the return on funded capital (see Note 17). The total costs of insurance administration for the premium pension are thus SEK 318 million; see the item of total, insurance administration, in the table below. The return has been reduced by all capital management costs of the premium pension (see Note 16). For the premium pension, the item of capital management costs, net, refers to the fees charged by the funds after rebates have been returned to premium pension savers. As rebates amounted to SEK 1 451 million, the fee before rebates was SEK 2 375 million. In addition to SEK 924 million in capital management costs, the PPM has been notified by fund managers of SEK 713 million in transaction costs. As with the corresponding item for the National Pension Funds, this amount does not fully account for all transaction costs.

**Costs of the Old-Age Pension System, Millions of SEK**

| | Inkomst-pension | Premium pension | Total |
|---|---|---|---|
| Collection of contributions, etc. (National Tax Board) | 287 | 45 | 330 |
| Pension administration | 514 | 273 | 789 |
| Total, insurance administration | 801 | 318 | 1 119 |
| Capital management costs reported gross | 971 | 0 | 971 |
| Capital management costs reported net | 803 | 924 | 1 727 |
| Transaction costs* | 435 | 713 ** | 1 148 |
| Total, capital management | 2 209 | 1 637 | 3 846 |
| Total costs | 3 010 | 1 955 | 4 965 |

* These consist primarily of transaction costs on the stock market. Transaction costs on bond and foreign exchange markets arise from the difference between bidding and asking prices. Such costs are not reported in this table.

** The costs included here are only those of the funds that report the so-called total cost share (TCS) to the PPM. These funds account for 95 percent of the capital in the premium pension system. The amount also includes costs of interest and coupon (dividend) taxes in the funds.

## Costs of the Swedish Social Insurance Agency (SSIA)

The income statement of the pension system includes the compensation that National Pension Funds are required by Government decision to provide to the SSIA for its administrative costs. The accounting of the inkomstpension is on a cash basis rather than an accrual basis. The difference between the compensation received from the National Pension Funds and the cost reported by the SSIA for the inkomstpension is offset by the compensation received by the authority two calendar years after the difference arises. The table below shows both the compensation decided, i.e. the cost included in the annual report of the pension system, and the accrued cost, or "cost outcome," used in the time series below.

**Costs of the Inkomstpension to the SSIA, Millions of SEK**

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|---|---|
| Opening balance | 45 | 61 | –70 | –92 | 16 | 139 | 312 | 302 |
| Compensation decided* | 734 | 730 | 785 | 904 | 895 | 794 | 514 | 257 |
| Cost outcome** | 719 | 861 | 807 | 796 | 772 | 622 | 524 | |
| Net income / loss for the year | 15 | –131 | –22 | 108 | 123 | 172 | –10 | |
| Closing balance | 61 | –70 | –92 | 16 | 139 | 312 | 302 | |

* Compensation from the National Pension Funds, the cost reported in the income statement of the inkomstpension.

** The cost included in the tables Costs of the Old-Age Pension System 2001–2007 and Cost per Insured, SEK, 2001–2007.

## Development of Costs, 2001–2007

In order to put costs in perspective, the tables below show the items of cost each year beginning with 2001, the first year that the annual report of the pension system was prepared. Costs are reported in SEK and in SEK per number insured, i.e. the number of people with pension accounts, including pensioners. For reasons of space, costs are not shown in relation to the "capital" from which they are deducted, i.e. costs in proportion to the pension liability. To permit such a calculation, however, the table *Pension Liability/Capital from Which the Cost Deduction Was Taken, 2001–2007* shows the amount of the "capital" from which the costs are to be withdrawn.

**Costs of the Old-Age Pension System, 2001–2007, Millions of SEK**

IP = Inkomstpension, PP = premium pension

| | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|
| Collection of contributions, etc. (National Tax Board)* | IP | 250 | 297 | 340 | 344 | 279 | 403 | 287 |
| | PP | – | – | – | – | 43 | 63 | 45 |
| Pension administration | IP** | 719 | 861 | 807 | 796 | 772 | 622 | 524 |
| | PP | 499 | 442 | 351 | 285 | 244 | 272 | 273 |
| Total, insurance administration | IP | 969 | 1 158 | 1 147 | 1 140 | 1 051 | 1 025 | 811 |
| | PP | 499 | 442 | 351 | 285 | 287 | 335 | 318 |
| Capital management costs reported gross | IP | 946 | 1 025 | 1 233 | 1 487 | 857 | 880 | 971 |
| | PP | – | – | – | – | – | – | – |
| Capital management costs reported net | IP | – | – | – | – | 769 | 672 | 803 |
| | PP | 306 | 273 | 374 | 523 | 697 | 892 | 924 |
| Transaction costs*** | IP | . . | . . | 305 | 414 | 369 | 424 | 435 |
| | PP**** | . . | . . | . . | . . | 503 | 537 | 713 |
| Total, capital management | IP | . . | . . | 1 538 | 1 901 | 1 995 | 1 976 | 2 209 |
| | PP | . . | . . | . . | . . | 1 200 | 1 429 | 1 637 |
| Total costs | IP | . . | . . | 2 685 | 3 041 | 3 046 | 3 001 | 3 020 |
| | PP | . . | . . | . . | . . | 1 487 | 1 764 | 1 955 |

* The compensation from the PPM to the National Tax Board for costs and the charge for pension administration differ from the accounts for previous years, as compensation to the SSIA was then included under collection of contributions; this charge is now reported instead under pension administration.

** In 2001 and 2002 the costs included are those of the National Social Insurance Offices, the National Social Insurance Board, the KPA Pensions Company and the National Institute of Economic Research. In 2003 and 2004 the costs of the National Social Insurance Offices and the National Social Insurance Board are included. From 2005 on, the costs of the old-age pension systems are those of the SSIA. The amount reported for the inkomstpension is the actual cost, whereas the amount in the table Costs of the Old-Age Pension System refers to the compensation received from the National Pension Funds for costs of administration.

*** See explanation in the table Costs of the Old-Age Pension System.

**** See explanation in the table Costs of the Old-Age Pension System.

**Pension Liability/Capital from Which Cost Deduction Was Taken, 2001–2007, Billions of SEK**

| | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|
| Pension liability from which cost deduction was taken | IP* | 3 943 | 4 157 | 4 314 | 4 486 | 4 613 | 4 751 | 4 910 |
| | PP | 65 | 59 | 94 | 125 | 193 | 269 | 311 |

* The pension liability of the pay-as-you-go system, excluding the liability for the ATP and for the inkomstpension during disbursement. The cost deduction for the inkomstpension is thus taken only from the inkomstpension liability for which disbursement has not yet begun.

By agreement between the SSIA and the PPM, joint costs of the inkomstpension and the premium pension are allocated, as from 2005, according to their respective proportions of the total contribution, i.e. 16/18.5 and 2.5/18.5. The largest joint cost is for the work of the National Tax Board in collecting contributions and in calculating and confirming pension-qualifying income. Other examples included the costs of producing and distributing the Orange Envelope and the costs of the pension website, minpension.se. Before 2005, the inkomstpension financed virtually the entire joint cost.

**Costs per Insured, 2001–2007, SEK**

| | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|
| Collection of contributions, etc. (National Tax Board) | IP | 37 | 43 | 48 | 47 | 38 | 54 | 38 |
| | PP | – | – | – | – | 8 | 11 | 8 |
| Pension administration | IP | 106 | 124 | 114 | 109 | 105 | 84 | 69 |
| | PP | 101 | 87 | 68 | 53 | 45 | 48 | 47 |
| Total, insurance administration | IP | 143 | 167 | 162 | 156 | 143 | 138 | 107 |
| | PP | 101 | 87 | 68 | 53 | 53 | 59 | 55 |
| Capital management costs reported gross | IP | 140 | 147 | 174 | 204 | 117 | 118 | 128 |
| | PP | – | – | – | – | – | – | – |
| Capital management costs reported net | IP | – | – | – | – | 105 | 90 | 106 |
| | PP | 63 | 54 | 71 | 98 | 128 | 157 | 158 |
| Transaction costs | IP | . . | . . | 43 | 57 | 50 | 57 | 58 |
| | PP | . . | . . | . . | . . | 92 | 94 | 122 |
| Total, capital management | IP | . . | . . | 217 | 261 | 272 | 265 | 292 |
| | PP | . . | . . | . . | . . | 220 | 251 | 280 |
| Total costs | IP | . . | . . | 379 | 417 | 415 | 403 | 399 |
| | PP | . . | . . | . . | . . | 273 | 310 | 335 |
| Number insured | IP | 6 774 199 | 6 951 248 | 7 090 267 | 7 284 999 | 7 352 026 | 7 437 041 | 7 557 655 |
| | PP | 4 894 470 | 5 081 073 | 5 233 891 | 5 350 154 | 5 456 306 | 5 689 608 | 5 838 802 |

## Capital Management Costs in Relation to Capital Managed

Yet another way to view the costs of capital management is to compare them with the capital managed. The capital management costs of the inkomstpension are the costs of the First–Fourth and Sixth National Pension Funds. The capital management costs of the premium pension refer to the fees that the premium pension funds, including the Seventh National Pension Fund, have deducted after rebates, as well as the capital management costs of the PPM for conventional life insurance. The economies of scale for the four major National Pension Funds in the inkomstpension system are clearly apparent from the table below. In 2007, the total gross and net costs of these funds, and for the much smaller Sixth National Pension Fund, were 0.20 percent. Their transaction costs were 0.05 percent, and the item of total, capital management, was 0.25 percent. The capital management costs of the far more numerous and much smaller funds in the premium pension system were 0.33; the transaction costs were 0.25, and the item of total, capital management, was 0.58 percent of the capital managed. However, the differences in cost are due not only to disparity in economies of scale, but also to the fact that the funds in the inkomstpension system invest some 39 percent of their capital in bonds or similar securities, with relatively low management costs compared to stocks. In the premium pension system, only about 13 percent of assets are invested in bonds or similar securities.

**Capital Management Costs in Relation to Capital Managed, 2001–2007, Percent**

| | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|
| Capital management costs reported gross | IP | 0.17 | 0.19 | 0.23 | 0.24 | 0.12 | 0.11 | 0.11 |
| | PP | – | – | – | – | – | – | – |
| Capital management costs reported net | IP | – | – | – | – | 0.11 | 0.08 | 0.09 |
| | PP | 0.45 | 0.44 | 0.43 | 0.42 | 0.42 | 0.40 | 0.33 |
| Transaction costs | IP | . . | . . | 0.06 | 0.07 | 0.05 | 0.05 | 0.05 |
| | PP | . . | . . | . . | . . | 0.30 | 0.24 | 0.25 |
| Total, capital management | IP | . . | . . | 0.29 | 0.31 | 0.28 | 0.24 | 0.25 |
| | PP | . . | . . | . . | . . | 0.72 | 0.64 | 0.58 |
| Average capital managed* | IP | 572 038 | 526 355 | 532 238 | 611 569 | 707 695 | 813 564 | 878 205 |
| | PP | 68 000 | 62 000 | 87 000 | 121 000 | 167 711 | 226 014 | 283 972 |

* Calculated as capital at the beginning of the year + capital at year-end divided by two, in millions of SEK.

## Actual Cost Deductions Taken, 2001–2007

In 2007 the deduction from pension balances for costs was 0.0440 percent in the inkomstpension system. The deduction for costs is taken only until pension disbursement begins. As previously noted, neither the capital management costs reported net, 0.09 percent of capital managed (0.02 percent of the pension liability), nor the transaction costs of 0.05 percent of capital managed (0.01 percent of the pension liability) are charged to pension savers as a deduction for costs. In the pension projections in the Orange Envelope, the deduction for costs is assumed to remain constant at 0.045 percent.

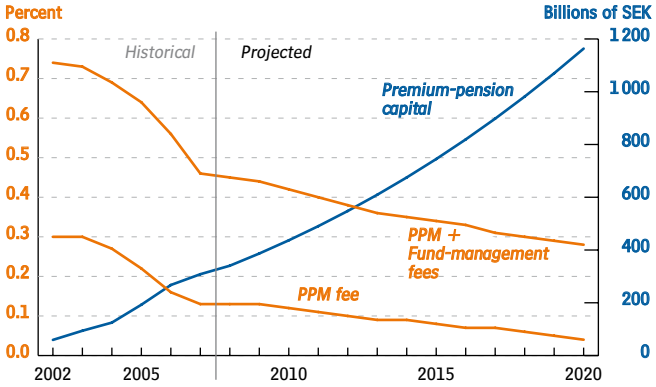
In 2007 the deduction for the administrative costs of the PPM was 0.13 percent, based on the capital managed in the premium pension system as of May 1, 2007. Here the deduction continues to be taken even after pension disbursement begins. The average cost deduction by fund managers after rebates was 0.33 percent in 2007. In addition, there were transaction costs of approximately 0.25 percent in the form of brokerage etc. The annual percentage cost deduction will diminish in the years ahead. As funded capital grows, it is estimated that the cost to the PPM will drop from 0.13 to around 0.04 percent, and the rebates returned from fund managers and credited to pension savers are expected to increase.

**Deductions for Costs, 2001–2007, Percent**

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|
| IP | 0.0340 | 0.0520 | 0.0480 | 0.0604 | 0.0509 | 0.0312 | 0.0440 |
| PP, PPM | . . | 0.30 | 0.30 | 0.27 | 0.22 | 0.16 | 0.13 |
| PP, funds | 0.45 | 0.44 | 0.43 | 0.42 | 0.42 | 0.40 | 0.33 |
| PP, total | . . | 0.74 | 0.73 | 0.69 | 0.64 | 0.56 | 0.46 |

One would expect the cost deducted from inkomstpension accounts to correspond to the cost reported in the income statement of the inkomstpension. That amount, divided by the pension liability – the inkomstpension account balances of the insured – for which disbursement has not yet begun, would be the cost deduction expressed as a percentage. This is true in principle; for several reasons, however, it is not always so in practice. One reason for discrepancies between actual and deducted costs is that until the year 2021, the cost deduction will be increased stepwise to 100 percent; see Note 11. Another is that budgeted costs are deducted from estimated account balances. The (minor) discrepancies thus arising between costs deducted and actual costs are followed up and corrected in the cost deduction of the next year.

**Costs of the Premium Pension**




For the premium pension there are equivalent small periodic discrepancies between the contribution charged and the actual cost of the authority. These discrepancies are also corrected on an ongoing basis.

## What Difference Do Costs Make for the Size of a Pension?

Costs are an important factor in determining the size of a future pension. A seemingly low fee can reduce a pension substantially since it is paid over a long period. Among factors affecting pension capital, the magnitude of costs is the one over which the responsible authorities have the most control; moreover, the insured are in a position to influence the costs of their premium pensions.

The following simplified calculation provides a fairly precise portrayal of how a certain cost percentage affects the size of the pension disbursed. The average time for which a paid-in contribution remains in the system before being disbursed is roughly 21 years, and the average time for which one krona remains in the system during pension disbursement is about 10 years. If the cost of the inkomstpension is 0.04 percent, the deduction will reduce the inkomstpension to $(1–0.0004)^{21} \approx 99$ percent of what it would have been without the deduction for costs, or by roughly 1 percent. If the costs of the premium pension are as low, for example, as 0.3 percent, the deduction will reduce the premium pension to $(1–0.003)^{31} \approx 91$ percent of what it would have been without the deduction for costs, or by approximately 9 percent. The reason why the deduction is made for 31 years is that in the premium pension system the cost deduction continues during the period of pension disbursement. A fairly normal management fee in Sweden for saving outside the national pension system is around 1 percent – not infrequently, it is even higher. If the fee for the same period as in the example above is 1 percent, pension capital savings will be 73 percent of what they would have been with a fee of 0 percent; in other words, 27 percent disappears in fees.

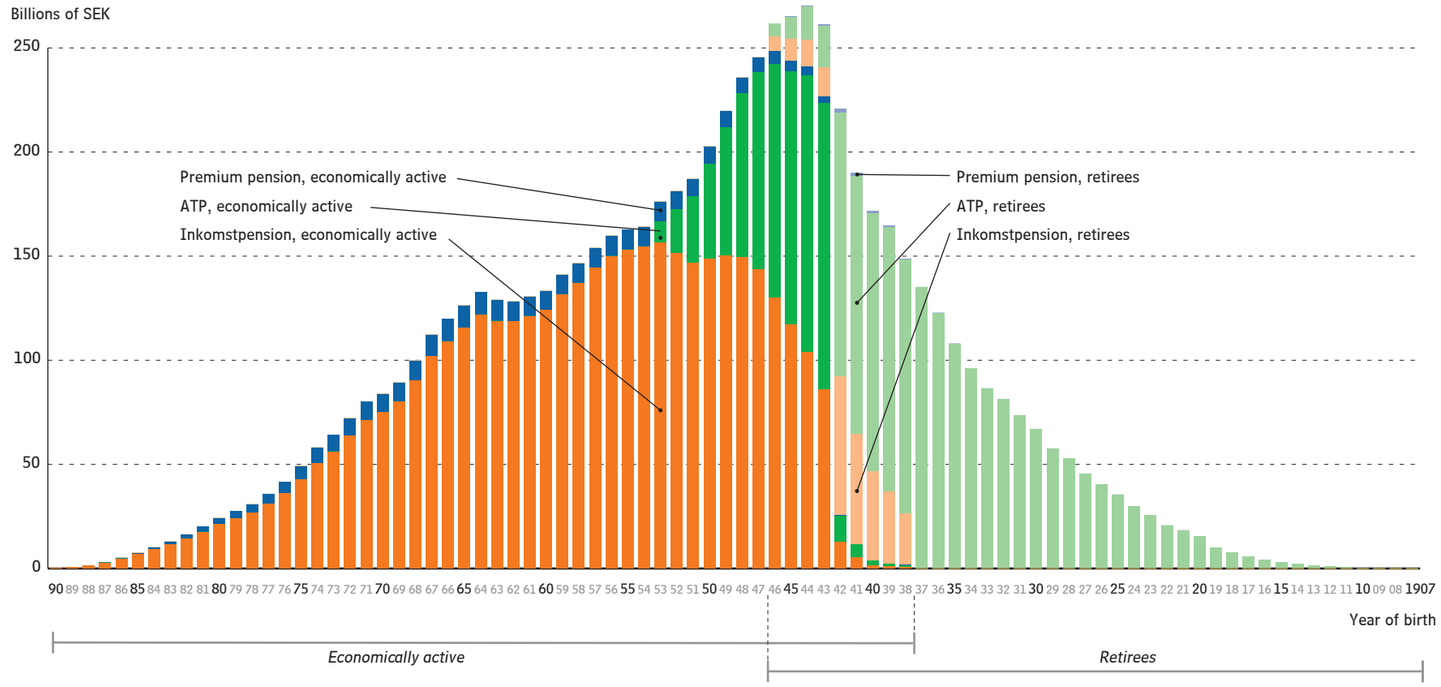
## Pension Liability to the Economically Active

**The inkomstpension liability to the economically active** consists of the sum of each birth cohort's pension balances as of December 31, 2007, with the addition of total estimated pension credit for 2007. For further information, see Note 14, Table A, and Appendix B, Section 4.

**The ATP liability to the economically active** is calculated with the pension model of the Swedish Social Insurance Agency (SSIA). The ATP of each birth cohort is calculated in the year when the cohort reaches age 65. The estimated annual pension is multiplied by the economic annuity divisor for the birth cohort, and the present value of the product is determined. For further information, see Note 14, Table B, and Appendix B, Section 4.

**The premium pension liability to the economically active** consists of the aggregate fund assets of the respective birth cohorts as of December 31, 2007.

### Total Pension Liability as of December 31, 2007




## Pension Liability to Retirees

**The pension liability to retirees** is calculated in the same way for the ATP and the inkomstpension. The sum of pension disbursements to each birth cohort in December 2007 is multiplied by 12, and that annual amount is multiplied by a three-year average of the economic annuity divisor. For further information, see Note 14, Table C, and Appendix B, Section 4.

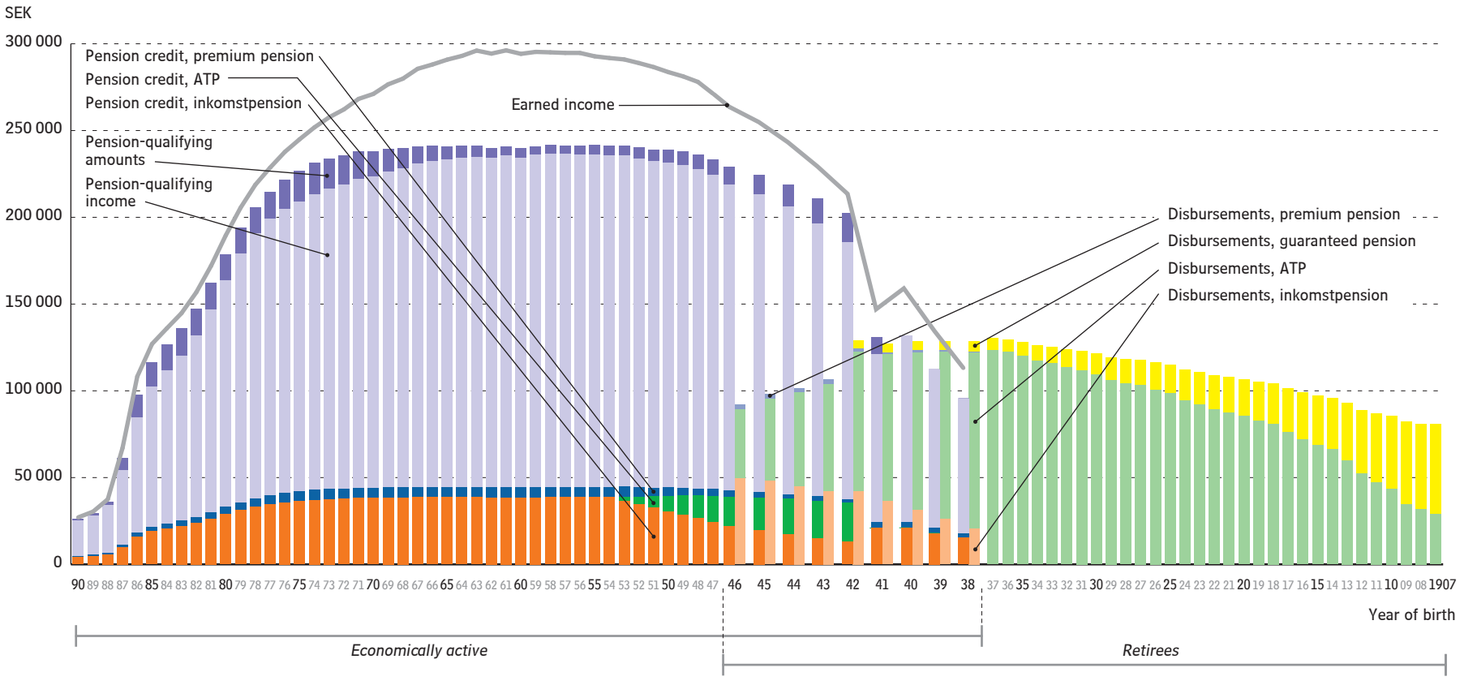
**The premium pension liability to retirees** is estimated from aggregate pension disbursements to the respective birth cohorts in December 2007, multiplied by 12 and by annuity divisors for the premium pension.

## Pension Credit Earned

**Data on income and pension credit** are taken from SSIA records of earnings and refer to average amounts for all insured persons with positive pension credit earned in 2006. For the total pension credit earned in 2006, see the respective income statements and balance sheets for the inkomstpension and the premium pension.

Income refers to income from employment and other earned income, as well as transfer payments. Income is shown before deduction of the individual pension contribution and for persons with incomes exceeding the threshold for pension credit (42.3 percent of one price-related base amount).

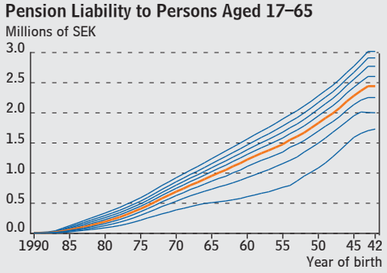
### Average Pension Credit Earned and Pension Disbursed




## Pension Disbursements

**Data on pension disbursements** are taken from SSIA records of disbursements and refer to average amounts for all retirees receiving a pension disbursement in 2007. For total disbursements of the inkomstpension and the premium pension, see Note 2.

## Pension Liability to Persons Aged 17–65

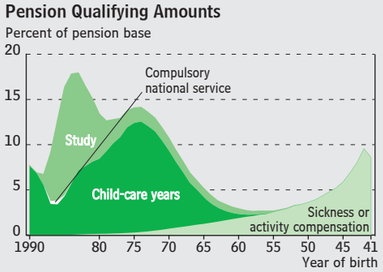



The red curve represents the median, which is the central value in the scale of values arranged from lowest to highest. The other curves indicate the values for the 20th-90th percentiles; i.e. the upper curve represents the value of the pension asset* exceeded by 10 percent of the insured, and the lower curve represents the value of the pension asset not reached by 20 percent of the insured.

The median pension asset for a woman aged 43.7 with pension credit is approximately SEK 880 000. At that age, about 10 percent have a pension asset above SEK 1 142 000, and some 20 percent have a pension asset below SEK 579 000.

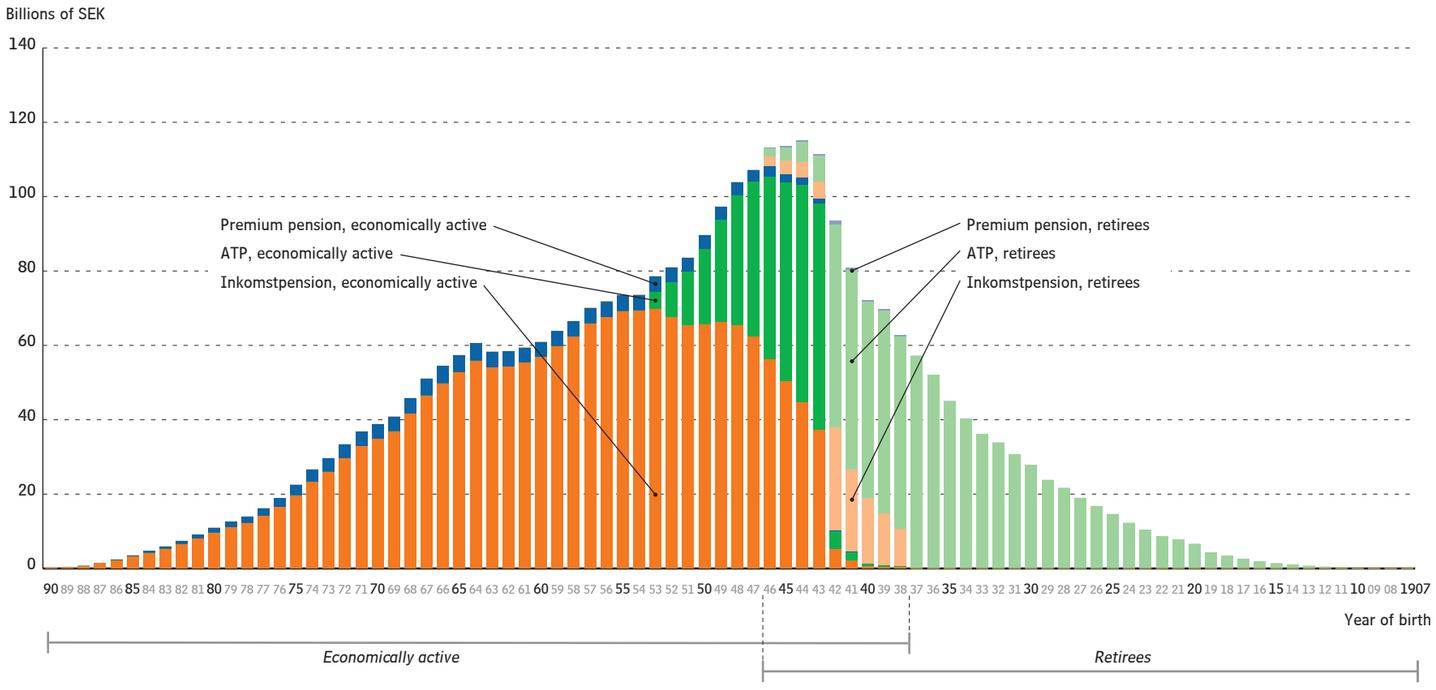
* The pension balances of individuals equal the pension liability of the system.

## Pension Qualifying Amounts

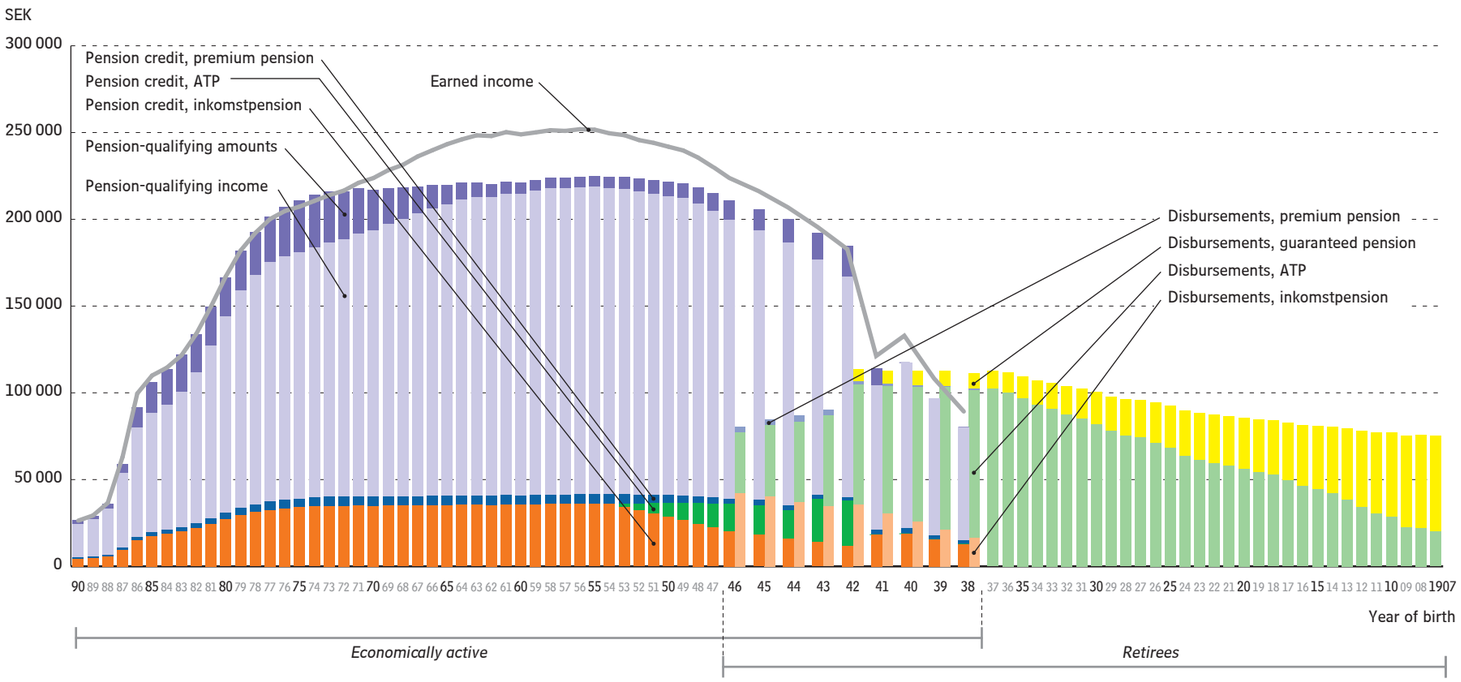



Pension credit is granted for pension-qualifying amounts in particular phases of individuals' lives, such as years with small children or of compulsory national service. In pay-in year 2006, pension-qualifying amounts constituted 7.4 percent of the pension base for women. The largest portion of this share, 3.8 percent, consisted of amounts for years with small children.

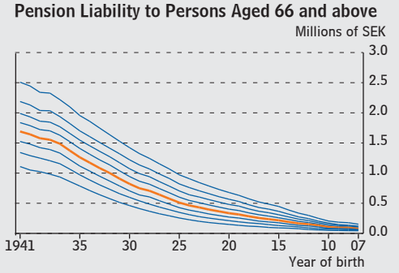
## Total Pension Liability as of December 31, 2007, Women




## Average Pension Credit Earned and Pension Disbursed, Women

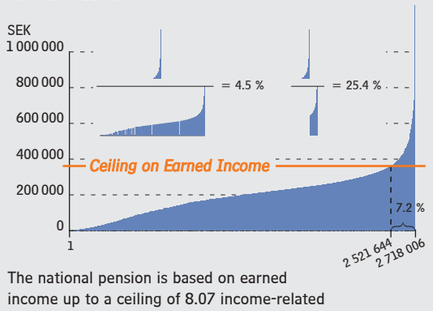



## Pension Liability to Persons Aged 66 and above



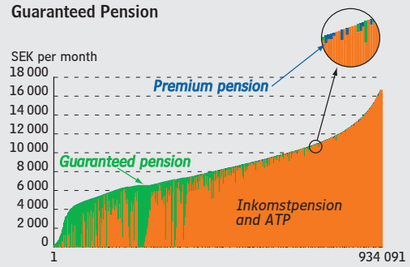

For 10 percent of retired women, the pension asset exceeds SEK 2 508 000 at age 66. The median at that age is SEK 1 691 000, and for 20 percent the pension asset is less than SEK 1 109 000. For a pensioner 75.7 years of age, the corresponding amounts decrease to SEK 1 583 000, 955 000 and 545 000.

## Earned Income




The national pension is based on earned income up to a ceiling of 8.07 income-related base amounts. In the diagram women's earnings in 2006 are presented in order of size.

## Guaranteed Pension

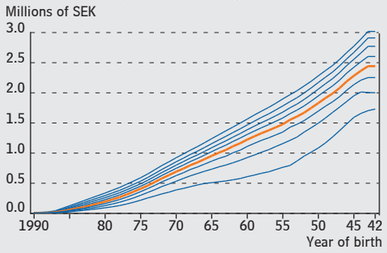



In the diagram, disbursements of the national pension in December, 2007, for female pensioners born in 1942 or earlier are presented in order of size (934 091 disbursements).

About 69 percent of female pensioners receive some guaranteed pension. In total, the guaranteed pension represents roughly 17 percent of pension disbursements to female retirees.

The widow's pension is not included in the diagram. Had it been included, pensions would have been substantially higher, particularly the lowest ones.

## Pension Liability to Persons Aged 17–65

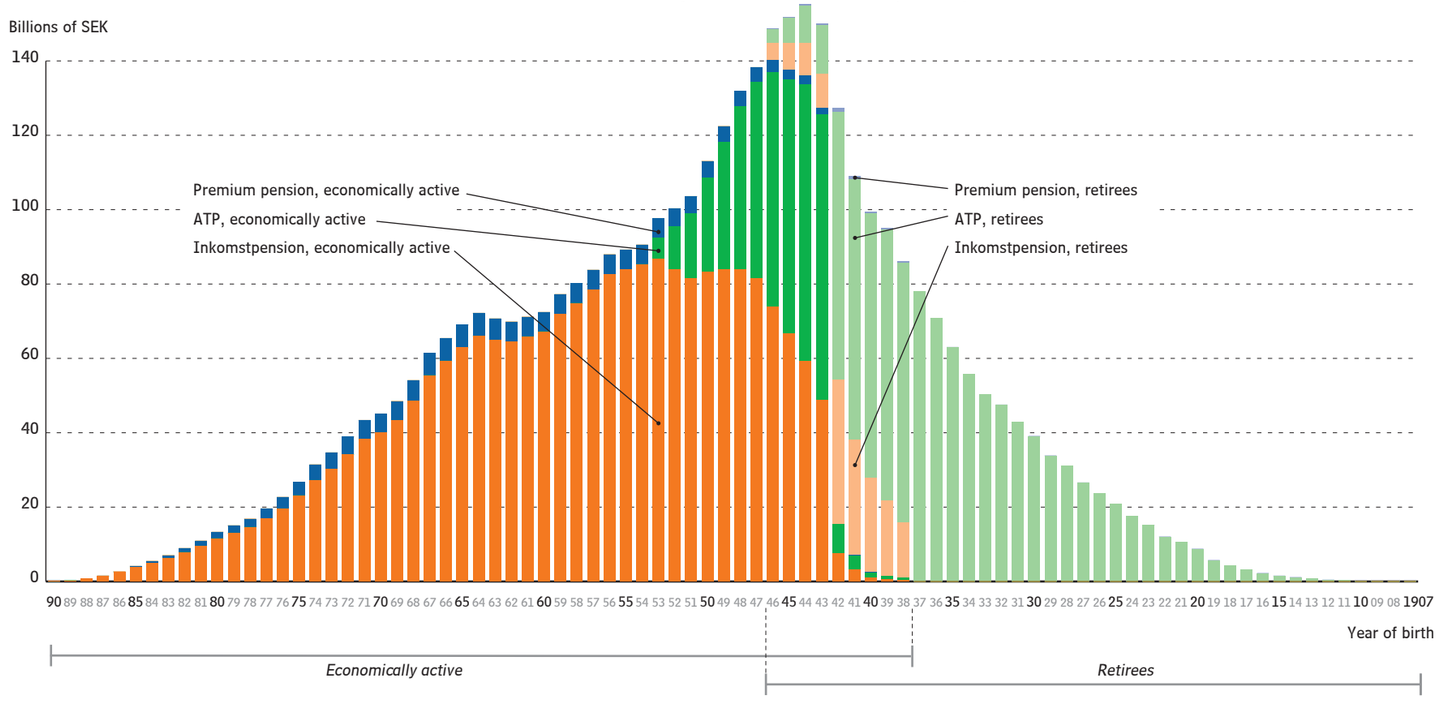



The red curve represents the median, which is the central value in the scale of values arranged from lowest to highest. The other curves indicate the values for the 20th-90th percentiles; i.e. the upper curve represents the value of the pension asset* exceeded by 10 percent of the insured, and the lower curve represents the value of the pension asset not reached by 20 percent of the insured.

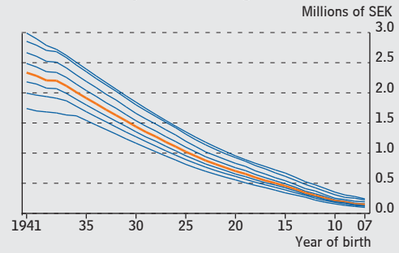
The median pension asset for a man aged 43.7 with pension credit is approximately SEK 1 030 000. At that age, about 10 percent have a pension asset above SEK 1 337 000, and some 20 percent have a pension asset below SEK 532 000.

* The pension balances of individuals equal the pension liability of the system.

## Total Pension Liability as of December 31, 2007, Men

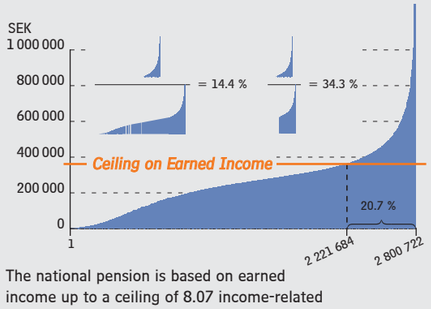



## Pension Liability to Persons Aged 66 and above



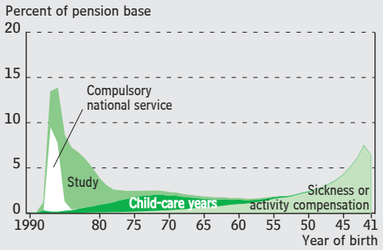

For 10 percent of retired men, the pension asset exceeds SEK 2 991 000 at age 66. The median at that age is SEK 2 335 000, and for 20 percent the pension asset is less than SEK 1 740 000. For a pensioner 75.7 years of age, the corresponding amounts decrease to SEK 2 005 000, 1 582 000 and 1 276 000.

## Earned Income



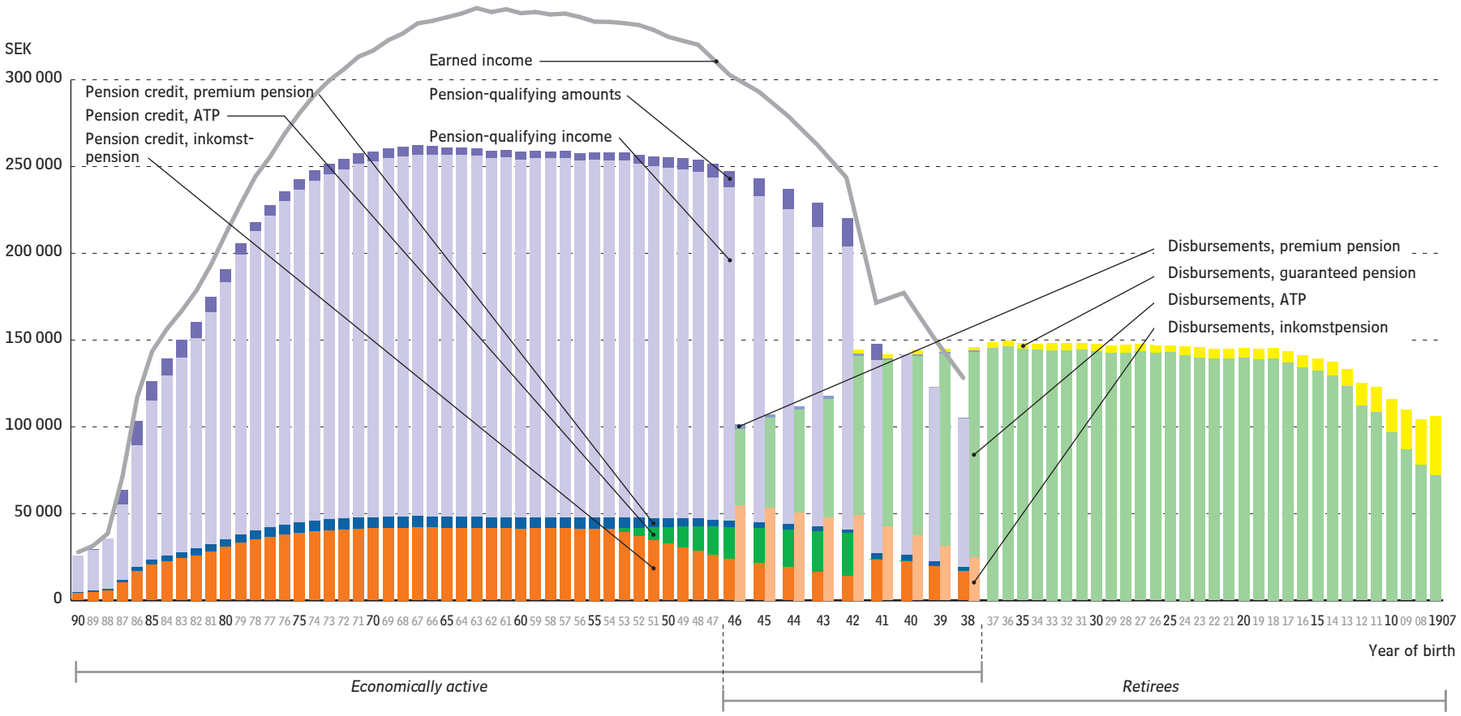

The national pension is based on earned income up to a ceiling of 8.07 income-related base amounts. In the diagram men's earnings in 2006 are presented in order of size.

## Pension Qualifying Amounts

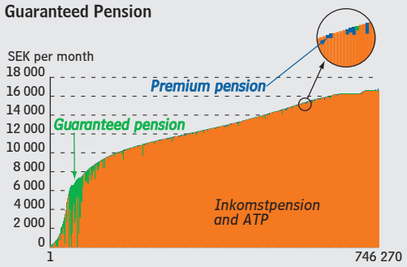



Pension credit is granted for pension-qualifying amounts in particular phases of individuals' lives, such as years with small children or of compulsory national service. In pay-in year 2006, pension-qualifying amounts constituted 2.9 percent of the pension base for men. The largest portion of this share, 1.4 percent, consisted of amounts for sickness or activity compensation.

## Average Pension Credit Earned and Pension Disbursed, Men




## Guaranteed Pension




In the diagram, disbursements of the national pension in December, 2007, for male pensioners born in 1942 or earlier are presented in order of size (746 270 disbursements).

About 22 percent of male pensioners receive some guaranteed pension. In total, the guaranteed pension represents roughly 2 percent of pension disbursements to male retirees.

# Three Scenarios for the Future of the Pension System

*To show how different developments can affect the financial position of the pension system and the size of pensions, three projections are presented for the evolution of the system over the next 75 years.*

The long-term financial development of the inkomstpension system is described below in three different projections, referred to as the base, optimistic and pessimistic scenarios. In the base scenario, which starts with the latest population forecast by Statistics Sweden, it is assumed that incomes will grow by 1.8 percent annually in real terms and that the real annual rate of return on buffer-fund assets will be 3.25 percent. In the other two scenarios, assumptions have been made about more and less positive paths of development for the finances of the inkomstpension system.

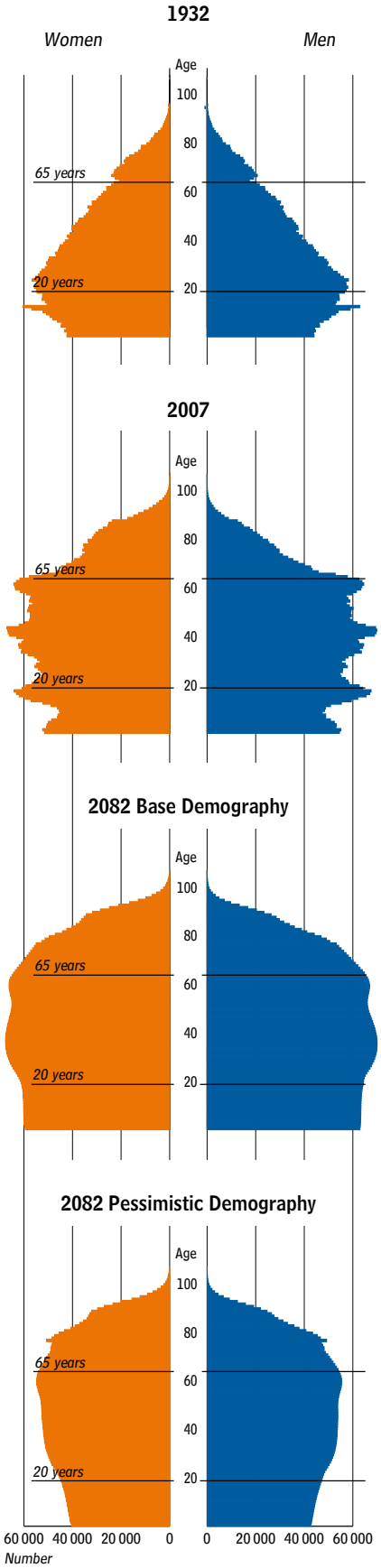
A high rate of return on the buffer fund can soften the impact of an otherwise negative tendency on the pension system.

The three projections extend 75 years into the future. The projected population structure in 75 years is different from the structure in Sweden today, as is illustrated by the population pyramids in the margin. In the base scenario and the optimistic scenario, the demographic assumptions are the same. For comparison, the population pyramid 75 years ago, that is, in 1932, is also shown. At that time the remaining life expectancy of a 65-year-old was roughly 13 years; today it is about 19 years, and in 2082 the remaining life expectancy at age 65 is expected to be 22 years – the same with both base and pessimistic demography. The share of the population aged 65 or above was 9 percent 75 years ago. Today it is over 18 percent, and in 2082 it will be an estimated 24 percent in the base-demography scenario and 27 percent in the scenario with pessimistic demography.

The results of the projections are reported as calculations of net contribution, size of buffer fund, balance ratio and average pension level for new pensioners. In summary, net contributions will be negative in all three scenarios beginning around 2010 and for quite a few years thereafter. Pension disbursements are thus forecast to exceed contribution revenue, but only in the pessimistic scenario does this trend ultimately exhaust the buffer fund. The reason why the fund is used up is that both the working-age population and the return on the buffer fund are low in this scenario. Only in the pessimistic scenario is balancing activated.

This section concludes with a discussion on the calculation of pension levels and compensation rates. In addition to the pension levels in the projections of the annual report, compensation rates from the insured's Orange Envelope are provided.

**Population 75 years ago, at present, and in 75 years in the two demographic scenarios**




Source: Statistics Sweden (SCB)

## Net Contribution

The amount of pension disbursements is a function of the rules of the system and their interplay with demographic and economic developments. Since birth cohorts vary in size, and to some extent have worked to different degrees, the contribution revenue and pension disbursements of the system vary over time. In certain periods, contributions exceed disbursements; at other times, the opposite is true. Surpluses and deficits are managed through the buffer fund of the system.

To permit comparison of net contributions – that is, contribution revenue received minus pensions disbursed – the net contribution in each scenario has been divided by the contribution revenue in that scenario. The

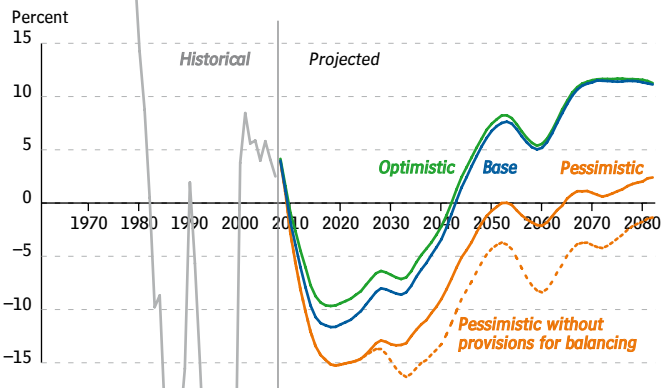
volume effect of different growth rates on the monetary value of the net contribution is thus eliminated.

When the ATP system was introduced in 1960, contributions exceeded pension disbursements, which were initially limited; in proportion to contributions, there was a large surplus. From 1980 on, net contributions have varied considerably. The variations have been due primarily to changes in rules; the changes regarding the contribution percentage affect revenue, and the modifications in the calculation of the base amount impact expenditure. To a lesser degree, the variations in net contribution have been due to changes in the number of pensioners and the number of gainfully employed.

The net contribution turns negative around 2010 (in the Orange Report for 2006 the year was 2009), when the large birth cohorts of the 1940's leave the labour force and begin drawing pensions. Around 2020 the weakening trend begins to lessen, and the net contribution deficit gradually diminishes. After 2043 (2044) revenue exceeds expenditure in the base and optimistic scenarios. In the pessimistic scenario, on the other hand, the net contribution remains negative for some 20 more years. Through balancing, the contribution deficit is limited to a range between 0 and 15 percent of contribution revenue.

Balancing is activated only in the pessimistic scenario. The reduction in pension levels due to balancing in this case is described in the section "Development of Pension Levels for Different Birth Cohorts".

**Net Contribution**
Contribution revenue less pension disbursements as a percentage of contribution revenue




## Buffer Fund

The size of the buffer fund can be expressed in terms of fund strength, that is, fund capital divided by pension disbursements for the year. Fund strength shows how many years of pension disbursements can be financed by the fund without additional contributions or return on assets. The varied development of the buffer fund in the three scenarios is due to differences both in net contributions and in the assumed return on the buffer fund.

Historically, fund strength has been high, the reason being that the introduction of the ATP system in 1960 brought an inflow of contributions while pension disbursements were limited. As the number of ATP pensioners has

*Base Scenario*

The demographic tendency in the base scenario follows the latest population forecast of Statistics Sweden from 2007. There it is assumed that the birth rate will remain stable at its present level of 1.85 children per woman for the entire projection period. Life expectancy for men was 78.7 years in 2007 and is assumed to increase to 83.8 years in 2050. For women, life expectancy is projected to rise from 82.9 to 86.3 years in the same period. After 2050 the assumptions on mortality, i.e. life expectancy, are unchanged. Net immigration, which has averaged 24 400 per year for the last 20 years, was 50 000 in 2006 because of the temporary law on asylum and was even higher in 2007, when it reached 54 000. In the first years of the projection until 2010, annual net immigration is expected to remain high. From that year on, the annual average is estimated at about 24 000. The proportion of persons aged 16–64 with an annual income over one (1) income-related base amount is assumed to remain at the current level of about 84 percent, corresponding to an employment rate of roughly 77 percent, as defined by the Labour Force Surveys (AKU). Real growth in average income is assumed to average 1.8 percent per year. The real rate of return on the buffer fund is assumed to remain unchanged at 3.25 percent per year. The same return, after costs of administration, has been assumed for the premium pension funds in the calculation of the future premium pension for a newly retired individual.

*Optimistic Scenario*

The demographic assumptions are the same as in the base scenario; the two scenarios differ only in respect to economic factors. In the optimistic scenario, the proportion of persons aged 16–64 with an annual income exceeding one income-related base amount is 86 percent; real annual growth in average income is 2.0 percent after 2010; and the real rate of return on the buffer fund is 5.5 percent. The return for the premium pension system, after costs of administration, is also assumed to be 5.5 percent in real terms. By historical standards, neither the assumed growth rate nor the assumed rate of return is particularly high.

increased, fund strength has decreased. Since 1990, fund strength has averaged slightly less than five years.

**In the base scenario**, fund strength gradually decreases because of the net contribution deficit. Fund strength reaches a low point in 2036, when it is equivalent to 3.4 years of pension disbursements (3.4).

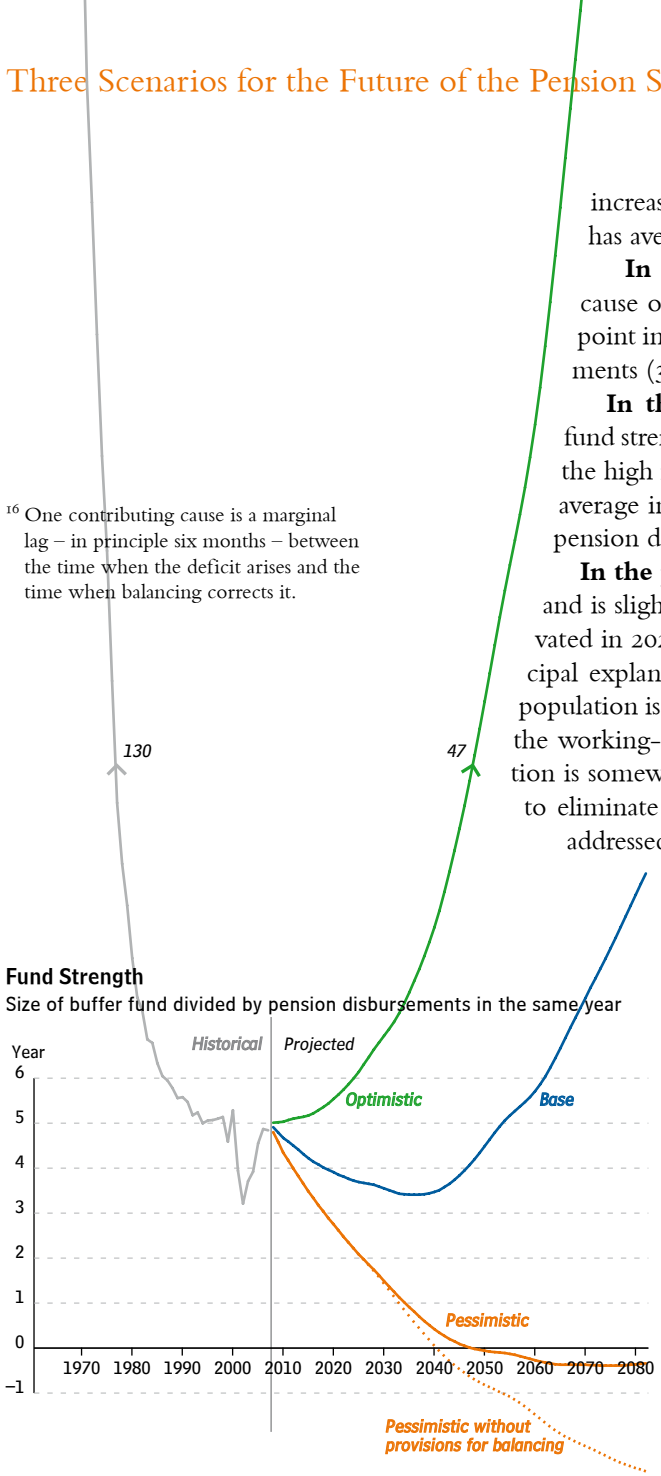
**In the optimistic scenario**, there is a substantial increase in fund strength. The explanation is the limited contribution deficit and the high rate of return on the fund in relation to the development of average income. In 2050, fund strength is equivalent to 14.4 years of pension disbursements (14.8).

**In the pessimistic scenario,** the buffer fund is exhausted by 2048 and is slightly negative thereafter. Thus, even though balancing is activated in 2025 (2013), the fund is used up and turns negative. The principal explanation[16] is that in the calculation of turnover duration, the population is implicitly assumed to be constant. With a declining trend in the working-age population, this assumption means that turnover duration is somewhat overestimated. Balancing was deliberately designed not to eliminate the risk of exhausting the buffer fund. This risk has been addressed by authorizing the funds to borrow money. Any borrowing is to take place via the National Debt Office.

When the assumed population decrease comes to a halt, the buffer fund is guided toward fund strength of at least zero. During the years when the fund is negative, interest is paid on the loans taken. In the diagram it is assumed that the interest rate on these loans, taken via the National Debt Office, is the same as the assumed rate of return in the scenario, i.e. 1 percent.

With balancing initiated, the annual reduction in pension levels relative to growth in average income is very modest at first but increases somewhat over time. For younger birth cohorts, the balancing effect is about 2 percentage points (3) – see the section "Development of Pension Levels for Different Birth Cohorts".

[16] One contributing cause is a marginal lag – in principle six months – between the time when the deficit arises and the time when balancing corrects it.




**Fund Strength**
Size of buffer fund divided by pension disbursements in the same year

*Pessimistic Scenario*

In the pessimistic scenario, the birth rate and net immigration are lower than in the base alternative. The birth rate is assumed to be 1.65 children per woman, and net immigration is assumed to average 17 000 per year until 2015 and 15 000 per year thereafter. The birth rate and migration are in accordance with the low assumptions in the 2006 population forecast of Statistics Sweden. Life expectancy develops as in the other two scenarios. The assumption for labour force participation is the same as in the base scenario, but here the real long-term rate of growth in average income is 1 percent. The real rate of return on the buffer fund and on premium pension funds, after costs of administration, is also 1 percent. Equalling the increase in average income, the return on the buffer fund provides no contribution, in principle, to the long-term financing of pensions. The buffer fund is then a demographically determined repository of pension capital with a neutral impact on the financing of the system. On the assumptions in the pessimistic scenario, contribution revenue increases slowly in relation to the desired indexation of average income. The pessimistic scenario describes the risks managed through balancing and how pensions are affected by a prolonged negative trend.

## Financial Position of the Inkomstpension System

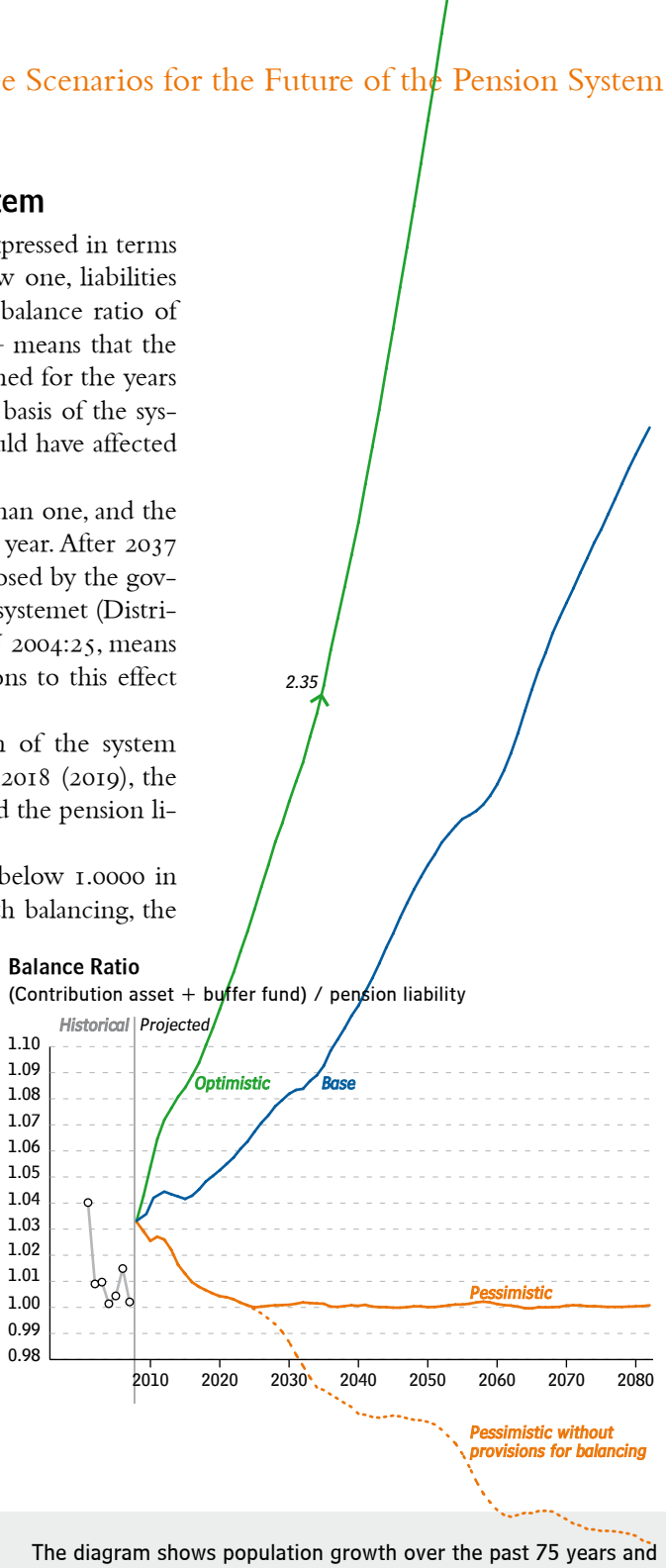
The financial position of the inkomstpension system is expressed in terms of the balance ratio. When the balance ratio drops below one, liabilities exceed assets, and balancing is activated. In principle, a balance ratio of 2.0 – that is, when assets are twice as great as liabilities – means that the system is fully funded. The balance ratio has been established for the years 2003–2009. The balance ratio has been calculated on the basis of the system's financial position as of December 31, 2007, and would have affected indexation in 2009.

In the **base scenario**, the balance ratio is never less than one, and the financial position of the system strengthens from year to year. After 2037 (2041) the balance ratio exceeds 1.1, a level which as proposed by the government report Utdelning av överskott i inkomstpensionssystemet (Distribution of Surpluses in the Inkomstpension System), SOU 2004:25, means that there is a distributable surplus. However, no provisions to this effect have been adopted by the Swedish Parliament.

In the **optimistic scenario**, the financial position of the system strengthens for virtually the entire period. Beginning in 2018 (2019), the balance ratio exceeds 1.1, and by 2050 system assets exceed the pension liability by 46 percent.

In the **pessimistic scenario**, the balance ratio falls below 1.0000 in 2025 (2013), and consequently balancing is activated. With balancing, the liability of the system accrues interest at the same rate as the growth in system assets. As a result, the balance ratio stabilizes around 1.0.

**Balance Ratio**
(Contribution asset + buffer fund) / pension liability

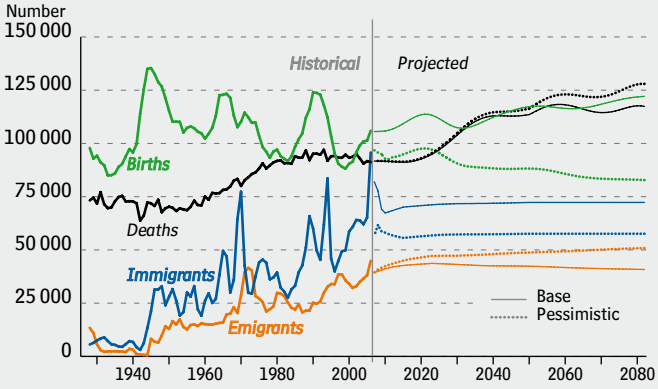



## Development of Pension Levels for Different Birth Cohorts

The pension level is defined here as the average national pension at age 65 in relation to the average pension-qualifying income for persons aged 16-64 with such income. For this level to be constant, one requirement is a roughly constant relationship between the number of economically active years and years of retirement. If this condition is to be satisfied at the same time as life expectancy is

*Comments on the Assumptions in the Scenarios*

**Births, Deaths, Immigration and Emigration – 1928–2005 and Assumptions Through 2082**




The diagram shows population growth over the past 75 years and the assumptions about it for the next 75 years. The large birth cohorts of the 1940's, 1960's and 1990's stand out clearly. The number of deaths increases each year, not because mortality is on the rise, but because the population is growing. The peak years for immigration are the 1960's and 1970's, when there was substantial immigration of labour, primarily from Finland. There was another peak in the early 1990's, with numerous refugees from ex-Yugoslavia. The peak immigration years of 2006 and 2007 are also shown clearly. The demographic conditions are the same in the base and optimistic scenarios.

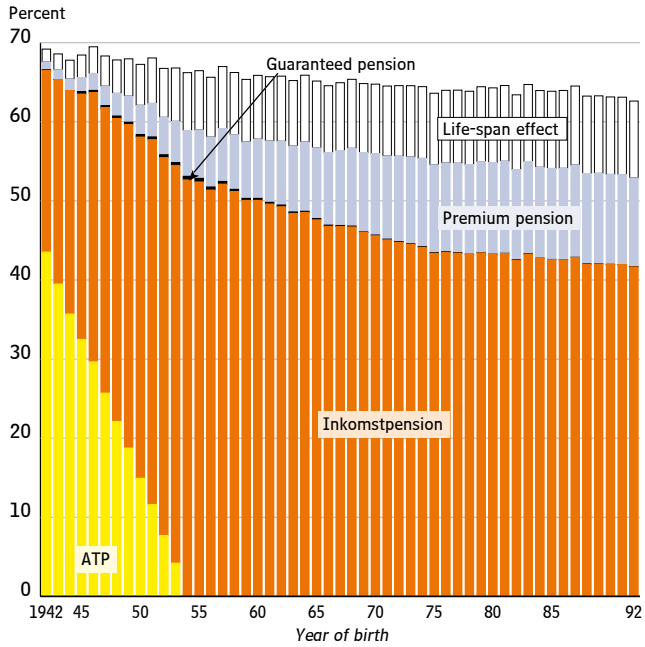
**Average Income and Pension – Base Scenario**

Amounts in SEK

| Year of birth | Pension at age 65 | Average income | Pension level, % |
|---|---|---|---|
| 1942 | 11 400 | 17 500* | 65 |
| 1965 | 14 900 | 26 300 | 57 |
| 1990 | 21 800 | 40 900 | 53 |

* An average monthly income for a full-time employee is about SEK 26 500. The reason why average income is lower than this figure is that the calculation of average income includes all persons aged 16-64 – whether or not they have had any income in the year concerned. The only requirement for inclusion in the calculations is that the individual at age 65 has had at least 30 years of pension-qualifying income. Inclusion of individuals with part-time or seasonal employment lowers both average income and pensions. The exclusion of incomes above the ceiling from average income reduces the latter by about 10 percent.

**Average Pension at Age 65 as a Percentage of Average Income, Base Scenario**



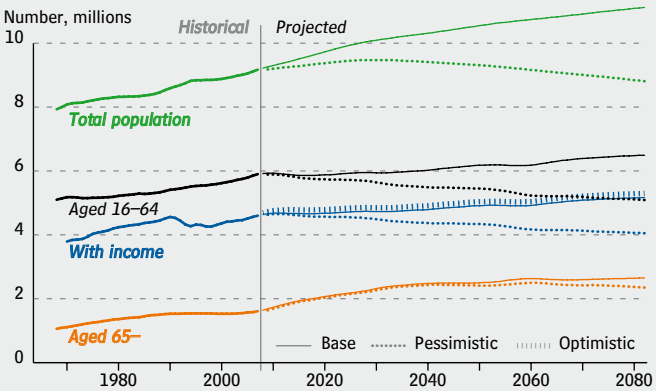

increasing, either the retirement age must be raised, or the age of entry into working life must be lowered. Moreover, for the value of pensions to remain constant in relation to incomes, balancing must not be activated.

In the scenarios, the average national pension at age 65 as a percentage of average income is shown in the following bar graphs, one for each scenario.

In the **base scenario**, the average pension level for the year when the individual turns 65 drops from 68 percent for birth cohort 1942 to 53 percent for birth cohort 1990. Of this decrease, roughly 10 percentage points are due to the anticipated increase in life expectancy. One explanation for the remainder of the decrease is that the calculations are for persons with 30 years or more of working life in Sweden. In relation to the new system, the ATP system is especially generous to persons who have worked only 30 years. If working life is prolonged to neutralize the effect of longer life expectancy on pension levels, the pension level stabilizes at just above 60 percent of average income. A longer working life also increases pensions through inheritance gains and the pension credit earned in the additional years. The effect of longer life expectancy on the retirement age, with the same pension level as for older birth cohorts, is shown in the table on page 35.

In the base scenario, the return of 3.25 percent for the premium pension system exceeds the assumed rate of growth in average income, which is 1.8 percent. As a result, the premium pension accounts for a disproportionately large share of the national pension in relation to the corresponding contributions.[17] For the youngest birth cohorts, the premium pension is more than 12 percent of average income, and the inkomstpension is about 43 percent. In the base scenario, the guaranteed pension for persons who have worked at least 30 years is only marginal from the very beginning. Since the guaranteed pension is assumed to remain constant in real terms, its significance decreases each year with the growth in incomes, although

**Population Size, etc.**




The scenarios do not differ significantly in respect to the number of persons over 65, as the assumptions regarding mortality are the same in all scenarios. The number of persons with income refers to those with earnings above one income-related base amount. The historical data are estimates.

The assumptions regarding the proportion with income are the same in the base and pessimistic scenarios and higher in the optimistic scenario.

the realism of this assumption is open to question. The relationship between the return of the premium pension system and growth in average income affects the relative size of the premium pension. The greater the positive difference between return and growth, the larger the share provided by the premium pension.

In the other two scenarios, the growth in average income is less and greater, respectively, than in the base scenario. As long as balancing is not activated, the inkomstpension accrues interest (is indexed) by the growth in average income and thus increases as the same rate as average income. The relationship between pensions and average income is then unaffected by this growth, and pensions remain unchanged in proportion to income. On the other hand, the inkomstpension will of course be less in monetary terms if growth is lower and greater if growth is higher.

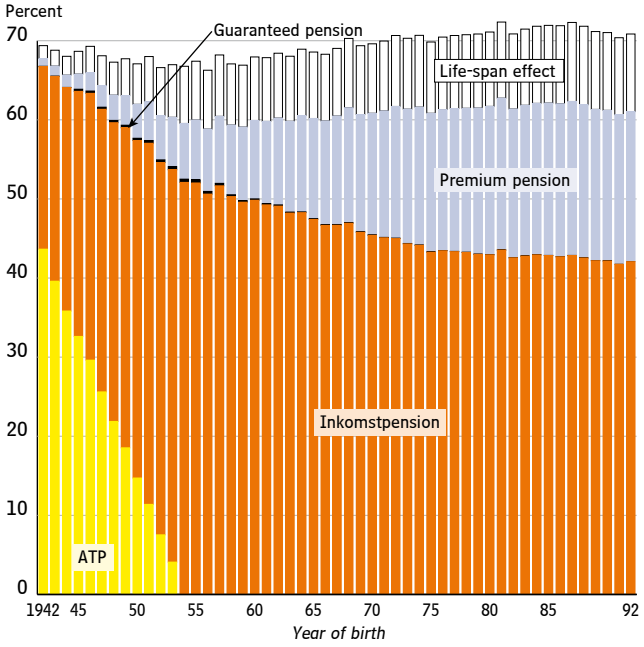
In the **optimistic scenario,** the return on the premium pension is 3.5 percentage points higher than the growth in average income, or 5.5 percent compared to 2 percent. The relatively large premium pension resulting from the high return fully compensates for the effect of longer life expectancy. If the retirement age were to increase at the same rate as life expectancy, the pension level would remain constant at about 70 percent. In both of the alternative projections made for each insured in the Orange Envelope, the difference between growth in income and the return on the premium pension is also 3.5 percentage points.

In the **pessimistic scenario**, growth in average income is 1.0 percent, or 0.8 percentage point less than in the base scenario. The rate of return is also lower, 1 percent instead of 3.25 percent. The lower rate of return means that the premium pension will be less both in monetary terms and as a share of the total pension. With earnings-related pensions relatively lower than in the base scenario, the guaranteed pension becomes more important.

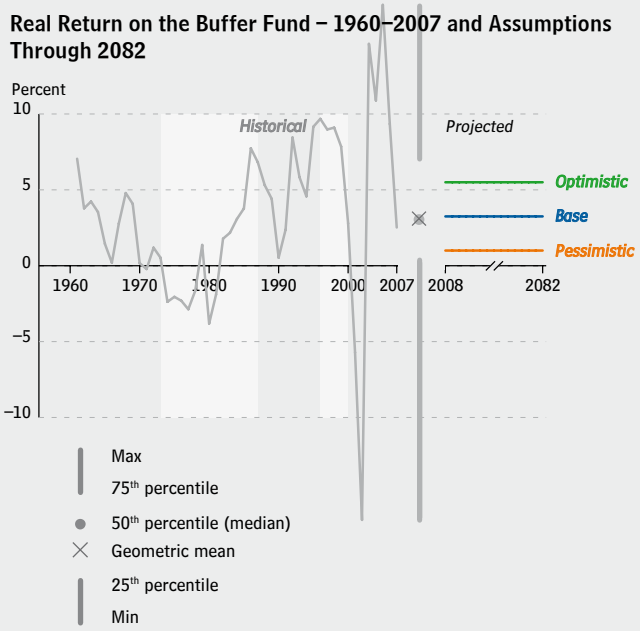
The diagram also shows how balancing affects pensions. Balancing is activated in 2025. For birth cohort 1990, balancing lowers the level of the income-related pension

[17] Another reason why the premium pension is relatively larger is that the interest credited in the annuity divisor is higher for the premium pension than for the inkomstpension; see the section "How the National Pension System Works" and Appendix A.

**Average Pension at Age 65 as a Percentage of Average Income, Optimistic Scenario**




**Real Return on the Buffer Fund – 1960–2007 and Assumptions Through 2082**



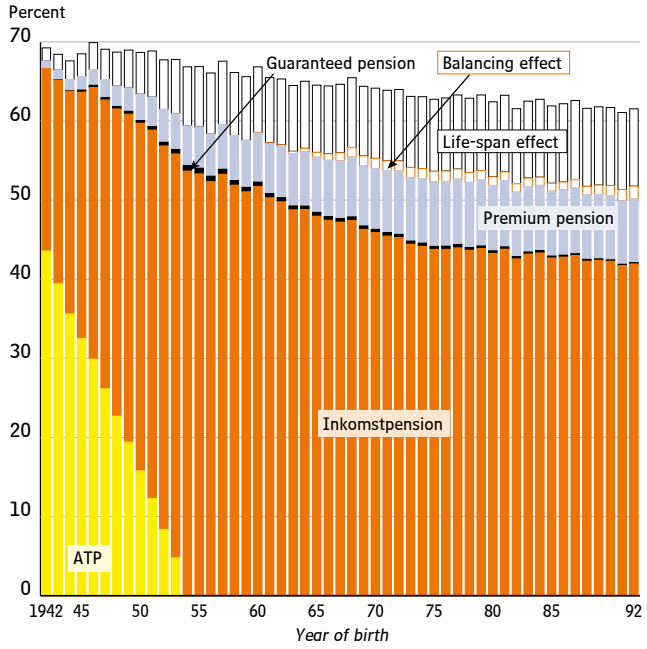

**History of the Buffer Funds in a Nutshell 1960–2007**

| Period | Fund Organisation | Investment Policies, Very General Overview |
|---|---|---|
| 1960–1999 | First–Third National Pension Funds | 100 percent interest-earning, mainly bonds |
| 1974–1999 | Fourth National Pension Fund | Mainly stocks |
| 1984–1992* | Five wage-earner fund boards | Primarily stocks |
| 1988–1999 | First–Third National Pension Funds | Allowed to invest in real estate |
| 1988–1999 | Fifth National Pension Fund | Same policy as Fourth Fund, i.e. mainly stocks |
| from 1996 on | Sixth National Pension Fund | Stocks and other securities on the risk capital market. (The five wage-earner fund boards were terminated, SEK 28 billion were apportioned out, and the rest was used to form the Sixth National Pension Fund.) |
| from 2000 on | First–Fourth National Pension Funds | Minimum of 30 percent in interest-earning securities, subject to several rules; see the websites of the National Pension Funds |

* These changes are not shown in the diagram. There the information in the table is shown as changes of investment policy in 1974, 1988, 1996, and 2000.

Source: Ds (Departementsserien – Swedish Ministry Studies) 1999:38

**Average Pension at Age 65 as a Percentage of Average Income, Pessimistic Scenario**




by 1.3 percentage points, whereas the guaranteed pension raises it by 0.2 percentage point.

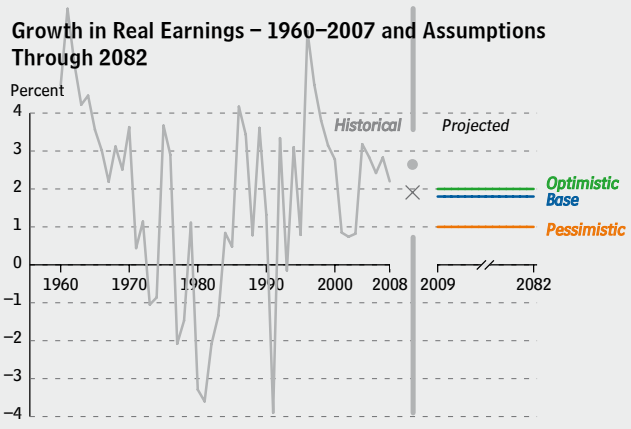
When balancing is activated, indexation is reduced, and the pension level is thereby lowered in relation to the development of average income. With the guaranteed pension designed as it is, individuals with a pension of 0–1.26 price-related base amounts (0–1.14 for married persons) will receive an unchanged disbursement because the guaranteed pension fully compensates for the reduction in the income-related pension due to balancing. For individuals with a pension of 1.26–3.07 price-related base amounts (1.14–2.72 for married persons), the guaranteed pension will provide compensation for 48 percent of the reduction in the income-related pension caused by balancing. Through the compensation provided by the guaranteed pension, the central government finances a portion of the reduction in the income-related pension caused by a negative development. In situations where the resources of the general economy are normally decreasing, there is thus a greater element of income redistribution in the national pension system. The higher cost of the guaranteed pension is equivalent to a maximum of just over 13 percent of the saving to the pension system when it is balanced.

## Life Expectancy Effect and Retirement Age

In the present calculation, the effect of an anticipated further increase in life expectancy is compared with the average life span for persons born in 1930, which was 65 years at the time of the fundamental decision on pension reform. It is assumed by Statistics Sweden that the average life span will increase rather substantially in the years ahead. As a consequence, remaining life expectancy at age 65 will rise from 17 years and 5 months for persons born in 1930[18] to 22 years and 1 month for those born in 1990. This is equivalent to an increase in life expectancy of 4 years and 8 months for birth cohort 1990 relative to birth cohort 1930. If those born in 1990 are to have the same monthly pension level as those born in 1930, a portion of the anticipated increase in remaining life expectancy at age 65 must be spent

[18] No annuity divisors have been confirmed for birth cohort 1930, whose initial pensions were calculated entirely by the rules of the ATP system.

**Growth in Real Earnings – 1960–2007 and Assumptions Through 2082**




### *Other Assumptions in the Calculations*

The assumptions for the scenarios apply from 2009 on. For 2008 the forecast of the National Institute of Economic Research (NIER) is used, but the scenario assumptions apply to the return on the fund as from January 1, 2008.

The guaranteed pension is price-indexed. Consequently, the lowest pensions will gradually decrease in relation to average income, as will the tax component of the pension contribution for individuals with modest incomes. The effect over 75 years is very powerful. If average annual income grows by 1.8 percent per year, it will be almost four times as great in 2082 as in 2007. Thus, the guaranteed pension will become totally marginal toward the end of the calculation period.

With the pension liability indexed to growth in average income, it may appear unnecessary to vary the growth in average income in the scenarios, for the inkomstpension system is designed to adjust the value of pensions to the development of average income. However, since the ATP liability to the

working longer. For birth cohort 1990, working life must be extended by 38 months if its members are to have the same pension level as birth cohort 1930. At the same time, those born in 1990, despite the higher retirement age, can look forward to being pensioners for 1 year and 6 months longer than persons born in 1930.

One of the first birth cohorts with a retirement age of 65 was born in 1911. When this cohort reached age 65 in 1976, the normal retirement age was lowered from 67 to 65. They could then expect to live as retirees for approximately 16 years.

**Life Expectancy and Retirement Age**

| Cohort born in | ..reaches 65 in | Life expectancy at 65 | Retirement age required | Time spent retired* | ...compared to birth cohort 1930 |
|---|---|---|---|---|---|
| *1930* | *1995* | *82 yr 5 mo* | *65 yr* | *17 yr 5 mo* | *0* |
| *1938* | *2003* | *83 yr 4 mo* | *65 yr 8 mo* | *17 yr 8 mo* | *+3 mo* |
| *1940* | *2005* | *83 yr 7 mo* | *65 yr 9 mo* | *17 yr 10 mo* | *+5 mo* |
| 1945 | 2010 | 84 yr 3 mo | 66 yr 3 mo | 18 yr | +7 mo |
| 1950 | 2015 | 84 yr 10 mo | 66 yr 7 mo | 18 yr 3 mo | +10 mo |
| 1955 | 2020 | 85 yr 3 mo | 66 yr 11 mo | 18 yr 4 mo | +11 mo |
| 1960 | 2025 | 85 yr 7 mo | 67 yr 2 mo | 18 yr 5 mo | +1 yr |
| 1965 | 2030 | 85 yr 11 mo | 67 yr 5 mo | 18 yr 6 mo | +1 yr 1 mo |
| 1970 | 2035 | 86 yr 3 mo | 67 yr 7 mo | 18 yr 8 mo | +1 yr 3 mo |
| 1975 | 2040 | 86 yr 7 mo | 67 yr 10 mo | 18 yr 9 mo | +1 yr 4 mo |
| 1980 | 2045 | 86 yr 10 mo | 68 yr | 18 yr 10 mo | +1 yr 5 mo |
| 1985 | 2050 | 87 yr | 68 yr 2 mo | 18 yr 10 mo | +1 yr 5 mo |
| 1990 | 2055 | 87 yr 1 mo | 68 yr 2 mo | 18 yr 11 mo | +1 yr 6 mo |

* Difference between life expectancy at age 65 and the required retirement age.

## Remarks on the Pension Level and the Compensation Rate

There are many methods of calculating the compensation rate of a pension system. The income with which the estimated pension is compared can be defined in different ways, and there are many possible samples of individuals to select for the calculations.

economically active is indexed by the rate of increase in prices, the inkomstpension system is initially unstable in relation to growth in average income. Moreover, the relationship between the increase in average income and the return on the buffer fund influences the financial development of the inkomstpension. The relationship between the return and the growth in average income also affects pension levels via the premium pension. The three scenarios differ regarding the contribution of the buffer fund to the financing of the inkomstpension. In the base scenario, the return on the buffer fund exceeds growth in average income by 1.45 percentage points (3.25 – 1.8). In the optimistic scenario, the return is 3.5 percentage points higher than growth in average income. In the pessimistic scenario, the return is equal to the rate of increase in average income.

*Development of the Base Scenario in the Last Three Years*

The result of the pension system was negative in 2007. The development of the pension system as reported by the accounting of the system was also negative in 2002, 2003 and 2004. In spite of these negative results, the projections for the pension system have been showing a gradually more positive long-term result trend for more than a decade. The principal reasons for this development are as follows:

– Immigration has substantially exceeded the level assumed in the population projections of Statistics Sweden; partly for this reason, Statistics Sweden has successively increased its assumptions for the future immigration surplus. The effect is that both the total and working-age populations are increasing faster than in previous projections.
– Growth in employment has been stronger than was assumed in the projections. The reason is partly that immigration has exceeded expectations, and partly that the proportion of the population with employment has increased more than

The income with which it is appropriate to compare the estimated pension depends on the income profile used in the calculation. If a straight-line income profile[19] is used, it is natural to compare the size of the pension with the income of the individual in the year before retirement.

If a concave[20] income profile is chosen, the question what income to use for comparison with the pension becomes more difficult. If the compensation rate is calculated by comparing the pension with the final year's income, the resulting compensation rate may appear deceptively high. One way to manage the problem is to compare the pension with average income for a number of years prior to retirement, normally the average income at ages 60–64.

In calculations of the pension level in this chapter, the question of the income with which to compare a pension at age 65 has been handled differently. Here a pension is compared with the average income for all individuals in the calculation between the ages of 16 and 64. One reason for this approach is that it reduces the sensitivity of the pension level to assumptions about income profile. The comparison income chosen, however, has the obvious shortcoming that the pension level calculated says nothing, in principle, about the change in income that may be expected when the individual begins to draw a pension. Therefore, the concept of pension level is used here to emphasize that what is shown is not a compensation rate.

The fact that the pension level in principle provides no information on the change in income at retirement does not prevent it from yielding such information as a practical matter. The reason is that the average pension-qualifying income (PQI) for persons aged 16-64 is very close to the average PQI for persons aged 60-64. It does not matter much for the outcome which definition is used. Thus, the pension level calculated here is very similar to the compensation rate that would have resulted if the average income of each individual at ages 60-64 had been used as the comparison income. On the other hand, if income at age 64 were used as the comparison income, compensation rates would be considerably higher in relation to the pension levels shown here.

For the pension levels shown, persons with fewer than 30 years of income of at least one income-related base amount at age 65 are excluded from the calculation of the average pension and average income. The reason is that

[19] With a straight-line income profile, income for all ages in the labour force develops at the same rate as the general development of income until retirement age; a straight-line profile means that in each year the development of income for all individuals is assumed to be the same until they retire.

[20] With a concave income profile, the development of income for each age group will be age-specific each year until retirement. Normally incomes increase faster in the early years of working life and start dropping around age 57. One explanation for the decrease is that people at this age tend to cut back on their work hours, a step that may be viewed as preparation for the transition to retirement.

expected. In the base scenario, it is assumed that in the future the proportion employed in each age group will correspond to that measured at the time indicated in the projection.

– Real growth in per capita income has exceeded the NIER's forecasts. The financial development of the new pension system is not affected by growth in per capita income. Via income indexation and adjustment indexation, variations in this growth are fully reflected as variations in the pension liability and the value of pensions. But during the transitional period through 2017 in which pension credit can still be earned in the old pension system, growth in income will affect the financial position of the pension system. However, even now the proportion of the ATP liability to the economically active is so limited (just over 12 percent) that the financial position of the system is not affected very much by variations in the growth of income.
– The average return on the buffer fund, particularly in the last three years, has substantially exceeded the real annual rate of 3.25 percent assumed in the projections. The one exception is the result for 2007, which was more in line with the development of earnings.

Below follows a comparison of the base scenario presented in the projection section for the years 2005, 2006 and 2007. The assumptions in the base scenario have been the same for all three years in regard to long-term growth in per capita income (1.8 percent) and the return on the buffer fund (3.25 percent). What has changed is the population forecast, as well as short-term growth in per capita income, which at the time of each projection follows the latest available forecast from the NIER. In addition, there is a new starting point for each projection, determined by the outcomes of all relevant variables for the latest year.

the pension level should reflect conditions for individuals who have spent most of their working life under this pension system.

Another question is whether to include incomes not insured in the national pension system in the calculation of the comparison income. Here we have chosen to include only income insured in the national pension system. Of all pension-qualifying income in Sweden, roughly 9 percent exceeds the pension-credit ceiling of 7.5 income-related base amounts. If income above the income ceiling is added to the comparison income, defined as average PQI for persons aged 16-64 with PQI, the average PQI increases by 9 percent, and the pension level decreases by about 8 percent.

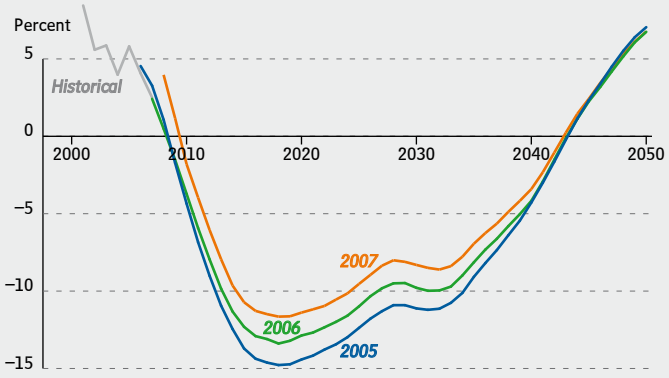
Here gross pensions are compared with gross incomes. As of January 1, 2007, a tax reduction for earned income became effective. With this reduction, the tax on pensions is no longer the same as the tax on most kinds of income included in pension-qualifying income. As of January 1, 2008, the tax reduction on earned income was enhanced. Of pension-qualifying income under the income ceiling, about 88 percent consists of earnings. The tax reduction decreases the pension level by roughly 2.7 percentage points, provided differences in the taxation of various types of income are considered.

The Orange Envelope provides pension projections each year for every individual insured based on that individual's actual pension credit earned. When the envelope is sent out in February/March, the latest data available are for income reported two years earlier. Thus, the envelope posted in February 2008 was based on all incomes of each individual through 2006.

In calculating the compensation rate on the basis of these forecasts, the pension forecast of each individual at age 65 in the zero-growth alternative, excluding any guaranteed pension, is divided by the pension-qualifying income of the same individual in 2006[21]. An average for each age/birth cohort has then been calculated by summation of all compensation rates and division of the sum by the number of individuals in the birth cohort.

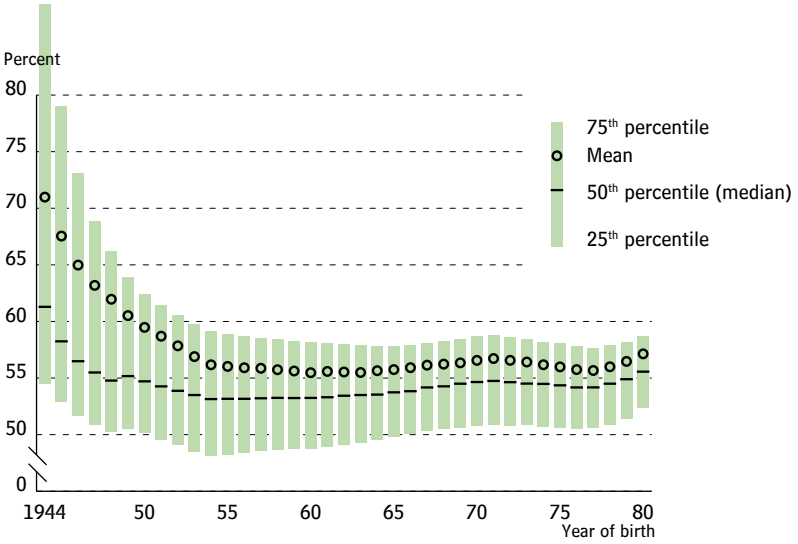
[21] For individuals with no income this year, no compensation rate can be determined, and they are excluded from the overall calculation. Individuals with a compensation rate above 150 percent have also been excluded, as such high compensation rates are normally due to an income so low that it is usually temporary.

**Net Contribution in the Three Latest Projections, Base Scenario**




The increasingly positive change in net contribution for the latest three years in the base scenario is due primarily to the growing number of economically active persons in the population. This, in turn, is a consequence of high immigration, a somewhat higher proportion of persons employed and also, in the long run, more births as well. As the ATP liability is sensitive to income growth, the higher assumed growth has also been a factor in the decreasing contribution deficit in the projections.

**Compensation Rates in the Orange Envelope – National Pension at Age 65 as a Percentage of Final Pension Qualifying Income. Guaranteed Pension not Included**

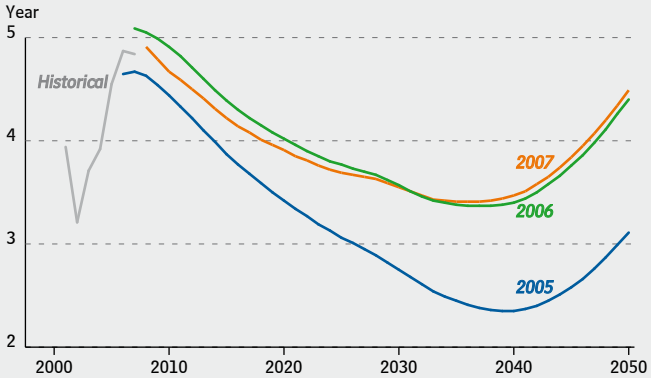



Source: 4 066 523 individual projections in the Orange Envelope for 2008

Both the assumptions underlying this calculation and the method applied differ in important respects from those in the calculation of pension levels in the table on page 32 and in the three bar graphs. In the calculation of the pension level, the comparison income is the average income below the ceiling on pension credit for persons aged 16-64 in the respective year. In the diagram above, the comparison income is the respective individual's income below the ceiling in 2006, equivalent to final income since growth in income is assumed to be zero. For young individuals, who have earned few years of pension credit, this means that the compensation rate has been calculated with a virtually straight-line earnings profile. For individuals relatively close to retirement age, the pension has been calculated on the basis of their actual incomes – this means that on average the profile will be concave.

The high compensation rates for the oldest birth cohorts are explainable partly by the fact that their own incomes, which are taken here as comparison incomes, have begun to decrease. As a consequence, the compensation rate is higher with the method used here. A further explanation is that for older birth cohorts a portion of their pension is calculated according to the provisions of the ATP system, which on average are more favourable. The reason why the variation in compensation rates decreases with the age of the birth cohort is that the calculation becomes more fictitious and straight-line for each younger birth cohort. The slight increase in compensation rates beginning with the birth cohorts of the mid-1950's reflects the greater importance of the premium pension for these birth cohorts. With the assumptions of an excess return of 3.5 percent and a slower increase in life expectancy, the compensation rate will show a slight upturn beginning with birth cohort 1955.

**Fund Strength in the Three Latest Projections, Base Scenario**




At the outset, fund strength is decreasing from the level projected in 2006 and will continue to do so for the near future. The explanation is that the fund did very well in 2006 and not quite so well in 2007, but in the longer run, the trend is also increasingly strong for fund strength in the base scenario. The difference among the three years in regard to fund strength is due primarily to the change in the value of the buffer fund between the points in time for the projections. The change in net contribution will have an impact later on.

## Guaranteed Pension and Its Coverage

The guaranteed pension and the inkomstpension function to some extent like communicating vessels in more ways than via balancing alone. The guaranteed pension provides some compensation for the decrease in the income-related pension due to the increase in life span. Given a certain level of inkomstpension balances, an increase in life expectancy will mean a lower monthly pension, which can then result in a larger guaranteed pension. Thus, an increase in life expectancy can cause redistribution from the inkomstpension to the guaranteed pension. This is shown in the sample calculations below.

A man born in 1943, with an average income for men,[22] must work 30 years in order to receive an inkomstpension so large that he will not be entitled to a guaranteed pension – on the assumption that he is covered only by the new pension system and that there are no transitional provisions. A woman born in the same year, with an average income for women, will have to work 37 years for an equally large inkomstpension.

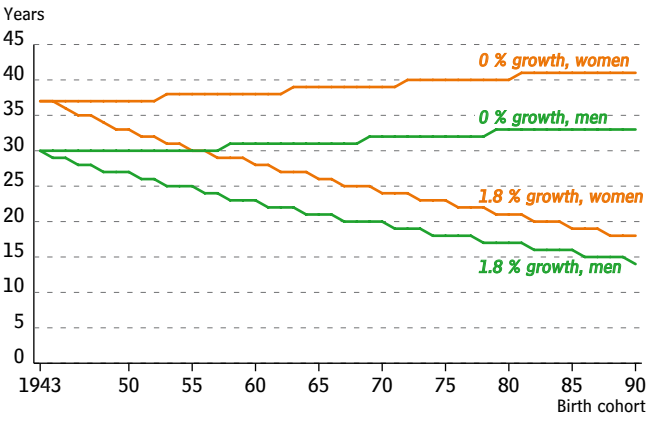
Without growth in earnings, or if the guaranteed pension were indexed to incomes, younger birth cohorts would need even more years of gainful employment to receive as high an inkomstpension.

Growth in earnings reduces the importance of the guaranteed pension. Assume that earnings increase by 1.8 percent per year as in the base scenario. The number of work years required to exceed the limit for the guaranteed pension then drops from 30 for an unmarried man and 37 for an unmarried woman born in 1943, to 18 and 14, respectively, for those born in 1990.

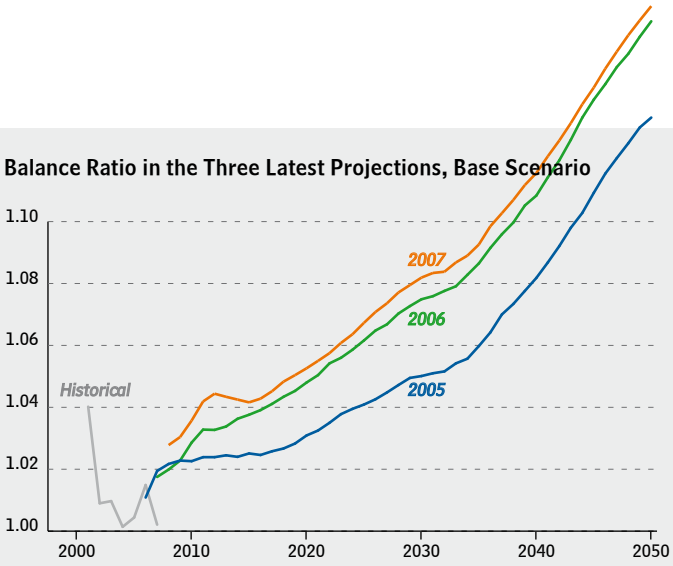
The diagram shows this effect in two scenarios. If the guaranteed pension is indexed in the same way as the inkomstpension (0 % growth), the amount of the guaranteed pension relative to the inkomstpension increases as it then compensates partly for the effect of a longer life expectancy. This effect is still present, of course, but is more limited when there is growth in incomes.

[22] This is roughly equivalent to SEK 384 000 for men and SEK 308 000 for women. Data from Survey of Household Finances (Hushållens ekonomi - HEK 2005), Statistics Sweden, for fully employed persons, increased by the income index for 2008.

**Number of Years of Work Required in Order not to Be Covered by the Guaranteed Pension. Base Scenario and Scenario with Income-Indexed Guaranteed Pension, Respectively**

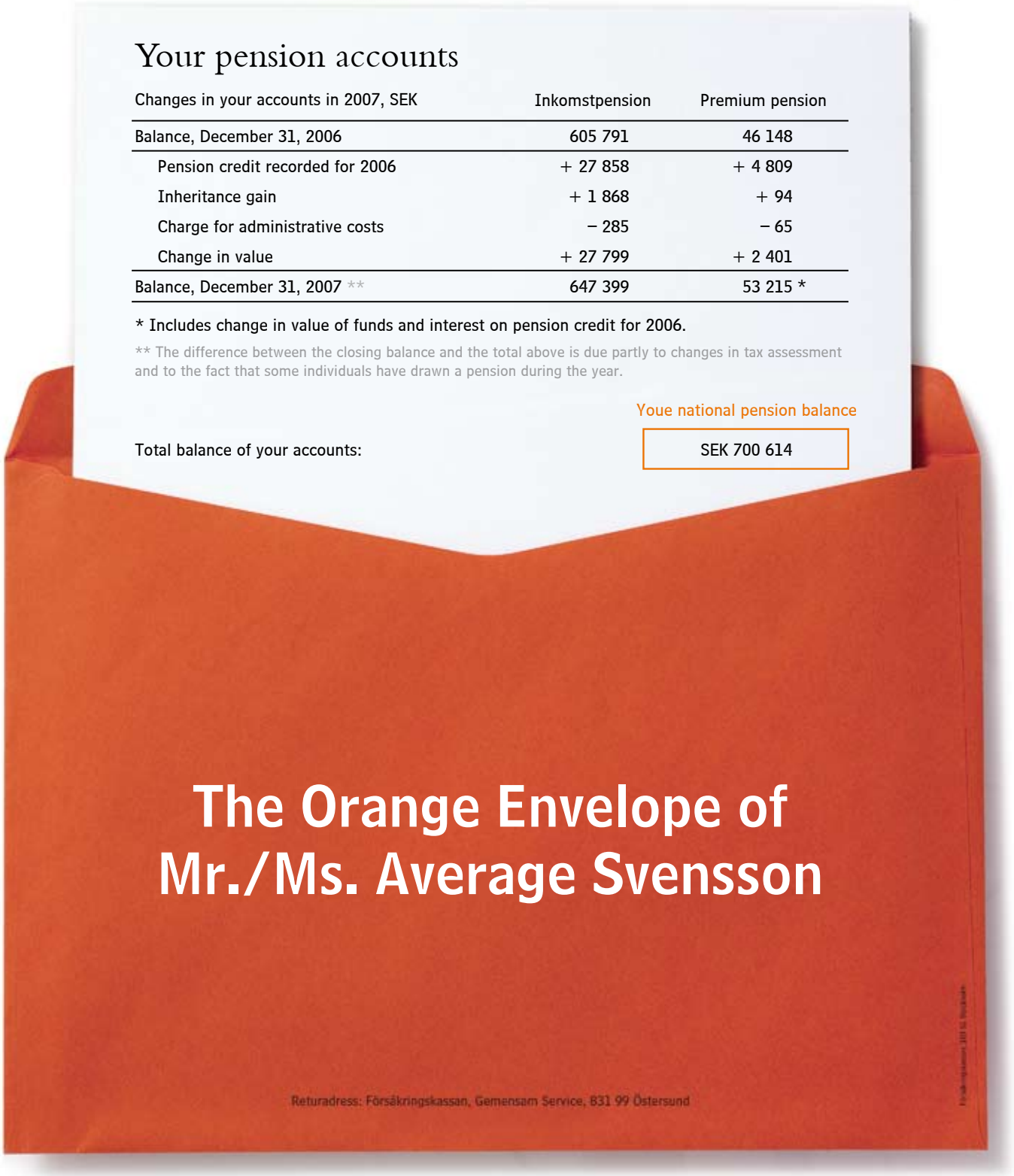



**Balance Ratio in the Three Latest Projections, Base Scenario**




The projection of the balance ratio in the base scenario shows an increasingly strong tendency. The balance ratio – the equivalent in the pay-as-you-go system of the consolidation ratio of a funded system – can be viewed as a variable summarizing net contribution and fund strength. With an increasingly positive tendency in the indicators, the balance ratio will strengthen further.

As shown in the diagram, the outcomes for 2007 deviate considerably from the projections made for that year in 2005 and 2006. One explanation for the sizable difference is that the lower pension contribution and pension credit for recipients of sickness and activity compensation taking effect in 2007 were not considered in the projections.


Your pension accounts
Changes in your accounts in 2007, SEK
Inkomstpension
Premium pension
Balance, December 31, 2006
605 791
46 148
Pension credit recorded for 2006
+ 27 858
+ 4 809
Inheritance gain
+ 1 868
+ 94
Charge for administrative costs
– 285
– 65
Change in value
+ 27 799
+ 2 401
Balance, December 31, 2007 **
647 399
53 215 *
* Includes change in value of funds and interest on pension credit for 2006.
** The difference between the closing balance and the total above is due partly to changes in tax assessment and to the fact that some individuals have drawn a pension during the year.
Youe national pension balance
Total balance of your accounts:
SEK 700 614
The Orange Envelope of
Mr./Ms. Average Svensson
Returadress: Försäkringskassan, Gemensam Service, 831 99 Östersund

## All pension accounts

| Changes during 2007, SEK * | Inkomstpension | Premium pension |
|---|---|---|
| Balance, December 31, 2006 | 3 612 428 000 000 | 269 447 000 000 |
| Pension credit recorded for 2006 | + 166 120 000 000 | + 28 080 000 000 |
| Inheritance gain | + 11 137 000 000 | + 550 000 000 |
| Charge for administrative costs | – 1 701 000 000 | – 379 000 000 |
| Change in value | + 165 770 000 000 | + 14 019 000 000 |
| Balance, December 31, 2007 *** | 3 860 545 000 000 | 310 711 000 000 ** |

* Rounded off to the nearest million.
** Includes change in value of funds and interest on pension credit for 2006.
*** The difference between the closing balance and the total above is due partly to changes in tax assessment and to the fact that some individuals have drawn a pension during the year.

Our national pension

Total of all orange envelopes: SEK 4 171 256 000 000

# Total of All Envelopes

Returadress: Försäkringskassan, Gemensam Service, 831 99 Östersund

When read out loud, the total of all Orange Envelopes is as follows: four trillion, one hundred seventy-one billion, two hundred fifty-six million Swedish kronor. The total amounts of the inkomstpension are found in Table A, Note 14, where the change in the pension liability to the economically active is reported. The corresponding amount for the premium pension is found in the income statement for the premium pension.

# ORANGE REPORT 2007 in 7 Minutes:

**This section summarizes the financial position and development of the two earnings-related components of the national pension system – the inkomstpension and the premium pension – for 2007.**

## Inkomstpension

The inkomstpension system is a pay-as-you-go system, where paid-in pension contributions in principle are used directly to pay the pension disbursements of the same year. The buffer fund absorbs the surpluses or deficits arising from differences between pension contributions received and pensions disbursed. The assets of the system are the value of future pension contributions – the contribution asset – and the buffer fund. The contribution asset is calculated through multiplication of the year's pension contributions by turnover duration, which is the average time that one Swedish krona (SEK 1) in liability is expected to remain in the system.

The pension liability to the economically active is the total of the bottom lines in the pension account statements in all Orange Envelopes. The pension liability to retirees is the sum of the expected pension disbursements to today's retirees for the rest of their lives. The pension liability increases primarily through annual indexation of pensions and the balances of pension accounts – in other words, by the change in average income in Sweden.

The result (net income/-loss) for the year is calculated as the difference between the change in system assets and the change in the pension liability. The result is affected by numerous macroeconomic and demographic factors. Normally the principal factor in the short run is growth in employment; in the long run, demographic factors are most important.

The balance ratio is a measure of the financial position of the system and is calculated as system assets divided by the pension liability. A balance ratio less than 1.0000 activates the balancing mechanism of the system as a part of indexation. The pension system is then guided toward a surplus/deficit of SEK 0 through reduced indexation of pensions and pension balances. Any surpluses arising after balancing has been activated are used directly to increase indexation to the extent possible and thus to restore the value of pensions.

**Six-Year Review**

Billions of SEK

| | 2007 | 2006 | 2005 | 2004 | 2003 | 2002 |
|---|---|---|---|---|---|---|
| Buffer fund | 898 | 858 | 769 | 646 | 577 | 488 |
| Contribution asset | 6 116 | 5 945 | 5 712 | 5 607 | 5 465 | 5 301 |
| Total assets | 7 014 | 6 803 | 6 490 | 6 253 | 6 042 | 5 789 |
| Pension liability | 6 996 | 6 703 | 6 461 | 6 244 | 5 984 | 5 729 |
| Surplus | 18 | 100 | 28 | 9 | 58 | 60 |
| Balance ratio | 1.0026 | 1.0149 | 1.0044 | 1.0014 | 1.0097 | 1.0105 |

**Right after the balance ratio was first established, it followed a declining trend for several years. In 2005 and 2006 the balance ratio increased, and has now decreased again. The balance ratio for 2009 is calculated on the basis of the financial position of the system as of December 31, 2007. If it had been less than 1.0000, it would have affected indexation at the end of 2008.**

**Result for 2007.** The result of the inkomstpension system in 2007 was a net loss of SEK 82 billion, which reduced the system's results brought forward to SEK 18 billion. The principal reason for the negative result is that the average income, which determines the rate of interest on the pension liability, increased more than contribution revenue, which together with turnover duration determines the change in the contribution asset. For 2007 the increase in average income impacted sooner than the increase in total income. The temporary reduction in the basis for the pension credit of persons with sickness or activity compensation, from 93 to 80 percent of imputed income, was a contributing cause, affecting the result by about SEK – 40 billion.

**Change in Assets in 2007.** The assets of the inkomstpension system increased by SEK 212 billion, or 3.1 percent. Of this amount, the contribution asset accounted for SEK 171 billion. Pension contributions received rose by 3.3 percent, adding SEK 193 billion to the contribution asset. However, shorter turnover duration reduced the contribution asset by SEK 22 billion. Turnover duration decreased because the average expected age for earning pension credit rose from 43.5 to 43.7 years, though the effect was counteracted by an increase of 0.1 year in average payout duration.

The buffer fund, that is, the First-Fourth and Sixth National Pension Funds, increased by a total of SEK 41 billion. The return of 4.4 percent on the buffer fund accounted for SEK 38 billion. Pension contributions exceeded pension disbursements; after the deduction for costs of administration, this difference accounted for the remainder, SEK 3 billion, of the increase in the buffer fund.

**Change in the Pension Liability in 2007.** The pension liability rose by SEK 293 billion, or 4.4 percent. Indexation of 4.0 percent accounted for SEK 268 billion of the increase. Since 1995 the capital-weighted return of the inkomstpension system has averaged 3.1 percent per year. Longer life expectancy in 2007 extended the average payout duration of pensions by 13 days, adding SEK 17 billion to the pension liability. The rest of the increase in the pension liability is explained primarily by the fact that new pension credit and ATP points, including certain adjustments, exceeded the year's disbursements.

**Financial Position as of December 31, 2007.** As of December 31, 2007, assets exceeded the pension liability by 0.26 percent. The balance ratio of the system for 2009 is thus calculated at 1.0026.

**The sensitivity analysis in the table shows the effect on the balance ratio if one base is changed while all other bases are assumed to remain the same.**

**How is the Balance Ratio Affected by Changes in the Bases for Its Calculation?**

| Type of base | Change in base | Change in balance ratio |
|---|---|---|
| Contribution base | +1 % | +0.9 % |
| Average income* | +1 % | –0.3 % |
| Return on fund | +10 percentage pts. | +1.1 % |
| Retirement age | +1 year | +1.9 % |
| Age for entering labour market | –1 year | +1.3 % |

* All of the increase is in incomes above the ceiling on earnings.
No smoothed values have been used in the calculation.

## Premium Pension

The premium pension system is a funded system where pension savers themselves choose the funds in which their premium pension moneys are invested. The premium pension is disbursed from the proceeds from selling off accumulated capital. The assets of the system consist of investments by pension savers in funds. With fund insurance, the pension liability to the economically active and to retirees is related primarily to the value of fund shares. Changes in the value of fund shares result in direct and equal changes in the system assets of pension savers. With conventional insurance, the pension liability is the value of the remaining guaranteed disbursements. That value is calculated on assumptions about future return, life expectancy and operating expenses.

The pension credit earned by pension savers is invested in December. The fund holdings of pensioners are increased by the new pension credit before the annual recalculation of pensions to be disbursed, with a consequent effect on pension disbursements for coming years.

**Change in Assets in 2007.** Funded premium pension assets increased during the year by SEK 41 billion. Of this amount, new pension credit accounted for SEK 28 billion and an increase in value for SEK 14 billion (discrepancy between 41 and 42 = 28 + 14 due to rounding). The increase in value during the year was 5.6 percent. The capital-weighted annual return of the premium pension system has averaged 5.8 percent since the system received its first contribution revenue in 1995.

**Change in the Pension Liability in 2007.** The pension liability rose by SEK 41 billion in 2007. The change in the pension liability was due to new pension credit earned, to a positive result in capital management and to disbursement of pensions. The rebate rate averaged 5.7 percent in 2007.

**Result for 2007.** The result for the year was net income of SEK 222 billion. In addition to net income of SEK 112 million from fund operations, the result has been affected by SEK 156 million from conventional insurance, by SEK 21 million from trade in fund shares via trade inventory and by net interest of SEK – 67 million. Of the improvement in the result of conventional insurance, roughly SEK 130 million was due to reducing the guaranteed return to 0 percent for new pension contributions and to changed assumptions about operating expenses. The positive result has been added to the consolidation fund in the accumulated results brought forward; the fund amounts to SEK 180 (29) million. The moneys in the consolidation fund are distributed to pension savers as rebates in connection with pension disbursements.

**Six-Year Review**

Millions of SEK

| | 2007 | 2006 | 2005 | 2004 | 2003 | 2002 |
|---|---|---|---|---|---|---|
| Fund insurance | 309 423 | 268 708 | 192 770 | 125 024 | 94 124 | 59 416 |
| Conventional insurance | 1 288 | 739 | 307 | 94 | 31 | 4 |
| Total insurance assets | 310 711 | 269 447 | 193 077 | 125 118 | 94 155 | 59 420 |
| Pension liability | 310 517 | 269 447 | 193 077 | 125 120 | 94 157 | 59 422 |
| Net result for the year | 222 | 56 | 57 | 48 | –109 | –365 |

**The value of pension savers' premium pension assets as of December 31, 2007, was SEK 310 711 million.**

# The Earnings-Related Old-Age Pension System, Income Statement and Balance Sheet

For references to notes, see the respective income statements and balance sheets of the inkomstpension and premium pension systems.

## Inkomstpension and premium pension

Income Statement, millions of SEK

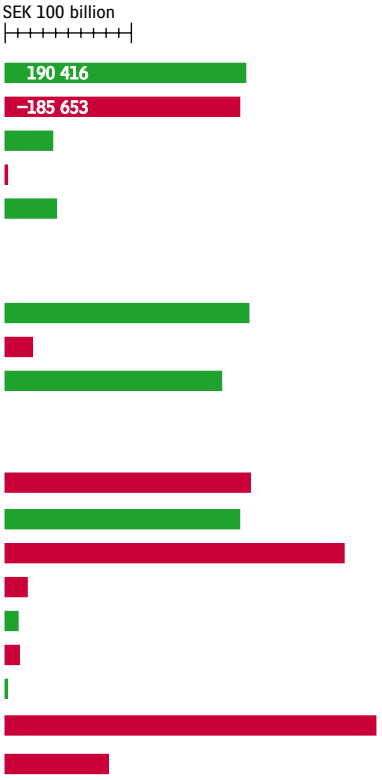
| Change in fund assets | 2007 | 2006 | Change |
|---|---|---|---|
| Pension contributions | 218 496 | 233 625 | –15 129 |
| Pension disbursements | –186 109 | –176 388 | –9 721 |
| Return on funded capital | 51 719 | 110 342 | –58 623 |
| Administrative costs | –2 085 | –2 406 | 321 |
| Total | 82 021 | 165 173 | –83 152 |
| | | | |
| **Change in contribution asset** | | | |
| Value of change in contribution revenue | 192 905 | 236 612 | –43 707 |
| Value of change in turnover duration | –21 573 | –12 652 | –8 921 |
| Total | 171 332 | 223 960 | –52 628 |
| | | | |
| **Change in pension liability*** | | | |
| New pension credit and ATP points | –222 142 | –241 169 | 19 027 |
| Pension disbursements | 186 076 | 176 364 | 9 712 |
| Indexation /change in value | –282 353 | –221 144 | –61 209 |
| Value of change in life expectancy | –17 391 | –32 764 | 15 373 |
| Inheritance gains arising | 10 679 | 9 865 | 814 |
| Inheritance gains distributed | –11 687 | –10 557 | –1 130 |
| Deduction for administrative costs | 2 080 | 1 500 | 580 |
| Total | –334 738 | –317 905 | –16 833 |
| Net income / -loss for the year | –81 385 | 71 228 | –152 613 |

* A negative item (–) increases the pension liability, and a positive item ( ) decreases it, by the amount shown.

Balance Sheet, millions of SEK

| Assets | 12/31 2007 | 12/31 2006 | Change |
|---|---|---|---|
| Fund assets | 898 472 | 857 937 | 40 535 |
| Insurance assets | 310 711 | 269 447 | 41 264 |
| Other assets | 29 798 | 25 956 | 3 842 |
| Contribution asset | 6 115 970 | 5 944 638 | 171 332 |
| Total assets | 7 354 951 | 7 097 978 | 256 973 |
| | | | |
| **Liabilities and results brought forward** | | | |
| Opening results brought forward | 97 995 | 26 770 | 71 225 |
| Net income/-loss for the year | –81 385 | 71 228 | –152 613 |
| Closing results brought forward | 16 610 | 98 000 | –81 390 |
| Pension liability | 7 307 001 | 6 972 457 | 334 544 |
| Other liabilities | 31 340 | 27 521 | 3 819 |
| Total liabilities and results brought forward | 7 354 951 | 7 097 978 | 256 973 |

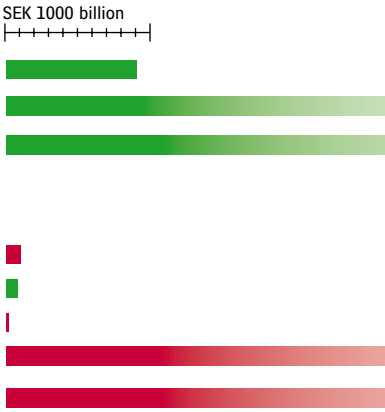
# Inkomstpension, Income Statement and Balance Sheet




Income Statement, millions of SEK

| Change in fund assets | Note | 2007 | 2006 | Change |
|---|---|---|---|---|
| Pension contributions | 1 | 190 416 | 183 624 | 6 792 |
| Pension disbursements | 2 | –185 653 | –176 156 | –9 497 |
| Return on funded capital | 3 | 37 544 | 83 355 | –45 811 |
| Administrative costs | 4 | –1 772 | –2 077 | 305 |
| Total | | 40 535 | 88 746 | –48 211 |
| **Change in contribution asset** | | | | |
| Value of change in contribution revenue | 5 | 192 905 | 236 612 | –43 707 |
| Value of change in turnover duration | 6 | –21 573 | –12 652 | –8 921 |
| Total | | 171 332 | 223 960 | –52 628 |
| **Change in pension liability*** | | | | |
| New pension credit and ATP points | 7 | –194 062 | –191 168 | –2 894 |
| Pension disbursements | 2 | 185 620 | 176 132 | 9 488 |
| Indexation | 8 | –268 334 | –194 172 | –74 162 |
| Value of change in life expectancy | 9 | –17 391 | –32 764 | 15 373 |
| Inheritance gains arising | 10 | 10 129 | 9 490 | 639 |
| Inheritance gains distributed | 10 | –11 137 | –10 182 | –955 |
| Deduction for administrative costs | 11 | 1 701 | 1 130 | 571 |
| Total | | –293 474 | –241 534 | –51 940 |
| Net income / -loss for the year | | –81 607 | 71 172 | –152 779 |

* A negative item (–) increases the pension liability, and a positive item ( ) decreases it, by the amount shown.




Balance Sheet, millions of SEK

| Assets | Note | 12/31 2007 | 12/31 2006 | Change |
|---|---|---|---|---|
| Fund assets | 12 | 898 472 | 857 937 | 40 535 |
| Contribution asset | 13 | 6 115 970 | 5 944 638 | 171 332 |
| Total assets | | 7 014 442 | 6 802 575 | 211 867 |
| **Liabilities and results brought forward** | | | | |
| Opening results brought forward | | 99 565 | 28 392 | 71 172 |
| Net income/-loss for the year | | –81 607 | 71 172 | –152 779 |
| Closing results brought forward | | 17 958 | 99 565 | –81 607 |
| Pension liability | 14 | 6 996 484 | 6 703 010 | 293 474 |
| Total liabilities and results brought forward | | 7 014 442 | 6 802 575 | 211 867 |

# Premium Pension, Income Statement and Balance Sheet


Income Statement, millions of SEK

| Change in fund assets | Note | 2007 | 2006 | Change |
|---|---|---|---|---|
| Pension contributions | 1 | 28 080 | 50 001 | –21 921 |
| Pension disbursements | 15 | –456 | –232 | –224 |
| Return on funded capital | 16 | 14 175 | 26 987 | –12 812 |
| Administrative costs | 17 | –313 | –329 | 16 |
| Total | | 41 486 | 76 427 | –34 941 |
| | | | | |
| **Change in pension liability *** | | | | |
| New pension credit | 18 | –28 080 | –50 001 | 21 921 |
| Pension disbursements | 15 | 456 | 232 | 224 |
| Change in value | 19 | –14 019 | –26 972 | 12 953 |
| Inheritance gains arising | 20 | 550 | 375 | 175 |
| Inheritance gains distributed | 20 | –550 | –375 | –175 |
| Deduction for administrative costs | 21 | 379 | 370 | 9 |
| Total | | –41 264 | –76 371 | 35 107 |
| Net income for the year | | 222 | 56 | 166 |

* A negative item (–) increases the pension liability, and a positive item ( ) decreases it, by the amount shown.


Balance Sheet, millions of SEK

| Assets | Note | 12/31 2007 | 12/31 2006 | Change |
|---|---|---|---|---|
| Insurance assets | 22 | 310 711 | 269 447 | 41 264 |
| Other assets | 23 | 29 798 | 25 956 | 3 842 |
| Total assets | | 340 509 | 295 403 | 45 106 |
| | | | | |
| **Liabilities and results brought forward** | | | | |
| Opening results brought forward | 24 | –1 570 | –1 622 | 52 |
| Net income for the year | | 222 | 56 | 166 |
| Closing results brought forward | 24 | –1 348 | –1 565 | 217 |
| Pension liability | 25 | 310 517 | 269 447 | 41 070 |
| Other liabilities | 26 | 31 340 | 27 521 | 3 819 |
| Total liabilities | | 341 857 | 296 968 | 44 889 |
| Total liabilities and results brought forward | | 340 509 | 295 403 | 45 106 |

# Accounting Principles

*To a large degree, the assets and liabilities of the inkomstpension are valued solely on the basis of events and transactions that are verifiable at the time of valuation. The calculation of the so-called contribution asset follows principles developed especially for a primarily unfunded pension system.*

## Regulations and Guidelines

The Annual Report of the Pension System has been prepared in accordance with Chapter 15, § 20 of the Earnings Related Old Age Pension Act (1998:674).

The earnings-related old-age pension system includes the benefits provided by the inkomstpension, the ATP and the premium pension.[23]

The inkomstpension and the ATP are examples of benefits in a pay-as-you-go pension system. In such systems, contributions are not funded, but in principle are used directly to finance pension disbursements. The National Pension Funds are buffer funds that absorb differences between the inflow of contributions and the outflow of pensions. As elsewhere in the accounts, the term "inkomstpension" is used here in reference to the entire pay-as-you-go system; in other words, it often applies to the ATP as well. According to the Earnings Related Old Age Pension Act (1998:674), the reported assets of the pay-as-you-go system consist of the contribution asset and the value of the assets of the First–Fourth and Sixth National Pension Funds. Formulas for calculating the contribution asset and the pension liability of the inkomstpension system are provided in the Regulations for Calculation of the Balance Ratio (2002:780). These formulas are also found in Appendix B.

The premium pension system is a fully funded pension system where contributions are invested and the accumulated capital is sold off to pay pensions.

According to the Regulations for the Annual Report (2002:135), the Report is to include a projection of the assumed long-term development of the pension system. See the section "Three Scenarios for the Future of the Pension System".

The accounting principles of the National Pension Funds are set forth in their annual reports and they are therefore not described in this Report. The annual report of each national pension fund is available on the home page of the respective fund: www.ap1.se, www.ap2.se, www.ap3.se, www.ap4.se and www.ap6.se. As the annual report of the PPM describes the accounting principles used for the premium pension, these are only presented in summary form in this Report. For further information, see www.ppm.nu.

## Where Do the Figures Come From?

The accounting for the inkomstpension system is based on data from the records of the Swedish Social Insurance Agency on pension credit earned and pension disbursements.

In the accounting for the pension system, the data for the First–Fourth and Sixth National Pension Funds have been taken primarily from the annual reports of each fund. The buffer funds prepare their own reports according to the Law on National Pension Funds (2000:192). On the basis of current provisions for comparable financial companies, the funds have also developed common principles for accounting and valuation.

[23] The guaranteed pension, which is part of the national pension system, is not based on earnings and is therefore not included in the accounts.

In the accounting for the pension system, the data for the premium pension are presented largely in accordance with the PPM Annual Report. The PPM prepares its annual report pursuant to the Law on Annual Reports of Insurance Companies (1995:1560) and to the regulations and general guidelines of the Swedish Financial Supervision Authority (Finansinspektionens författningssamling FFFS) on annual reports of insurance companies. Consistent with the regulations and general guidelines in FFFS 2006:17, there has been a transition to legally limited application of IFRS (International Financial Reporting Standards). Certain items have been adjusted, simplified or combined in order to make the presentation more comparable with that of the inkomstpension.

## Principles for Valuation of Assets and Liabilities

In general, the assets and liabilities of the inkomstpension system are valued only on the basis of events and transactions that are verifiable at the time of valuation. For example, the assumption that contribution revenue normally changes at the rate of economic growth is not considered in the calculation of the contribution asset. Nor does the valuation of the pension liability take into account the assumption that pension disbursements, because of factors like indexation, will change in the future. The reason why assets and liabilities are valued without regard to future factors is that the financial position of the system is determined exclusively by the relationship of assets to liabilities, that is, the so-called balance ratio.

In the design of the inkomstpension, there is a strong link between the development of system assets and the development of system liabilities, although in cases where the balance ratio exceeds one (1.0000), assets and liabilities will develop at slightly different rates over time. When the balance ratio is less than one (1.000), the provisions for balancing establish in principle an absolute link between the respective rates of change in liabilities and assets.[24]

In the valuation of the assets and liabilities of the inkomstpension system, it is assumed that these will change at the same rate after each valuation. To put it another way, it is assumed in the method of valuation that the future internal rate of return of the system will be the same as the future change in the pension liability, even though this outcome is certain only if balancing has been activated. When balancing has not been activated, the internal rate of return may be either greater or less than the change in the value of the pension liability.

The valuation of the contribution flow and of the pension liability is based almost exclusively on conditions prevailing at the time of valuation. This is not due to any belief that all these factors will remain totally constant; rather, the accounting is designed not to include changed conditions until these are reflected in the events and transactions on which the accounts are based.

## Valuation of Inkomstpension Assets

The basis for valuation of the contribution asset is the size of the pension liability that the contribution revenue for the accounting year – i.e. paid-in pension contributions – could finance if the conditions prevailing at the time of valuation remained constant. The relevant determinants, in addition to the rules of the pension system, are economic and demographic. The economic determinants are the average pension-qualifying income of each annual birth cohort and the sum of these incomes. The demographic determinants relate to mortality at different ages. The relevant rules for the pension system are those that govern the calculation and the indexation of

[24] In the method for calculating turnover duration, there is an implicit assumption that the size of the economically active population will remain constant. If the population decreases, there is thus a risk that the accounts will (slightly) overstate the system's assets in relation to its liabilities. It is reasonable, however, to assume that the population will cease declining at some point. If so, the underestimate, and the possible deficit in the buffer fund that may result, will be temporary. The buffer fund will in time return to a level of at least SEK zero.

the inkomstpension, define the contribution and pension base and determine the contribution in percent. The contribution asset is calculated in principle by multiplication of the contribution revenue for the accounting year by the turnover duration for the same year.[25] Turnover duration expresses the expected average length of time between the payment of a monetary unit of contribution into the system and the disbursement of the corresponding pension credit in the form of a pension. Thus, turnover duration reflects the difference in age between the average contributor and the average pensioner that would result if economic, demographic and legal conditions were constant.

To state that the valuation of the contribution inflow is derived through multiplication of the year's inflow by turnover duration is equivalent to holding that this value is based on a supposedly permanent inflow of contributions, with the inflow each year equal to the contributions of the preceding year, discounted at a rate equal to one (1) divided by turnover duration. If turnover duration goes up, the rate of discount decreases and the value of the contribution flow increases. If turnover duration goes down, the rate of discount increases and the value of the contribution flow decreases.

To limit variation in the balance ratio – that is, to reduce fluctuation in the annual result of the pension system – the contribution flow used in the calculation of the contribution asset is smoothed. The method of smoothing is the same as in the calculation of the income index. Since the latter has a substantial impact on the development of the pension liability and thus on the denominator of the balance ratio, it is important that the contribution flow in the numerator of the balance ratio also follow the smoothing of the income index. To achieve this smoothing, the average contribution of the past three years is calculated, then indexed by the annual percentage change in the contribution flow for the last three years, after eliminating the change in consumer prices during the same period. Thereafter, the change in consumer prices in the latest year is added back. Moreover, and also to reduce the variation in the balance ratio, the median turnover duration for the latest three years is used in calculating the contribution asset.

The assets of the National Pension Funds are assessed at their so-called true value. This means that assets are valued preferably at their latest price paid, if any, on the last trading day of the year, otherwise at the latest price bid.

## Valuation of Inkomstpension Liabilities

The inkomstpension liability to persons who have not yet begun to draw an old-age pension is valued as the sum of the pension balances of all insured persons. Income earned in the year covered by the accounts has not yet been confirmed at the time of the report. For this reason, an estimate of the inkomstpension credit earned in the year of the report is added to the sum of the pension balances of the insured. This added amount equals only about three percent of the total pension liability. The difference between estimated and confirmed pension credit is deducted in the annual report for the following year.[26]

The pension liability to retirees is calculated through multiplication of pensions granted (annual amount) by the expected number of years for which the pension amount will be disbursed. The number of years is discounted in order to reflect the indexation of disbursed amounts by the increase in the income index less 1.6 percentage points. The expected number of pay-out years is calculated from measurements of the pay-out period of pension amounts according to Swedish Social Insurance Agency records, and is expressed in terms of so-called economic annuity divisors.[27] In economic

[25] The method of calculating turnover duration is described in Equation 3, Appendix B.

[26] See Note 14, Table A.

[27] See Formula 4.3 in Appendix B.

annuity divisors, consideration is given to any correlation between size of pensions and pay-out period.

One accounting principle followed is that the report is based only on events or transactions occurring and recorded. Since credit for the ATP will be earned through 2017, this accounting principle cannot yet be fully applied. The reason is that the ATP liability to persons who have not yet begun to receive their pensions cannot be determined without making assumptions about future economic and demographic developments. According to the Regulation (2002:135) for the Annual Report, the ATP liability for the economically active is therefore to be calculated on the basis of certain assumptions about future developments. The applicable principles for this calculation are set forth by the Government in its proposed Law (2000/01:70) on Automatic Balancing in the Old Age Pension System. These principles provide that the liability to the economically active is to be calculated on the assumptions of the same life expectancy used in determining the inkomstpension liability and of two-percent annual real growth in the income index.

On these conditions, the ATP liability as of December 31, 2007, is calculated by estimating the ATP to be received at age 65 by each annual cohort born in the years 1943–1953. This amount is multiplied by the established annuity divisor of the accounting year for persons aged 65. The present value of this amount is then calculated through discounting it by the assumed annual change of two percent in the income index from the year when each birth cohort reaches age 65 until the year of the accounts. That amount is reduced by the similarly discounted value of each birth cohort's expected contribution inflow until its members reach age 64. Pension credit for income earned after that age is calculated entirely according to the provisions for the inkomstpension.

## Valuation of Premium Pension Assets and Liabilities

Premium pension assets are reported at their true value, or accrued acquisition cost, according to the regulations and general guidelines of the Swedish Financial Supervisory Authority (FFFS 2006:17) on annual reports of insurance companies. Assets reported at their true value as of the balance sheet date are valued at their price on the last trading day of the year. In the valuation of assets reported at accrued acquisition cost, the difference between acquisition cost and redemption price is periodized as interest revenue for the time remaining to maturity.

Fund insurance assets consist of the investments of pension savers in funds and are valued at the redemption price for fund shares.

With fund insurance, the pension liability consists of fund insurance assets and of liquid assets not yet converted into fund shares.

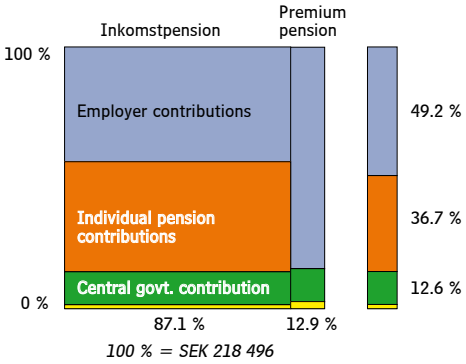
With conventional insurance, holdings are invested in various assets and reported at their true value.

The pension liability for conventional insurance is determined for each insurance policy as the capital value of the remaining guaranteed disbursements. The value is calculated on assumptions about future returns, life expectancy and operating expenses. The return represents a conservative assessment of the nominal rate of return for the period covered by the insurance. As from April 1, 2007, assumptions about life expectancy are based on the population forecasts of Statistics Sweden for 2006. Operating expenses, which were previously 0.3 percent, were changed in 2007 to 0.1 percent. In addition, the rate of return in the calculation of the guaranteed amount has been lowered from 2.75 to 0.0 percent before the deduction for PPM costs.

# Notes and Comments

Notes 2–14 relate to the inkomstpension, Notes 15–25 to the premium pension. Note 1 applies to both parts of the earnings-related national pension system. All amounts are shown in millions of SEK.

## Note 1 Pension Contributions




In the diagram final settlements etc. have been allocated between employer contributions and the central government old-age pension contribution.

### Contributions to the National Pension

| Contributions to: | Inkomstpension | | Premium pension | |
|---|---|---|---|---|
| | 2007 | 2006 | 2007 | 2006 |
| Employer contributions below contribution ceiling | 84 024 | 78 708 | 22 972 | 21 434 |
| Self-employment contributions below contribution ceiling | 2 802 | 2 488 | 764 | 675 |
| Individual pension contributions | 80 094 | 75 098 | – | – |
| Central government old-age pension contribution | 23 743 | 26 564 | 3 517 | 3 830 |
| Final settlements etc. | –247 | 766 | 827 | 24 062 * |
| Total | 190 416 | 183 624 | 28 080 | 50 001 |

* Because of changed procedures, the PPM reports two years of contributions for 2006.

As shown in the table above, there are several different types of contributions in the national pension system. Not all contribution revenue goes to the pension system; contributions for incomes above the so-called income ceiling of 8.07 income-related base amounts are transferred to the central government budget. These contributions, which are actually taxes, are not included in the table. Contributions to the old-age pension are paid by employers and self-employed persons, individual pension contributions by all economically active persons earning pension credit. In addition, from various appropriations in the central government budget, the central government pays old-age pension contributions for pension credit arising from certain transfer payments, such as those for sickness and unemployment cash benefits. The central government also pays a pension contribution for pension-qualifying amounts.

Contribution revenue increased between 2006 and 2007 because of higher total earnings. Revenue from central government pension contributions decreased, however. The main reason is that the rules for calculation of pension credit from sickness and activity compensation were changed between 2006 and 2007. In 2006, 93 percent of imputed income was pension-qualifying, whereas in 2007 only 80 percent of imputed income was pension-qualifying. A decrease in sickness absence was also a factor in reducing central government pension contributions.

The following section provides a more detailed accounting for pension contributions.

### More Detailed Accounting for Pension Contributions

Table A shows pension contributions recorded in 2007. Some of them refer to previous years. Employer contributions, for example, are recorded at least one month after disbursement of the corresponding wages and salaries.

Individual pension contributions are allocated entirely to the National Pension Funds. For employer contributions and self-employment pension contributions, there is a preliminary allocation by set percentages among the National Pension Funds, the premium pension system and the central

government budget. The central government old-age pension contribution is allocated by set percentages between the National Pension Funds and the premium pension system.

The share of the old-age pension contribution allocated to the central government budget is for the portion of income that exceeds the ceiling for pension-qualifying income. This ceiling is 8.07 income-related base amounts before deduction of the individual pension contribution and 7.5 after this deduction.[28] Since these contributions do not represent pension credit, they are in fact taxes.

[28] The income-related base amount for 2007 is SEK 45 900. This base amount multiplied by 8.07 is SEK 370 413; multiplied by 7.5, it is SEK 344 250.

**Table A Pension Contributions by Type, 2007**

| Contributions to: | Inkomst-pension | Premium pension | Central govt. budget (tax) | Total | of which contri-butions to the national pension |
|---|---|---|---|---|---|
| Employer contributions | 84 024 | 22 972 | 12 915 | 119 911 | 106 996 |
| Self-employment contributions | 2 802 | 764 | 436 | 4 002 | 3 566 |
| Individual pension contributions | 80 094 | – | – | 80 094 | 80 094 |
| Central govt. old-age pension contributions | 23 743 | 3 517 | – | 27 260 | 27 260 |
| Total excl. settlements etc.* | 190 663 | 27 253 | 13 351 | 231 267 | 217 916 |
| Final settlements in 2007 for 2005 | 726 | 56 | –782 | 0 | 782 |
| Collection loss, settlement | –267 | – | – | –267 | –267 |
| Discrepancies between SSIA accounting and accounting of National Pension Funds and PPM, respectively | –706 | 771 | – | 65 | 65 |
| Total | 190 416 | 28 080 | 12 569 | 231 065 | 218 496 |

* Contributions received by the SSIA in 2007 and transferred to the National Pension Funds, the premium pension system and the central government budget, respectively.

To ensure that the premium pension system has received contributions corresponding to pension credit earned for a particular year and that the central government budget has received contributions for the portion of incomes above the contribution ceiling, the discrepancies are reconciled two years later. Thereafter, a settlement is made among the central government budget, the premium pension system and the National Pension Funds.

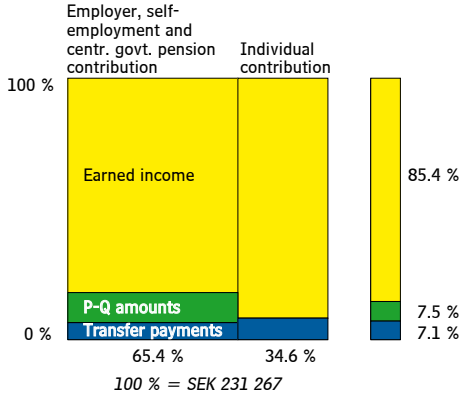
The discrepancy between the accounting of the Swedish Social Insurance Agency (SSIA) and that of the National Pension Funds (SEK –706 million) is due primarily to differences in regard to periodization. The explanation for the difference between the accounting of the SSIA and that of the PPM (SEK 771 million) is that the accounts of the PPM refer to contribution revenue for pension credit earned in 2006, whereas the accounts of the SSIA show contribution revenue received in 2007.

**Table B Pension Contributions, Excluding Settlements etc. Allocated by Type of Contribution Base, 2007**

| | Employer, self-employment and centr. govt. pension contributions | Individual pension contributions | Total |
|---|---|---|---|
| Earned income * | 123 913 | 73 519 | 197 432 |
| Transfer payments, see Table C | 9 885 | 6 575 | 16 460 |
| Pension-qualifying amounts, see Table D | 17 375 | – | 17 375 |
| Total | 151 173 | 80 094 | 231 267 |

The allocation of individual pension contributions among the different types of contribution base is estimated and is not shown in the accounting systems.

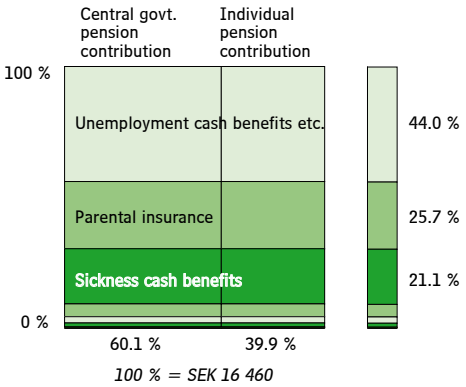
* Including sick-pay and self-employment income, excluding transfer payments.



The individual pension contribution is 7 percent of the sum of earned income and pension-qualifying transfer payments such as sickness cash benefits, but not including sickness and activity compensation. The individual pension contribution is assessed only on the portion of such income below the ceiling of 8.07 income-related base amounts.

The pension contribution paid by employers and self-employed persons on earned income, and by the central government on the above-mentioned transfer payments, is 10.21 percent. The central-government pension contribution on sickness and activity compensation and on so-called pension-qualifying amounts, which are not subject to the individual pension contribution, is 18.5 percent.

To obtain as correct an allocation as possible in Table B, only the "new" contributions received by the SSIA are included in the table.




Partial pensions are not included in the diagram.

**Table C Pension Contributions for Transfer Payments, 2007**

| | Central govt. pension contributions | Individual pension contrib. | Total |
|---|---|---|---|
| Sickness cash benefits | 2 083 | 1 385 | 3 468 |
| Rehabilitation benefits | 147 | 98 | 245 |
| Benefits to immediate relatives | 8 | 5 | 13 |
| Compensation for work-related injuries, etc. | 489 | 325 | 814 |
| Partial pension | –1 | 0 | –1 |
| Parental insurance | 2 543 | 1 691 | 4 234 |
| Care allowances | 240 | 160 | 400 |
| Unemployment cash benefits etc. | 4 347 | 2 891 | 7 238 |
| Educational allowances | 27 | 18 | 45 |
| Artists' Board | 1 | 1 | 2 |
| Allowances to disease carriers | 1 | 1 | 2 |
| Total | 9 885 | 6 575 | 16 460 |

The allocation of individual pension contributions among the different types of transfer payments is estimated and is not shown in the accounting systems.

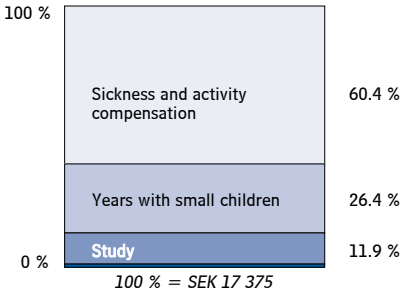



**Table D Pension Contributions for Sickness/Activity Compensation and Pension Qualifying Amounts, 2007**

| | |
|---|---|
| Sickness and activity compensation* | 10 495 |
| Amounts credited for years with small children | 4 592 |
| Amounts credited for study** | 2 075 |
| Amounts credited for compulsory national service** | 213 |
| Summa | 17 375 |

* Amounts consist of both pension-qualifying benefits paid and pension-qualifying amounts. In both cases the contribution is 18.5 percent.

** A minor portion of amounts credited for study and for compulsory national service consists of pension-qualifying income.

## Note 2 Pension Disbursements etc.

| | 2007 | 2006 |
|---|---|---|
| ATP | 170 491 | 165 971 |
| Inkomstpension | 15 129 | 10 161 |
| Total pension disbursements | 185 620 | 176 132 |
| Transfers to the European Communities | 33 | 24 |
| Total | 185 653 | 176 156 |

In 2007 a total of SEK 185 620 million in pensions was disbursed from the National Pension Funds, reducing the pension liability to retired persons by that amount.

According to the Act (2002:125) on Transfer of Pension Credit to and from the European Communities (EC), the value of pension credit for EC officials can be transferred from the National Pension Funds and the premium pension system to the service pension system of the EC. In 2007, the sum of SEK 33 million was thus transferred from the National Pension Funds, reducing the pension liability to the economically active by that amount. In total, the National Pension Funds were charged with SEK 185 653 million as a result of pension disbursements or transfer of pension credit.

## Note 3 Return on Funded Capital

| National Pension Fund: | First | Second | Third | Fourth | Sixth | Other* | 2007 Total | 2006 Total |
|---|---|---|---|---|---|---|---|---|
| Stocks and shares | 7 069 | 8 154 | 7 755 | 3 625 | 2 474 | 85 | 29 162 | 94 988 |
| *of which:* | | | | | | | | |
| *Dividends received* | *3 960* | *3 609* | *3 160* | *2 800* | *238* | *70* | *13 837* | *12 055* |
| *Gain/-loss, listed and unlisted stocks and shares, net* | *3 109* | *4 545* | *4 595* | *825* | *2 236* | *15* | *15 325* | *82 933* |
| Bonds and other interest-bearing securities | 4 876 | 2 852 | 6 060 | 3 636 | 217 | 204 | 17 845 | 6 731 |
| *of which:* | | | | | | | | |
| *Net interest* | *4 149* | *3 615* | *3 889* | *3 615* | *214* | *204* | *15 686* | *11 214* |
| *Gain/-loss, interest-bearing assets, net* | *727* | *–763* | *2 171* | *21* | *3* | *–* | *2 159* | *–4 483* |
| Other investments | –1 961 | –1 987 | –2 846 | –2 262 | 138 | 1 | –8 917 | –17 838 |
| *Gain/-loss, derivatives, net* | *–1 623* | *–1 378* | *–2 417* | *–2 781* | *135* | *–* | *–8 064* | *–6 858* |
| *Net foreign-exchange gain/-loss* | *–338* | *–609* | *–429* | *519* | *3* | *1* | *–853* | *–10 980* |
| Costs of commissions | –153 | –168 | –152 | –72 | 0 | –1 | –546 | –526 |
| Total | 9 831 | 8 851 | 10 817 | 4 927 | 2 829 | 289 | 37 544 | 83 355 |

* Special administration of the First and Fourth National Pension Funds.
Sources: Annual Reports of the First, Second, Third, Fourth, and Sixth National Pension Funds for 2006 and 2007.

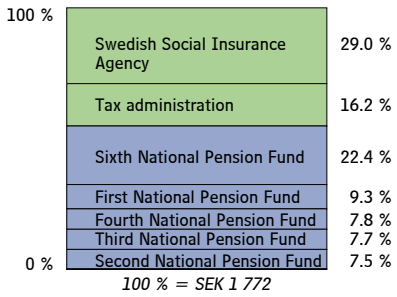
For all National Pension Funds, the total direct return in 2007 was SEK 12 767 (12 055), 14 165 (5 615) and –3 990 (–7 041) million for the respective items of stocks and shares, bonds and other interest-bearing securities and other investments (amounts not shown in the table). The item of gain/-loss, derivatives, net now includes all derivatives; for this reason, there has been an adjustment of net interest under bonds and other interest-bearing securities.

The item of costs of commissions consists of non-result-based charges. Result-based charges, brokerage fees and other expenses have reduced the return earned (see the section Costs of the Old-Age Pension System).

## Note 4 Costs of Administration

| | 2007 | 2006 |
|---|---|---|
| Swedish Social Insurance Agency | 514 | 794 |
| Tax administration (incl. Enforcement Service) | 287 | 403 |
| Total costs of insurance administration | 801 | 1 197 |
| First National Pension Fund | 164 | 153 |
| Second National Pension Fund | 133 | 129 |
| Third National Pension Fund | 137 | 125 |
| Fourth National Pension Fund | 139 | 133 |
| Sixth National Pension Fund | 397 | 331 |
| First and Fourth National Pension Funds, special administration* | 1 | 9 |
| Total costs, fund administration | 971 | 880 |
| Total | 1 772 | 2 077 |

* The liquidation fund of the First National Pension Fund was completely terminated in 2007.



For the First-Fourth National Pension Funds, only internal administrative costs are reported. External costs of administration and custodial fees are referred to as costs of commissions and are reported as negative revenue (see Note 3). Result-based charges, brokerage fees etc. have reduced the return shown in Note 3 (see the section Costs of the Old-Age Pension System).

Because of phase-in provisions applicable until 2020, only a portion of administrative costs (72 percent in 2007, see Note 11) are charged to the pension balances of the insured. Each fund finances its own administrative costs by withdrawals from itself.

## Note 5 Value of Change in Contribution Revenue

| | 2007 | 2006 |
|---|---|---|
| Smoothed contribution revenue 2007 | 191 521 | – |
| Smoothed contribution revenue 2006 | –185 491 | 185 491 |
| Smoothed contribution revenue 2005 | – | –178 116 |
| Change in smoothed contribution revenue | 6 030 | 7 375 |
| (Smoothed turnover duration 2007 + smoothed turnover duration 2006)/2 | x 31.99090 | – |
| (Smoothed turnover duration 2006 + smoothed turnover duration 2005)/2 | – | x 32.08292 |
| Value of change in contribution revenue | 192 905 | 236 612 |

Duration in years.

**Table A Basis for Calculating Smoothed Value of Contribution Revenue**

| | 2007 | 2006 | 2005 | 2004 |
|---|---|---|---|---|
| Pension contributions | 190 416 | 183 624 | 179 552 | 171 600 |
| Contribution deficit due to contributions and contribution base not phased in | – | – | – | 1 500 |
| Basis for calculation | 190 416 | 183 624 | 179 552 | 173 100 |
| Smoothed contribution revenue | 191 521 | 185 491 | 178 116 | 173 049 |
| CPI, June | 289.95 | 284.68 | 280.45 | 278.91 |

During a phase-in period extending through fiscal year 2004, adjustments were made so that the contribution used in calculating the contribution asset would reflect the contribution level when the system is fully functioning. The method of calculating smoothed contribution revenue is described in Appendix B, Section 1.

## Note 6 Value of Change in Turnover Duration

| | 2007 | 2006 |
|---|---|---|
| Smoothed turnover duration 2007 | 31.93368 | – |
| Smoothed turnover duration 2006 | –32.04812 | 32.04812 |
| Smoothed turnover duration 2005 | – | –32.11771 |
| Change in smoothed turnover duration | –0.11444 | –0.06959 |
| (Smoothed contribution revenue 2007 + smoothed contribution revenue 2006)/2 | x 188 506 | – |
| (Smoothed contribution revenue 2006 + smoothed contribution revenue 2005)/2 | – | x 181 803 |
| Value of change in turnover duration | –21 573 | –12 652 |

Duration in years.

**Table A Basis for Calculating Smoothed Turnover Duration**

| | 2007 | 2006 | 2005 | 2004 |
|---|---|---|---|---|
| Pay-in duration | – | 21.09395 | 21.26565 | 21.46187 |
| Pay-out duration | – | 10.66803 | 10.66803 | 10.58625 |
| Turnover duration | – | 31.76198 | 31.93368 | 32.04812 |
| Smoothed turnover duration | 31.93368 | 32.04812 | 32.11771 | 32.39887 |

Duration in years.

Smoothed turnover duration is the median turnover duration for the latest three years. The method of calculating turnover duration is described in Appendix B, Section 3.

Since pay-in duration cannot be calculated until all pension credit has been confirmed, the most recent year for which turnover duration can be determined is the year immediately prior to the accounting year. In the audit of the Annual Report of the National Pension System 2006, it was pointed out that the SSIA had used disbursement data for the accounting year in calculating turnover duration, a practice not consistent with Regulation (2002:780) on calculation of balance ratios. Beginning with accounting year 2007, disbursement data for the year immediately prior to the accounting year will be used, in accordance with the regulation.

## Note 7 New Pension Credit and ATP Points

| | 2007 | 2006 |
|---|---|---|
| Estimated inkomstpension credit earned in 2007 | 179 769 | 168 238 |
| Estimated value of ATP points earned | 6 123 | 5 382 |
| Adjustment amount, new pension credit, see Table A | 706 | 2 024 |
| Adjustment amount, new ATP points, see B | 7 464 | 15 524 |
| Total | 194 062 | 191 168 |

The items of New Pension Credit and ATP points have been adjusted upward by certain other amounts that have affected the size of the pension liability. These adjustment amounts are explained in the tables below.

### Table A Adjustment Amount, New Pension Credit, 2007

| | |
|---|---|
| Confirmed inkomstpension credit earned in 2006 | 166 120 |
| Estimated inkomstpension credit earned in 2006 | –168 238 |
| Adjustments affecting pension balances, etc. | –1 291 |
| Change in amounts disbursed | 4 115 |
| Total | 706 |

Since the tax assessment for the year of the financial statements has not been completed when the statements are prepared, the amount of pension credit earned during that year can only be estimated. In the Annual Report of the Pension System for 2006, pension credit earned during the year was estimated at SEK 168 238 million. After the tax assessment for 2006 had been finalized, the actual value proved to be SEK 166 120 million.

The adjustment amount of SEK –1 291 million represents primarily adjustments, tax-assessment changes etc. affecting the size of pension balances; see Note 14, Table A. The pension liability to retirees has been adjusted by SEK 4 115 million because of changes in pension disbursements other than indexation (see Note 14, Table C).

### Table B Adjustment Amount, New ATP Points, 2007

| | |
|---|---|
| Effect of difference between assumed value for 2007 and estimate for 2006, etc. | –9 752 |
| Value of other paid-in pension contributions for ATP* | 9 565 |
| Change in amounts disbursed | 7 651 |
| Total | 7 464 |

* Excluding value of ATP points.

The ATP liability to the economically active – that is, to individuals who have not yet begun drawing a pension – is estimated in the pension model of the SSIA. The procedure is described in Note 14.

The ATP liability to retirees has been adjusted by SEK 7 651 million because of changes in pension amounts other than indexation (see Note 14, Table C).

Of ATP points earned in 2007, only a minor portion will have a significant impact on future pensions. The portion expected to contribute to higher pensions has been reported as the estimated value of ATP points earned (SEK 6 123). However, all contributions to the ATP pension add to the estimated pension liability. The last year for which ATP points may be earned is 2017. This means that pension contributions, except for administratively caused discrepancies, will not equal pension credit earned until 2018.[29]

[29] Contributions relating to the ATP pension totalled SEK 15.7 billion in 2007, whereas the value of new ATP points for that year was only SEK 6.1 billion. Thus, contributions exceeded the value of ATP points earned by SEK 9.6 billion. The explanation for this difference is that in the ATP system, pension credit is often earned relatively early in working life. Individuals aged 55 who are already past their 15 best pay-in years (and who have worked for at least 30 years) cannot increase their ATP pension at all, even if they keep working and paying contributions until age 65. This situation illustrates one of the disincentives of the ATP system for older members of the work force to contribute to the labour supply.

[30] For individuals who draw ATP benefits before reaching age 65, the pension liability is indexed by the change in the price-related base amount until they turn 65.

## Note 8 Indexation

| | 2007 | | | 2006 | | |
|---|---|---|---|---|---|---|
| | Active | Retired | Total | Active | Retired | Total |
| Inkomstpension | 165 770 | 5 675 | 171 445 | 113 439 | 3 178 | 116 617 |
| ATP | 42 624 | 54 265 | 96 889 | 32 608 | 44 947 | 77 555 |
| Total | 208 394 | 59 940 | 268 334 | 146 047 | 48 125 | 194 172 |

The pension liability grows by the increase in the income index.[30] The value of indexation refers to the indexation affecting the pension liability as of December 31, 2007. The pension liability to the economically active as of December 31, 2007, earned a return equal to the change in the income index, 4.5 percent, between 2007 and 2008. The pension liability to retirees as of the same date earned a return equal to the change in the income index at the end of the previous year, i.e., 2006, which was 3.2 percent.

## Note 9 Value of the Change in Life Expectancy

| | 2007 | | | 2006 | | |
|---|---|---|---|---|---|---|
| | Active | Retired | Total | Active | Retired | Total |
| Inkomstpension | – | 1 576 | 1 576 | – | 2 027 | 2 027 |
| ATP | 5 307 | 10 508 | 15 815 | 11 255 | 19 482 | 30 737 |
| Total | 5 307 | 12 084 | 17 391 | 11 255 | 21 509 | 32 764 |

As used here, the term "life expectancy" refers to the assumed payout duration of an average pension, or so-called economic life expectancy, adjusted for the norm of 1.6 percent. Economic life expectancy is expressed as an economic annuity divisor. The method of calculating economic annuity divisors is shown in Appendix B, Section 4.

A higher economic life expectancy will increase the ATP liability, both to the economically active and to retirees. In the inkomstpension system, only the liability to retirees will increase if life expectancy goes up.

The value of the change in life expectancy is the difference between the pension liability calculated with the economic annuity divisor used in the year of the financial statements, and the pension liability calculated with the economic annuity divisors used in the previous year.

## Note 10 Inheritance Gains, Arising and Distributed

| | 2007 | | 2006 | |
|---|---|---|---|---|
| Age | Inheritance gains arising | Inheritance gains distributed | Inheritance gains arising | Inheritance gains distributed |
| 60 or older | 3 952 | 4 861 | 3 449 | 4 221 |
| Below 60 | 6 177 | 6 276 | 6 041 | 5 961 |
| Total | 10 129 | 11 137 | 9 490 | 10 182 |

The pension balances of deceased persons (inheritance gains arising) are distributed to the survivors of the same age. The distribution is made as a percentage increase in pension balances by an inheritance gain factor.

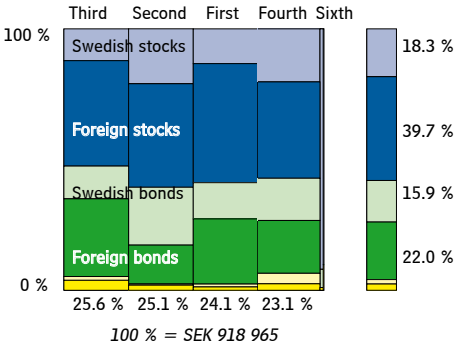
Until the year when a birth cohort reaches age 60, the inheritance gains distributed are those actually arising. The inheritance gain factor is thus determined by the total pension balances of decedent persons of the same age. The inheritance gains from persons dying in 2006 (born in 1947 or later) were distributed to the respective birth cohorts in 2007. The difference between inheritance gains arising and inheritance gains distributed is explainable in part by the annual adjustment of pension balances for changes in tax assessments.

Beginning with the year when a birth cohort reaches age 60, the inheritance gains distributed are not those actually arising, but those expected to arise. Inheritance gain factors are estimated on the basis of the mortality observed by Statistics Sweden, the Swedish Central Office of Statistics, for an earlier period. Because this mortality will not be exactly the same as actual mortality in the year concerned, as well as for other reasons, there will be a discrepancy between inheritance gains arising and inheritance gains distributed. For those dying in their 60th year or at an older age in 2007 (born in 1938–1947), the inheritance gains are distributed in the same year.

## Note 11 Deduction for Costs of Administration

Costs of administration are financed by a percentage deduction from the pension balances of the insured. In order to avoid charging a disproportionately high cost to younger birth cohorts during the period when the ATP is being phased out, this administrative cost deduction is being introduced in steps. In 2007, 72 percent of administrative costs were financed by a deduction from pension balances. This deduction will increase by two percentage points each year and thus will not cover 100 percent of administrative costs until 2021.

The calculation of the administrative cost factor is based on budgeted costs of administration, including those of the National Pension Funds, for the current year and the pension balances for the preceding year (see Appendix A). The difference between the monetary amount of the deduction made and the cost subsequently confirmed is considered in the calculation of the administrative cost factor for the following year. The administrative cost deduction is calculated as pension balances multiplied by the administrative cost factor. The deduction in 2007 was 0.0440 percent and totalled SEK 1 701 (1 130) million.




The diagram shows the assets of the National Pension Funds.

## Note 12 Fund Assets

| National Pension Fund: | First | Second | Third | Fourth | Sixth | Other* | 2007 Total | 2006 Total |
|---|---|---|---|---|---|---|---|---|
| Stocks and shares | 129 888 | 139 239 | 124 114 | 121 097 | 18 251 | 275 | 532 864 | 516 517 |
| *of which: Swedish* | *29 362* | *48 254* | *28 772* | *42 997* | *18 251* | *275* | *167 911* | *174 038* |
| *foreign* | *100 526* | *90 985* | *95 342* | *78 100* | – | – | *364 953* | *342 479* |
| Bonds and other interest-bearing assets | 85 592 | 84 927 | 99 889 | 77 020 | 1 381 | – | 348 809 | 321 597 |
| *of which: Swedish issuers* | *30 566* | *50 803* | *29 603* | *34 197* | *1 381* | – | *146 550* | *157 179* |
| *foreign issuers* | *55 026* | *34 124* | *70 286* | *42 823* | – | – | *202 259* | *164 418* |
| Derivatives | 2 437 | 1 076 | 3 461 | 8 526 | – | – | 15 500 | 14 117 |
| Other assets | 2 831 | 4 469 | 9 000 | 5 253 | 209 | 30 | 21 792 | 18 607 |
| Total assets | 220 748 | 229 711 | 236 464 | 211 896 | 19 841 | 305 | 918 965 | 870 838 |
| Liabilities | –1 957 | –2 199 | –11 567 | –4 551 | –219 | 0 | –20 493 | –12 901 |
| *of which: Derivatives* | *–1 601* | *–1 938* | *–2 467* | *–2 374* | – | – | *–8 380* | *–3 004* |
| *Other* | *–356* | *–261* | *–9 100* | *–2 177* | *–219* | – | *–12 113* | *–9 897* |
| Total | 218 791 | 227 512 | 224 897 | 207 345 | 19 622 | 305 | 898 472 | 857 937 |

* Special administration of the First and Fourth National Pension Funds.

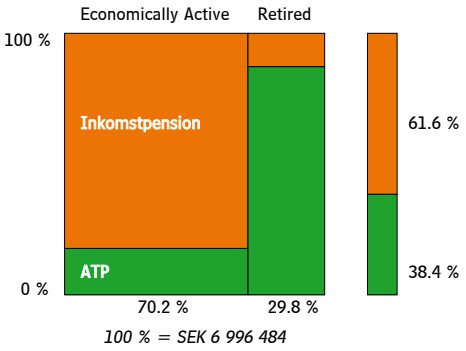
Other assets include cash and bank balances, prepaid expenses and accrued revenue etc. Liabilities, aside from derivative instruments, include other liabilities, prepaid revenue and accrued expenses.

## Note 13 Contribution Asset

| | 2007 | 2006 |
|---|---|---|
| Smoothed contribution revenue | 191 521 | 185 491 |
| Smoothed turnover duration | x 31.93368 | x 32.04812 |
| Contribution asset | 6 115 970 | 5 944 638 |

Time in years.

See Notes 5–6 and Appendix B for the values and formulas used in calculating contribution revenue and turnover duration.




## Note 14 Pension Liability

| | 2007 | | | 2006 | | |
|---|---|---|---|---|---|---|
| | Active | Retired | Total | Active | Retired | Total |
| Inkomstpension | 4 040 314 | 266 875 | 4 307 189 | 3 786 941 | 182 574 | 3 969 515 |
| ATP | 869 255 | 1 820 040 | 2 689 295 | 963 808 | 1 769 687 | 2 733 495 |
| Total | 4 909 569 | 2 086 915 | 6 996 484 | 4 750 749 | 1 952 261 | 6 703 010 |

The pension liability to retirees for the ATP and the inkomstpension is calculated in the same manner for both. The first step is to add up the pension disbursements to each birth cohort in December and to multiply the total by 12 to obtain a theoretical annual amount. The annual amount is thereafter multiplied by the economic life expectancy for each birth cohort; the product is the pension liability to that cohort. The sum of the pension liabilities to all birth cohorts is the total liability to retirees. Economic life expectancy is expressed as an economic annuity divisor. The inkomstpension liability to the economically active consists of the total pension balances of all insured persons in this category as of December 31, 2007, with the addition of the estimated pension credit earned in 2007. The method of calculating the pension liability to the economically active and to retirees, as well as the economic annuity divisors, is shown in Appendix B, Section 4.

The ATP liability to the economically active cannot be calculated directly from the data in the records of pension credit earned. That liability is estimated in the SSIA pension model. The calculation is made for the birth cohorts whose pensions will be calculated partly by the rules of the ATP system (those born no later than 1953) and who have not reached age 65.

In order to determine the ATP liability, an estimate is made of the ATP of the respective birth cohorts in the year when they reach 65. The estimated annual amount for each cohort is multiplied by the economic annuity divisor for 65-year-olds in the year of the accounts. To obtain the present value of the estimated pension liability, the liability is reduced by the cohort's expected future contributions to the system and discounted by the expected future increase in the income index. In the calculation it is assumed that the income index will increase by 2 percent annually. The ATP liability to the economically active will gradually diminish and will in principle be gone entirely by 2018.

**Table A Analysis of the Change in Inkomstpension Liability to the Economically Active, 2007**

| | |
|---|---|
| Inkomstpension liability to the economically active, Dec. 31, 2006 | 3 786 941 |
| of which estimated inkomstpension credit earned in 2006 | –168 238 |
| Pension balance, December 31, 2006 | 3 618 703 |
| Inheritance gains arising from persons dying before age 60* | –6 177 |
| Adjustments affecting pension balances** | –98 |
| Opening pension balance, 2007 | 3 612 428 |
| Changes in tax assessments etc. affecting pension balances | –1 193 |
| Confirmed inkomstpension credit earned in 2006 | 166 120 |
| Distributed inheritance gains from persons dying at or after age 60 | 4 861 |
| Distributed inheritance gains from persons dying before age 60 | 6 276 |
| Indexation | 165 770 |
| Deduction for administrative costs | –1 701 |
| Pensions drawn | –88 437 |
| Pensions revoked | 373 |
| Inheritance gains arising, persons dying at or after age 60 | –3 952 |
| Pension balances as of December 31, 2007 | 3 860 545 |
| Estimated inkomstpension credit earned in 2007 | 179 769 |
| Inkomstpension liability to the economically active as of Dec. 31, 2007 | 4 040 314 |

* Distributed in 2007.
** Transfers to the European Communities (see Note 2), adjustments for deceased persons, sealed cases, etc.

**Table B Analysis of Change in ATP Liability to the Economically Active, 2007**

| | |
|---|---|
| ATP liability to the economically active, December 31, 2006 | 963 808 |
| Effect of difference between assumption for 2007 and estimate in 2006 etc. | –9 752 |
| Opening ATP liability, 2007 | 954 056 |
| Indexation | 42 624 |
| Estimated value of ATP points earned in 2007 | 6 123 |
| Pensions drawn | –148 420 |
| Value of other paid-in contributions for the ATP | 9 565 |
| Value of change in life expectancy | 5 307 |
| ATP liability to the economically active, December 31, 2007 | 869 255 |

**Table C Analysis of Change in Pension Liability to Retirees, ATP and Inkomstpension, 2007**

| | Inkomst-pension | ATP | Total |
|---|---|---|---|
| Pension liability to retirees, December 31, 2006 | 182 574 | 1 769 687 | 1 952 261 |
| Additional liability to the economically active | 88 064 * | 148 420 ** | 236 484 |
| Change in amounts disbursed | 4 115 | 7 651 | 11 766 |
| Pensions disbursed*** | –15 129 | –170 491 | –185 620 |
| Indexation | 5 675 | 54 265 | 59 940 |
| Value of change in life expectancy | 1 576 | 10 508 | 12 084 |
| Pension liability to retirees, December 31, 2007 | 266 875 | 1 820 040 | 2 086 915 |

* Net of pensions drawn and pensions revoked, see Table A.
** See Table B.
*** See Note 2.

The liability to retirees is increased by indexation and a higher life expectancy, and it is decreased by disbursements made during the year. Pension amounts can change because of new pension credit earned, changes in marital status (applies to the ATP), changes in taxation etc. Such changes are reported as changes in disbursements. The liability to retirees also increases with the approval of new pensions; this increase in the pension liability is accompanied by a corresponding reduction in the pension liability to the economically active.

## Notes and Comments Relating to the Premium Pension

### Note 15 Pension Disbursements

| | 2007 | 2006 |
|---|---|---|
| Pension disbursements from fund insurance | 405 | 206 |
| Pension disbursements from conventional insurance | 50 | 25 |
| Total pension disbursements | 455 | 231 |
| Transferred to the European Communities | 1 | 1 |
| Total | 456 | 232 |

At the time of retirement, a pension saver has the option of retaining her/his accumulated balance in fund insurance; the amount of the pension will then depend on the change in the value of the funds chosen by the saver. The other option is to switch to conventional insurance, either on retirement or later. With conventional insurance, the pension is disbursed as a nominal guaranteed monthly amount. As from April 2007, the return in the calculation of the guaranteed amount was lowered from 2.75 percent to 0.0 percent. The reduction of the return applies only to new pension contributions after April 1, 2007; guaranteed amounts previously determined are not changed by the reduction. If PPM management of conventional insurance capital achieves a return higher than the guaranteed rate, pension savers will receive a rebate in the form of a monthly supplement which may vary from year to year. Such supplements totalled SEK 5.3 (0,7) million in 2007.

According to the Act (2002:125) on Transfer of Pension Credit to and from the European Communities (EC), the value of pension credit for EC officials can be transferred from the National Pension Funds and the premium pension system to the service pension system of the EC. In 2007 the sum of SEK 1 million was transferred from the premium pension system.

### Note 16 Return on Funded Capital

| | Fund insurance | Conventional insurance | 2007 Total | 2006 Total |
|---|---|---|---|---|
| Stocks and shares | 13 961 | 40 | 14 001 | 28 255 |
| *of which: Direct return* | *3 497* | *46* | *3 543* | *2 528* |
| *Realized and unrealized capital gains* | *10 464* | *–6* | *10 458* | *25 727* |
| Bonds and other interest-bearing securities | 79 | –9 | 70 | –70 |
| *of which: Direct return (net interest)* | *19* | *–1* | *18* | *8* |
| *Realized and unrealized capital gains* | *60* | *–8* | *52* | *–78* |
| Net foreign-exchange gain/-loss | –52 | – | –52 | –1 213 |
| Subtotal, return | 13 988 | 31 | 14 019 | 26 972 |
| Change, conventional insurance | – | 156 | 156 | 15 |
| Total | 13 988 | 187 | 14 175 | 26 987 |

The return earned includes realized and unrealized foreign-exchange gains and losses after deduction of fund management charges. The average fund management charge after deduction of rebates is 0.33 percent of average capital.

## Note 17 Costs of Administration

| | 2007 | 2006 |
|---|---|---|
| Operating expenses | 267 | 289 |
| Financial items, net | 46 | 40 |
| Total | 313 | 329 |

Financial items, net, refer primarily to borrowing expenses, gain/-loss on trade inventories and interest revenue (net). Costs of fund management are paid directly from insurance assets and thus are not included in PPM operating expenses. Total costs of administration in 2007 were SEK 318 (335) million, of which SEK 5 (6) are included in Note 16 as Change, Conventional Insurance. A presentation of the respective gross and net reported costs of the pension system is provide in the section Costs of the Old-Age Pension System.

## Note 18 New Pension Credit

| | 2007 | 2006 |
|---|---|---|
| Confirmed premium pension credit earned in 2004 | – | 24 829 |
| Confirmed premium pension credit earned in 2005 | – | 25 172 |
| Confirmed premium pension credit earned in 2006 | 28 080 | – |
| Total | 28 080 | 50 001 |

In the premium pension system, the equivalent of contribution revenue is new pension credit, including interest for the period when contribution moneys are managed by the PPM before being invested in the funds chosen by the insured. Also included are changes in pension credit earned in previous years and distributed rebates of fund management fees.

For 2006 the investment of new pension credit for both new and existing pension savers has been timed to coincide as closely as possible with the final taxation decision. This means that the pension credit for 2006 includes confirmed pension credit for two pay-in years, 2004 and 2005.

## Note 19 Change in Value

The pension liability was changed by the return on premium pension funds totalling SEK 14 019 (26 972) million; see Note 16.

## Note 20 Inheritance Gains Arising, Inheritance Gains Distributed

Inheritance gains arising and distributed are analogous to decedents' capital. Inheritance gains are distributed once a year; in addition, a minor portion is distributed during the course of the year in connection with changeovers from fund insurance to conventional insurance. In 2007 inheritance gains distributed were SEK 550 (375) million; this amount was determined by the sum of the capital released because of deaths in calendar year 2006, i.e., the inheritance gains of SEK 550 (375) million arising that year. Inheritance gains distributed include SEK 12 (2) million in connection with changeovers from fund insurance to conventional insurance; this amount reduces the additional inheritance gain in calendar year 2007. This item also includes reductions in premium pension credit when premium pensions are

transferred between spouses. In calendar year 2006, a total of 7 632 (7 116) persons transferred an aggregate of SEK 45 (40) million between spouses or registered partners.

## Note 21 Deduction for Costs of Administration

The amount of SEK 379 (370) million is for fees withdrawn by the Premium Pension Authority (PPM) to finance its costs of administration. In the fee for 2007, the principle for fee withdrawal was changed. Previously the fee withdrawn consisted only of a percentage, but now there is also a ceiling of SEK 100. For 2007, the fee was 0.13 percent of the account balances of pension savers. During the build-up phase and until 2018, the PPM will be financed by a combination of fees withdrawn, interest-bearing overdrafts for working capital needs and borrowing within authorized limits from the National Debt Office. The fee charged was based on the cost level forecast for 2007.

## Note 22 Insurance Assets

| | Fund insurance | Conventional insurance | 2007 Total | 2006 Total |
|---|---|---|---|---|
| Stocks and shares | 294 904 | 351 | 295 255 | 260 072 |
| Bonds and other interest-bearing securities | 13 442 | 935 | 14 377 | 8 604 |
| Trade in progress and inheritance gains arising | 1 077 | 2 | 1 079 | 771 |
| Total | 309 423 | 1 288 | 310 711 | 269 447 |

Fund insurance assets of SEK 309 423 million include SEK 6 million in liquid assets that are included in other assets; a transfer to other assets was made in January, 2008. Inheritance gains arising for 2007 total SEK 656 (538) million, of which fund insurance accounts for SEK 648 (534) million and conventional insurance for SEK 8 (4) million; these gains will be distributed to pension savers in 2008.

As of December 31, 2007, the number of pension savers totalled 5 838 802, of whom 5 782 582 had invested their savings in fund insurance and 56 220 in conventional insurance. The number of pension savers receiving pension disbursements was 448 691.

## Note 23 Other Assets

| | 2007 | 2006 |
|---|---|---|
| Temporarily managed preliminary contributions | 27 817 | 24 521 |
| PPM's administrative inventory of fund shares (trading inventory) | 155 | 85 |
| Other assets | 1 826 | 1 350 |
| Total | 29 798 | 25 956 |

The temporary management of preliminary contributions is for pay-in year 2007.

The PPM's administrative inventory of fund shares is used to facilitate trade in fund shares by reducing the number of trading transactions with fund managers.

Other assets include intangible assets, cash and bank balances, receivables, prepaid expenses and accrued revenue, as well as fixtures and other long-term assets.

## Note 24 Change in Results Brought Forward

| | Fund insurance | Conventional insurance | 2007 Total | 2006 Total |
|---|---|---|---|---|
| Opening results brought forward: consolidation fund | –1 594 | 29 | –1 565 | –1 622 |
| Rebate paid from consolidation fund | – | –5 | –5 | – |
| Net income/-loss for the period | 66 | 156 | 222 | 56 |
| Total results brought forward | –1 528 | 180 | –1 348 | –1 565 |

The PPM reports negative results brought forward for its overall operations. The solvency provisions in the Insurance Businesses Act do not apply to the PPM; through 2018 negative results brought forward (accumulated deficits) will be financed by overdrafts with the National Debt Office. It is expected that by 2018 a balance between assets and liabilities will be achieved. Conventional insurance reports a positive result that is added to the consolidation fund under results brought forward. The amounts in the consolidation fund are distributed to pension savers as a refund in connection with pension disbursements. The item of net income/-loss for the period, conventional insurance, is explainable in part by the reduction of the guaranteed return from 2.75 percent to 0 percent and by the lower estimate for operating expenses.

## Note 25 Pension Liability

| | 2007 | 2006 |
|---|---|---|
| Pension liability, fund insurance | 309 417 | 268 708 |
| Pension liability, conventional life insurance | 1 100 | 739 |
| Total | 310 517 | 269 447 |

The pension liability is a liability to economically active and retired pension savers. The item of pension liability, fund insurance, is linked primarily to fund shares and is affected by the development of the market value of the funds chosen. Fund holdings are valued at the price quoted on the closing day of the accounts and correspond to value of the insurance assets in Note 22.

The item of pension liability, conventional life insurance, is calculated for each pension saver choosing this form of insurance and is the capital value of the remaining guaranteed disbursements. The value is calculated on assumptions about future return, life expectancy and operating expenses. Information on the calculation of economic annuity divisors is found in Appendix A.

**Table A Analysis of the Change in Pension Liability, Fund Insurance, 2007**

| | |
|---|---|
| Pension liability, fund insurance, December 31, 2006 | 268 708 |
| Confirmed premium pension credit earned in 2006* | 27 506 |
| Inheritance gains distributed** | –546 |
| Change in value | 13 988 |
| Deduction for costs of administration | –379 |
| Decrease in liability because of pensions withdrawn, 2007 | –405 |
| Inheritance gains arising | 546 |
| Premium pension capital as of December 31, 2007 | 309 418 |
| Adjustment affecting premium pension capital*** | –1 |
| Pension liability, fund insurance, December 31, 2007 | 309 417 |

* Includes tax assessment changes and changes in pension credit in the amount of –7.
** Inheritance gains, capital released in 2006, distributed in 2007.
*** Transfers to the European Communities, etc.

**Table B Analysis of the Change in Pension Liability, Conventional Insurance, 2007**

| | |
|---|---|
| Pension liability, conventional insurance, December 31, 2006 | 739 |
| Adjustment of pension liability | –5 |
| Results brought forward, December 31, 2006 | –29 |
| Tax assessment changes etc. affecting premium pension capital | 0 |
| Confirmed premium pension credit earned in 2006 | 574 |
| Inheritance gains distributed* | –4 |
| Change in value | 31 |
| Decrease in liability because of pensions withdrawn, 2007 | –50 |
| Change in pension liability** | –156 |
| Premium pension capital as of December 31, 2007 | 1 100 |
| Pension liability, conventional insurance, December 31, 2007 | 1 100 |

* Inheritance gains, capital released in 2006, distributed in 2007.
** Change in pension liability includes –1 in costs of administration and +4 in inheritance gains arising, 2007. See Note 24 Change in Results Brought Forward.

As from 2007, results brought forward are excluded from the calculation of the pension liability. The pension liability is affected by new pension credit earned, changes in the extent of pension withdrawal, changes in tax assessment, changes in the value of assets, costs of administration, pension disbursements and estimates of future mortality for the insured.

## Note 26 Other Liabilities

| | 2007 | 2006 |
|---|---|---|
| Liability relating to preliminary contributions | 26 313 | 24 520 |
| Other liabilities | 5 027 | 3 001 |
| Total | 31 340 | 27 521 |

Liabilities relating to preliminary contributions consist of unconfirmed pension credit for pay-in year 2007 and correspond to the assets invested under temporary management; see Note 23.

Other liabilities consist of fund trading in progress, accounts payable to suppliers, borrowings from the National Debt Office, accrued management fees, accrued expenses and prepaid revenue.

BDO

BDO Nordic AB
Authorized public accountants

# AUDIT REPORT

**on the**

**ANNUAL REPORT OF THE SWEDISH PENSION SYSTEM**

**To the Swedish Social Insurance Agency:**

We have audited the Annual Report of the Swedish Pension System for 2007. In accordance with the Regulations on Annual Reporting of the Financial Position and Development of the Earnings Related Old Age Pension System (2002:135), the Swedish Social Insurance Agency is required to provide this Annual Report. The Director General of the Swedish Social Insurance Agency is responsible for preparing the Annual Report and for its conformity with the Earnings Related Old Age Pension Act (1998:674). Our responsibility is to express an opinion on the Annual Report based on our audit.

We conducted our audit in accordance with generally accepted auditing standards in Sweden. Those standards require that we plan and perform the audit so as to establish with reasonable certainty that the Annual Report is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Annual Report. An audit also involves assessing the accounting principles used and their application by the Director General as well as significant estimates made by the Director General when preparing the Annual Report, and evaluating the overall presentation of the Annual Report.

In addition to the principles applied and the calculations made in the preparation of the Annual Report, our audit covers the income statements and balance sheets of the inkomstpension, premium pension and earnings-related old-age pension systems as well as notes and comments, accounting principles and other explanatory information. Our audit has not involved reviewing the principles of the national public pension or reviewing projections or other information outside the scope of our audit.

We believe that our audit provides a reasonable basis for our opinion as set forth below:

The Annual Report has been prepared in accordance with the Earnings Related Old Age Pension Act (1998:674), with the Regulations on Annual Reporting of the Financial Position and Development of the Earnings Related Old Age Pension System (2002:135) and otherwise with what is described in the Annual Report under the heading of Accounting Principles. The balance ratio shown in the Annual Report has been calculated in conformity with the Regulations for Calculation of the Balance Ratio (2002:780).

Stockholm, 12th March 2008

Ulf H Davéus
Authorized Public Accountant

Ove Olsson
Authorized Public Accountant

# Appendix A. Calculation Factors*

* For amounts and values, see Aktuella belopp at www.forsakringskassan.se and at www.ppm.nu.

The Earnings Related Old Age Pension Act, or LIP, (1998:674), requires the Swedish Social Insurance Agency to calculate the income index. In addition, the Agency is obligated by the Regulations for the Earnings Related Old Age Pension (1998:1340) to calculate and confirm factors for inheritance gains, administrative costs and annuity divisors.

According to the LIP, the PPM is to operate on the same principles as insurance businesses. These principles, as interpreted by the PPM, govern the calculation of the rebate rate, inheritance gains and annuity divisors for the premium pension. Further, the PPM is to calculate the fee that will finance its operations.

## Income Index

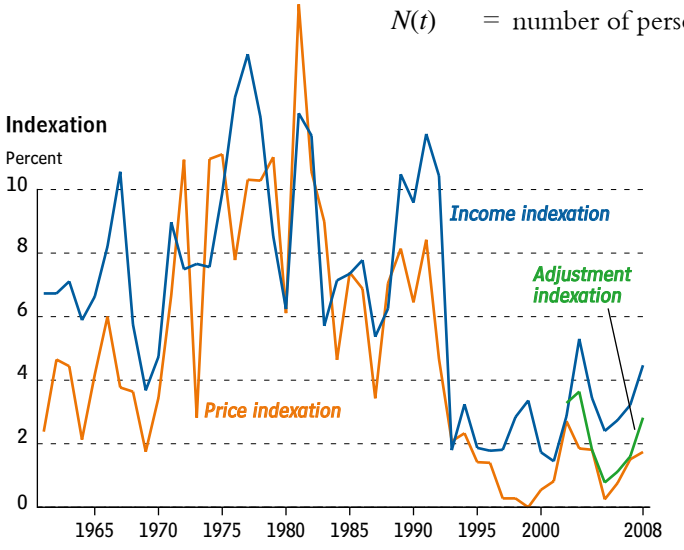
The development of average income is shown by the change in the income index. Here, income refers to pension-qualifying income without limitation by the ceiling, but after deduction of the individual pension contribution.

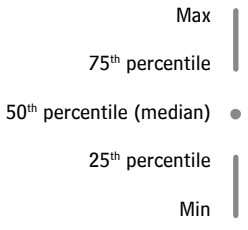
$$Income\ Index(t) = \left(\frac{u(t-1)}{u(t-4)} \times \frac{CPI(t-4)}{CPI(t-1)}\right)^{1/3} \times \frac{CPI(t-1)}{CPI(t-2)} \times k \times Income\ Index(t-1)$$

$$u(t) = \frac{Y(t)}{N(t)}$$

where

$t$ = calendar year
$CPI(t)$ = consumer price index for June of year $t$
$k$ = adjustment factor for error in estimation of $u$ $(t-2)$ and $u(t-3)$
$Y(t)$ = total pension-qualifying income without limitation by the ceiling, persons aged 16–64 in year $t$, after deduction of the individual pension contribution
$N(t)$ = number of persons aged 16–64 with pension-qualifying income in year $t$




The change in the index consists of two parts. The first is the average annual change in average income for the latest three-year period, excluding inflation; the second is inflation for the latest 12-month period ending in June. Pension-qualifying income is not known until after the final tax assessment, i.e. in December of the year following the income year. This means that the income for the two most recent years is based on estimates. Errors in estimates are corrected in the indices for subsequent years. Inflation for the three-year period is excluded, and the inflation for the most recent year is restored, to permit more rapid adjustment of pensions to changes in the inflation rate than would have resulted with a "pure" three-year moving average for the development of income.

The change in the income index between year $t-1$ and year $t$ affects the pension liability to retirees in year $t$ via adjustment indexation of inkomstpension and ATP disbursements (see Note 8 and Note 14, Table C). The change in the income index between years $t$ and $t+1$ affects the inkomstpension liability to the economically active in year $t$ via income indexation of pension balances (see Note 8 and Note 14, Table A).

## Balance Index

When balancing is activated, the balance index is used instead of the income index.

$$Balance\ index\ (t) = I(t) \times BR(t)$$

$$Balance\ index(t+1) = Balance\ index(t) \times \left(I(t+1) \,/\, I(t)\right) \times BR(t+1) = I(t+1) \times BR(t) \times BR(t+1)$$

where
$I(t)$ = income index, year $t$
$BR(t)$ = balance ratio, year $t$

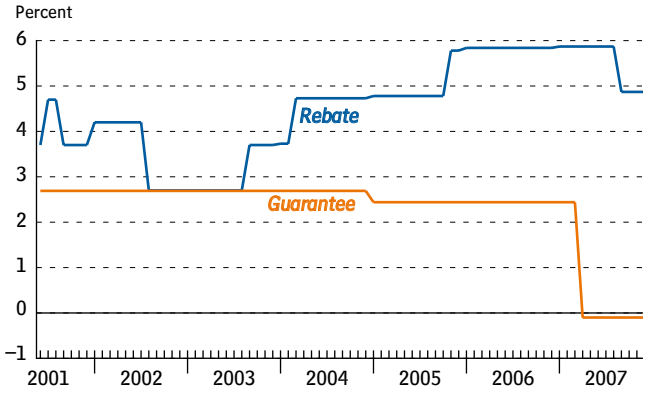
At the end of year $t$–1, indexation takes place via multiplication of pensions by the ratio between the balance index for year $t$ and the income index for year $t$-1 divided by 1.016, and of pension balances by the ratio between the balance index for year $t$ and the income index for year $t$–1. At the end of year $t$, there is analogous indexation of the ratio between the balance index for year $t$+1 and the balance index for year $t$. Indexation by the balance index ceases when the product of the balance indices is ≥1, that is, when the balance index reaches the level of the income index.

## Rate of Rebate

If an individual elects to draw her/his premium pension in the form of conventional insurance, the amount disbursed is recalculated each year. It may be higher than the guaranteed amount if the conventional life insurance operation achieves a better result than was assumed when the guaranteed amount was calculated. The result of the conventional insurance operation is reflected in the rate of rebate used to increase the value of conventional insurance.

The rate of rebate does not affect the pension liability, as the latter is calculated on the basis of the guaranteed amount.

**Rate of Rebate and Guarantee**




## Inheritance Gain Factors for the Inkomstpension

The pension balances of deceased persons are credited to the survivors in the same age group in the form of inheritance gains. For the economically active, this is done through multiplying the pension balances of the survivors by an inheritance gain factor for the inkomstpension.

$$Inheritance\ Gain\ Factor_i(t) = 1 + \frac{\sum_{j=2}^{17} PBd_{j-1}(t-1)}{\sum_{j=2}^{17} PB_{j-1}(t-1)} \qquad \text{for } i = 2, 3, \ldots 17$$

$$Inheritance\ Gain\ Factor_i(t) = 1 + \frac{PBd_{i-1}(t-1)}{PB_{i-1}(t-1)} \qquad \text{for } i = 18, 19, \ldots 60$$

$$Inheritance\ Gain\ Factor_i(t) = \frac{L^*_i(t)}{L_i(t)} \qquad \text{for } i = 60, 61, \ldots r$$

where

$i$ = age at end of year $t$

$PBd_{i-1}(t-1)$ = total pension balances in year $t$–1 for persons dying in year $t$–1 in age group $i$–1

$PB_{i-1}(t-1)$ = total pension balances in year $t$–1 for survivors in year $t$–1 in age group $i$–1

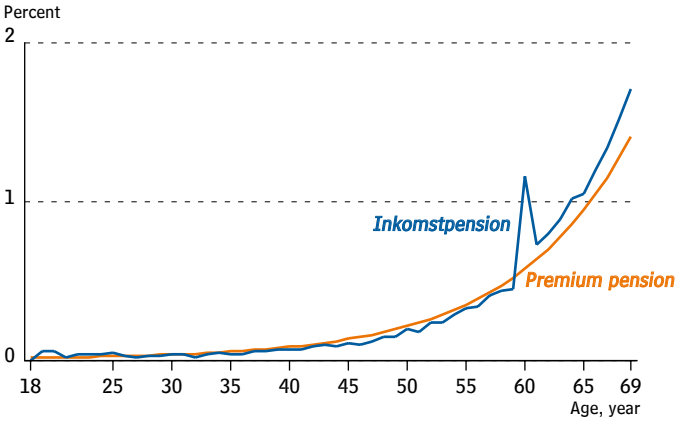
$r$ = oldest age group in which $L_i > 0$

$L_i(t)$ = number of survivors out of 100 000 born in age group $i$ at the end of year $t$ according to the life span data of Statistics Sweden for the five-year period immediately preceding the year when the insured reaches age 60 for $i$ = 60–64 and age 64 for $i$ = 65 or older

$L^*_i(t)$ = number of survivors out of 100 000 born in age group $i$ at the start of year $t$ according to the life span data of Statistics Sweden for the five-year period immediately preceding the year when the insured reaches age 60 for $i$ = 60–64 and age 64 for $i$ = 65 or older

For persons 60 years old or less, the inheritance gain factor is calculated as the sum of the pension balances of the deceased divided by the sum of the pension balances for the survivors in the same age group. For the group aged 2–17 years, a common inheritance gain factor is calculated. Because there is some delay in information on persons dying during the year, the distribution of inheritance gains to persons aged 60 or less is made with a time lag of one year. For older persons, inheritance gain factors are calculated on the basis of life-expectancy statistics from Statistics Sweden. The distribution of inheritance gains to older persons is made in the year of death.

**Inheritance Gains**




The inheritance gain factor for the inkomstpension for 60-year-olds is shown in the diagram as the two inheritance gain factors multiplied by each other. In the actual distribution of inheritance gains, however, the two different inheritance gains factors are applied to different bases.

Inheritance gains arising after retirement are implicitly taken into account in the annuity divisor, through redistribution from individuals who die earlier to those who live longer. For the purpose of distributing inheritance gains by the same principle for both the economically active and retirees in the same birth cohort, the method of allocation is changed from age 60 on. The change of method is made in the year when the individual turns 60 in order to avoid delay in the allocation of inheritance gains for the year prior to retirement for persons who begin drawing their pensions at age 61. In the year when an insured turns 60, he or she is credited with double inheritance gains because of the two different procedures.

The impact of inheritance gains on the pension liability is limited, for it means that the pension balances of deceased persons are redistributed to the survivors. There is, however, an effect on the inkomstpension liability to the economically active because of the difference between inheritance gains arising and inheritance gains distributed; this effect is reported in Note 10. For the group dying before their 60th year, the difference is due to tax assessment changes between the time when inheritance gain factors are calculated and the time when the gains are distributed, and to late information on persons dying. For the group dying in their 60th year or thereafter, the reasons are differences between estimated and actual mortality, and possible variations in mortality depending on the insured's level of income, i.e. the effect due to the shorter average life spans, for each gender, of persons with low incomes compared to persons with high incomes.

## Inheritance Gain factors for the Premium Pension

In the premium pension system, inheritance gains are calculated as a percentage of the premium pension capital of the survivors. The percentage corresponds to the one-year risk of death, i.e. the probability of dying within one year. For both the economically active and retirees, inheritance gains for the premium pension are currently distributed once a year. As with the inkomstpension, inheritance gains arising after retirement are included in the annuity divisor and are allocated through distribution of actual gains. If the insured elects a survivor benefit, the inheritance gain will be much smaller, as it is then based on the probability that the longer-surviving party, whether the primary insured or the co-insured, will die within one year of the first party.

The risk of death in year $t$ is calculated by Makeham's formula (see p. 73). The values of a, b and c in the formula are determined by the relationship between the capital of pension savers dying in year $t$–1 and the capital of the surviving pension savers in the same year, calculated for each age group. The pension capital used to determine the inheritance gain in year $t$ corresponds to the balance of the premium pension account as of December 31 in year $t$–1. The amounts of the inheritance gains are adjusted by a factor that equalizes the total amount distributed in year $t$ and the capital of pension savers dying in year $t$–1.

The inheritance gains for the premium pension do not affect the pension liability over time, as death capital is offset by inheritance gains distributed.

## Administrative Cost Factor, Inkomstpension

The costs of administering the inkomstpension system reduce the pension balances of the economically active. The amount of the deduction from pension balances is recalculated annually through multiplication of pension balances by an administrative-cost factor.

$$\textit{Administrative cost factor}(t) = 1 - \left[(B(t) \times A(t) - C(t-1) + F(t-1) \times A(t-1)) \,/\, PB(t-1)\right]$$

where

$B(t)$ = budgeted costs of administration, year $t$
$A(t)$ = proportion charged to pension balances, year $t$
$C(t-1)$ = amount of reduction in pension balances, year $t$–1
$F(t-1)$ = actual costs of administration, year $t$–1
$PB(t-1)$ = total pension balances, year $t$–1

The administrative-cost factor is calculated on the basis of a certain proportion, A, of budgeted costs for year $t$. Until the year 2021, the proportion charged to pension balances will be less than 100 percent (see Note 11). Moreover, there is an adjustment for the administrative costs of year $t$–1. The amount of the adjustment is the difference between actual administrative costs in $t$–1 and the deduction from pension balances in the same year.

The administrative-cost factor affects the inkomstpension liability to the economically active via the deduction from pension balances (see Note 14, Table A). The difference between total costs of administration (see Note 4) and the deduction from pension balances puts a strain on the balance ratio.

## Charge for Costs of Administration, Premium Pension

The costs of administration for the premium pension system are not to exceed 0.3 percent of the aggregate balances of the premium pension accounts of pension savers. The charge, which is deducted from premium pension accounts once a year, is intended to cover the total operating costs of the PPM, including interest and other financial expenses.

Administrative costs affect the capital of the premium pension system; through the deduction from pension balances, they also affect the premium pension liability by the same amount (see Notes 17 and 21).

## Annuity Divisors for the Inkomstpension

The annuity divisors for the inkomstpension are used for recalculation of pension balances as annual disbursements and are a measure of life expectancy at retirement, with interest of 1.6 percent (the norm) credited to pensions in advance.

$$Annuity\ Divisors_i = \frac{1}{12L_i}\sum_{k=i}^{r}\sum_{X=0}^{11}\left(L_k + (L_{k+1} - L_k)\frac{X}{12}\right)(1.016)^{-(k-i)}(1.016)^{-X/12} \quad \text{for } i = 61, 62, \ldots r$$

where

$k-i$ = number of years of retirement ($k=i, i+1, i+2$ etc.)

$X$ = months (0, 1, …11)

$L_i$ = number of survivors in age group $i$ per 100 000 born, according to the life span statistics of Statistics Sweden. These statistics are for the five-year period immediately preceding the year when the insured reached age 60 in the case of pension withdrawal before age 65, and age 64 in the case of withdrawal thereafter

For persons who have begun drawing their old-age pensions before age 65, the amount disbursed is recalculated, in accordance with recalculated annuity divisors, at the start of the year when the individual turns 65. The reason for the recalculation is the change in the underlying statistical data for the latest life expectancy statistics available in the individual's 65th year. With the continuing increase in life expectancy, the recalculated annuity divisors have so far been higher than before, resulting in reduction of future monthly pensions. The consequent marginal decrease in the inkomstpension liability to retirees is a component of the "Change in Amounts Disbursed" in Note 14, Table C.

After age 65, there is no further recalculation of annuity divisors. The increase in the pension liability of the system resulting from the fixed annuity divisors puts strain on the balance ratio when life expectancy is increasing.

Withdrawal of an old-age pension involves a transfer of pension liability from the economically active to retirees. The actual recalculation of pension balances as annual disbursements results in a marginal change in the pension liability. The change arises because of the difference between annuity divisors and what we refer to as "economic annuity divisors" in this report. For a description of economic annuity divisors, see Appendix B, Section 4. The economic annuity divisors are used to calculate the pension liability to retirees.

**Confirmed Annuity Divisors for the Inkomstpension***

| | Age 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1938 | 17.87 | 17.29 | 16.71 | 16.13 | 15.56 | 14.99 | 14.42 | 13.84 | 13.27 | 12.71 |
| 1939 | 17.94 | 17.36 | 16.78 | 16.19 | 15.62 | 15.04 | 14.47 | 13.89 | 13.32 | 12.76 |
| 1940 | 18.02 | 17.44 | 16.86 | 16.27 | 15.69 | 15.11 | 14.54 | 13.96 | 13.39 | 12.82 |
| 1941 | 18.14 | 17.56 | 16.98 | 16.39 | 15.81 | 15.23 | 14.65 | 14.08 | 13.50 | 12.94 |
| 1942 | 18.23 | 17.65 | 17.06 | 16.48 | 15.89 | 15.31 | 14.74 | 14.16 | 13.59 | 13.02 |
| 1943 | 18.33 | 17.75 | 17.16 | 16.58 | 15.99 | 15.41 | 14.84 | 14.26 | 13.68 | 13.11 |

* The SSIA confirms annuity divisors each year up to age 80, but the table shows only the divisors up to age 70.

## Annuity Divisors for the Premium Pension

To calculate the annual premium pension, the value of the premium pension account is divided by an annuity divisor for the premium pension. Unlike the inkomstpension, the annuity divisor for the premium pension is based on forecasts of life expectancy,

$$Annuity\ Divisors_x = \int_0^{\infty} e^{-\delta t} \frac{l(x+t)}{l(x)}\, dt$$

$$l(x) = e^{-\int_0^x \mu(t)dt}$$

$$\mu(x) = a + be^{cx}$$

where
$x$ = exact age at time of retirement

The annuity divisors are calculated continually and according to exact age at retirement, but in principle they are consistent with the formula for the annuity divisor for the inkomstpension.[31] The survival function, $l(x)$, can be considered equivalent to the number $L$ used in the calculation of the inkomstpension. The mortality function, $\mu(x)$, is the so-called Makeham's formula used for calculating the risk of death within one year. The values of $a$, $b$ and $c$ correspond to Statistics Sweden's forecast of remaining life expectancy in the years 2006–2050 for individuals born in 1943.[32] The low-mortality alternative of Statistics Sweden is used in calculating the guaranteed amount in conventional insurance. But in contrast to previous years, Statistics Sweden's main alternative for mortality is used in calculating the pension amounts to be paid out. The shorter assumed life span resulting from this change has reduced the annuity divisor in fund insurance (without survivor benefit) by 15 percent for a 65-year-old. One reason for making the change is that the PPM considers it more realistic to assume the same increase in life span as Statistics Sweden in its main forecast. The previous assumption is considered unnecessarily cautious, and the change results in a better assumed pay-out profile.

Since April 1, 2007, the interest credited in fund insurance, δ, has been 4 percent before the deduction for costs. From that date on, a premium pension paid out in the form of conventional insurance is calculated with an interest rate that is presently 2.3 percent, and the guaranteed amount by an interest rate of 0 percent. The interest rate used in calculating the amount was previously much higher; see the diagram Rate of Rebate and Guarantee. One reason why the PPM decided on this change is that it permits the PPM in its conventional insurance operation to take at least the same risk as before and thus be in a position to obtain at least the same expected return. With the lower assumed rate of interest, the annuity divisor used in calculating the guaranteed amount is higher. The annuity divisor has been increased by almost 40 percent for a person who begins drawing a pension at age 65. The net effect of the lower interest rate and the higher mortality applied after April 1, 2007, in calculating the amounts to be paid out with conventional life insurance is that the annuity divisor is largely unchanged from the previous year.

In calculating actuarial provisions (FTA), the interest rate used is 2.75 percent. In all cases, a deduction of 0.1 percent for costs is taken from the interest rate. The purpose of the deduction is to cover the PPM's costs.

For the premium pension in the form fund insurance, the pension liability is equal by definition to the value of all the assets, which in turn equals the aggregate value of all fund shares. For fund insurance, therefore, a change in annuity divisors has no effect on the pension liability. In the case of conventional insurance, the pension liability is equal to the actuarial provisions (FTA) and is calculated by multiplying every guaranteed amount by an annuity divisor. The annuity divisor is calculated in the same way as is done when determining pension amounts. In

[31] The formula applies in cases where one life is insured, i.e. where there is no survivor coverage.

[32] Persons born in 1943 constitute the birth cohort closest to age 65 during 2007–2009. Current values: a=0.0082, b=0.0000001, c=0.1576, δ=3.8221 percent, equivalent to an annual interest rate of 3.8961 percent. For x>97, μ(x) merges with a straight line with a slope of 0.001.

the calculation of FTA, however, separate mortality assumptions are used for women and men. The FTA increase if a lower mortality rate or interest rate is assumed.

### Annuity Divisors for Annual Amount (Fund Insurance)

*Without survivor benefit*

| Age | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
|---|---|---|---|---|---|---|---|---|---|---|
| | 14.72 | 14.42 | 14.11 | 13.79 | 13.46 | 13.12 | 12.77 | 12.40 | 12.03 | 11.65 |

*With survivor benefit*

| Age, co-insured | Age, primary insured 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 | 18.05 | 17.95 | 17.85 | 17.75 | 17.66 | 17.57 | 17.49 | 17.41 | 17.33 | 17.25 |
| 60 | 17.26 | 17.13 | 16.99 | 16.86 | 16.73 | 16.61 | 16.49 | 16.38 | 16.28 | 16.18 |
| 65 | 16.55 | 16.36 | 16.18 | 16.00 | 15.83 | 15.66 | 15.50 | 15.34 | 15.19 | 15.05 |
| 70 | 15.95 | 15.73 | 15.50 | 15.27 | 15.05 | 14.82 | 14.60 | 14.39 | 14.18 | 13.97 |

### Annuity Divisors for Annual Amount (Conventional Insurance)

*Without survivor benefit*

| Age | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
|---|---|---|---|---|---|---|---|---|---|---|
| | 17.75 | 17.30 | 16.85 | 16.38 | 15.91 | 15.42 | 14.93 | 14.43 | 13.93 | 13.41 |

*With survivor benefit*

| Age, co-insured | Age, primary insured 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 | 22.62 | 22.46 | 22.30 | 22.15 | 22.01 | 21.88 | 21.75 | 21.63 | 21.52 | 21.41 |
| 60 | 21.30 | 21.08 | 20.87 | 20.67 | 20.47 | 20.29 | 20.12 | 19.96 | 19.80 | 19.66 |
| 65 | 20.18 | 19.89 | 19.61 | 19.33 | 19.07 | 18.82 | 18.58 | 18.35 | 18.13 | 17.93 |
| 70 | 19.31 | 18.96 | 18.61 | 18.26 | 17.93 | 17.60 | 17.28 | 16.97 | 16.67 | 16.38 |

### Annuity Divisors for Guaranteed Annual Amount (Conventional Insurance)

*Without survivor benefit*

| Age | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
|---|---|---|---|---|---|---|---|---|---|---|
| | 26.91 | 26.05 | 25.21 | 24.36 | 23.53 | 22.70 | 21.88 | 21.07 | 20.27 | 19.48 |

*With survivor benefit*

| Age, co-insured | Age, primary insured 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 | 36.48 | 36.14 | 35.82 | 35.53 | 32.25 | 34.99 | 34.75 | 34.52 | 34.31 | 34.12 |
| 60 | 33.68 | 33.24 | 32.82 | 32.43 | 32.06 | 31.71 | 31.38 | 31.08 | 30.79 | 30.53 |
| 65 | 31.48 | 30.93 | 30.40 | 29.90 | 29.42 | 28.97 | 28.54 | 28.13 | 27.75 | 27.40 |
| 70 | 29.86 | 29.21 | 28.59 | 27.98 | 27.40 | 26.84 | 26.30 | 25.79 | 25.30 | 24.84 |

### Annuity Divisors for 2008 Compared with Annuity Divisors for 2007, Percent*

*Without survivor benefit*

| Age | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
|---|---|---|---|---|---|---|---|---|---|---|
| Fund | –16 | –16 | –16 | –15 | –15 | –15 | –15 | –15 | –15 | –15 |
| Conventional | 1 | 1 | 1 | 0 | 0 | 0 | –1 | –1 | –1 | –2 |
| Conventional, guaranteed | 45 | 43 | 42 | 41 | 40 | 38 | 37 | 36 | 35 | 34 |

* Respective effects of changed mortality assumptions and changed assumption on mortality and interest rate.

# Appendix B.
# Mathematical Description of the Balance Ratio

**Excerpts from Regulation 2002:780 on the Calculation of the Balance Ratio***

* Some editing has been done to simplify the presentation

Pursuant to Chapter 1, §§ 5 a and 5 b of the Earnings Related Old Age Pension Act (1998:674), the Swedish Social Insurance Agency is to calculate the balance ratio for each year in accordance with the following formula.

**1. Balance ratio, *BR*,**

$$BR(t+2) = \frac{CA(t) + F(t)}{S(t)} \tag{1.0}$$

$$CA(t) = \overline{C}(t) \times \overline{T}(t) \tag{1.1}$$

$$\overline{C}(t) = \frac{C(t) + C(t-1) + C(t-2)}{3} \times \left( \frac{C(t)}{C(t-3)} \times \frac{CPI(t-3)}{CPI(t)} \right)^{1/3} \times \left( \frac{CPI(t)}{CPI(t-1)} \right) \tag{1.2}$$

$$\overline{T}(t) = median \left[ T(t-1), T(t-2), T(t-3) \right] \tag{1.3}$$

where

$t$ = calendar year if the variable refers to flows, end of calendar year if the variable refers to stocks
$CA(t)$ = contribution asset, year $t$
$F(t)$ = buffer fund, the aggregate market value of the assets of the First–Fourth and Sixth National Pension Funds in year $t$. By market value is meant the value which in accordance with Ch. 6, § 3 of the National Pension Funds Act (2000:192) and Ch.4, § 2 of the Sixth National Pension Fund Act (200:193) is to be shown in the annual reports of these funds.
$S(t)$ = pension liability, year $t$
$\overline{C}(t)$ = smoothed contribution revenue to the pay-as-you-go system, year $t$
$\overline{T}(t)$ = smoothed turnover duration, year $t$
$C(t)$ = contributions to the pay-as-you-go system, year $t$
$T(t)$ = turnover duration, year $t$
$CPI(t)$ = consumer-price index for June, year $t$

**2. The average retirement age, $\overline{R}$, is calculated as**

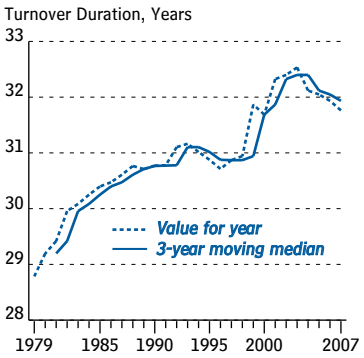
$$\overline{R}(t) = \frac{\sum_{i=61}^{R^*(t)} P^*_i(t) \times G_i(t) \times i}{\sum_{i=61}^{R^*(t)} P^*_i(t) \times G_i(t)} \text{ , } \overline{R} \text{ rounded off to nearest whole number} \tag{2.0}$$

where

$i$ = age at year-end
$R^*(t)$ = the oldest age group for which pensions have been granted in year $t$
$P^*_i(t)$ = the total of pensions granted monthly in year $t$ to persons in age group $i$
$G_i(t)$ = annuity divisor in year $t$ for age group $i$

### 3. Turnover duration, *T*,

$$T(t) = ID(t) + OD(t) \tag{3.0}$$




| | Change measured percent | Change in percent with 3-year moving median |
|---|---|---|
| 3 | 0 | |
| 2 | 0 | 4 |
| 1 | 148 | 148 |
| 0 | 02222244455568 | 0000022223445668 |
| −0 | 22455556 | 02359 |
| −1 | 3 | |

1 | 148 to be read as three annual changes of 1.1, 1.4 and 1.8 percent, respectively

### 3.1 Pay-in duration, *ID*,

$$ID(t) = \frac{\sum_{i=16}^{\overline{R}(t)-1} \overline{E}_i(t) \times L_i(t) \times \left(\overline{R}(t) - i - 0.5\right)}{\sum_{i=16}^{\overline{R}(t)-1} \overline{E}_i(t) \times L_i(t)} \tag{3.1.1}$$

$$\overline{E}_i(t) = \frac{\frac{E_i(t)}{N_i(t)} + \frac{E_{i+1}(t)}{N_{i+1}(t)}}{2} \quad \text{for } i = 16, 17, \ldots, \overline{R}(t)-2 \tag{3.1.2}$$

$$\overline{E}_{\overline{R}(t)-1}(t) = \frac{E_{\overline{R}(t)-1}(t)}{N_{\overline{R}(t)-1}(t)} \tag{3.1.3}$$

$$L_i(t) = L_{i-1}(t) \times h_i(t) \text{ for } i = 17, 18, \ldots, \overline{R}(t)-1 \text{ where } L_{16}(t) = 1 \tag{3.1.4}$$

$$h_i(t) = \frac{N_i(t)}{N_{i-1}(t-1)} \text{ for } i = 17, 18, \ldots, \overline{R}(t)-1 \tag{3.1.5}$$

where

$E_i(t)$ = the sum of 16% of pension qualifying-income calculated in accordance with Ch. 2 of the Earnings Related Old Age Pension Act (1998:674) and 16% of the imputed pension-qualifying income calculated in accordance with Ch. 3 of said act in pay-in year $t$ age group $i$ for individuals who have not been registered as deceased

$N_i(t)$ = number of individuals in age group $i$ who at any time through pay-in-year $t$ have been credited with pension-qualifying income or pension-qualifying amounts and have not been registered as deceased

$L_i(t)$ = proportion of persons in age group $i$ in year $t$

$h_i(t)$ = change in proportion of persons in age group $i$ in year $t$

**3.2 Pay-out duration, *OD*,**

$$OD(t) = \frac{\sum_{i=\bar{R}(t)}^{R(t)} 1.016^{-(i-\bar{R}(t)+0.5)} \times L^*_i(t) \times \left(i-\bar{R}(t)+0.5\right)}{\sum_{i=\bar{R}(t)}^{R(t)} 1.016^{-(i-\bar{R}(t)+0.5)} \times L^*_i(t)} \quad (3.2.1)$$

$$L^*_i(t) = L^*_{i-1}(t) \times he_i(t) \text{ where } L^*_{60}(t) = 1 \quad (3.2.2)$$

$$he_i(t) = \frac{P_i(t)}{P_i(t) + Pd_i(t) + 2 \times Pd^*_i(t)} \quad \text{for } i = 61, 62, ..., R(t) \quad (3.2.3)$$

where

$R(t)$ = the oldest age group receiving a pension in year $t$

$P_i(t)$ = total pension disbursements in December of year $t$ to age group $i$

$Pd_i(t)$ = total of the last monthly pension disbursements to persons in age group $i$ who received pensions in December of year $t$-1 but not in December of year $t$

$Pd^*_i(t)$ = total of the last monthly pension disbursements to persons in age group $i$ who were granted pensions in year $t$ and did not receive a pension payment in December of year $t$

$L^*_i(t)$ = proportion of remaining disbursements to age group $i$ in year $t$

$he_i(t)$ = change in pension disbursements due to deaths in year $t$, age group $i$

**4. The pension liability, *D*,**

$$D(t) = AD(t) + DD(t) \quad (4.0)$$

$$AD(t) = K(t) + E(t) + ATP(t) \quad (4.1)$$

$$DD(t) = \sum_{i=61}^{R(t)} P_i(t) \times 12 \times \left(\frac{Ge_i(t) + Ge_i(t-1) + Ge_i(t-2)}{3}\right) \quad (4.2)$$

$$Ge_i(t) = \frac{\sum_{j=i}^{R(t)} \frac{1}{2} \times \left(L^*_j(t) + L^*_{j+1}(t)\right) \times 1.016^{\,i-j-1}}{L^*_i(t)} \quad \text{for } i = 61, 62, ..., R(t) \quad (4.3)$$

where

$AD(t)$ = pension liability in year $t$ in regard to pension commitment for which disbursement has not commenced (pension liability to the economically active)

$DD(t)$ = pension liability in year $t$ in regard to pensions being disbursed to retired persons in the pay-as-you-go system

$K(t)$ = total of pension balances in year $t$ according to Ch. 5, § 2 of the Earnings Related Old Age Pension Act (1998:674)

$E(t)$ = estimated pension credit for the inkomstpension earned in year $t$ according to Ch. 4, §§ 2–6 of said act

$ATP(t)$ = estimated value of the ATP in year $t$ for persons who have not yet begun to receive this pension

$Ge_i(t)$ = economic annuity divisor for age group $i$ in year $t$

* For amounts and values, see Aktuella belopp at www.forsakringskassan.se and at www.ppm.nu.

# List of Terms

in Swedish

**actuarial provisions** — försäkringstekniska avsättningar

provisions set aside to guarantee the commitment of the insurer in conventional insurance. The corresponding assets must therefore be invested conservatively to make certain that the insured will receive their benefits during retirement.

**adjustment indexation*** — följsamhetsindexering

recalculation of pensions by the change in the income index, reduced by interest of 1.6 percent credited in the annuity divisor. Note that there is no adjustment index, only adjustment indexation. If the income index for year $t$ is designated by $I(t)$, the adjustment indexation is calculated as follows:

Adjustment indexation (at the end of year $t$-1) = $[I(t)/I(t\text{-}1)]$ /1.016

**annuity divisor*** — delningstal

a number that reflects remaining life expectancy at retirement, taking into account the imputed interest credited to the pension to be paid.

In the calculation of the annual inkomstpension and the premium pension, the individual's pension balance and premium pension capital, respectively, are divided by an annuity divisor at the time of retirement (see Appendix A).

Economic annuity divisors are used in the calculation of the pension liability (see Appendix B).

**ATP** — tilläggspension

corresponds to the former ATP and folkpension and is paid to all persons born before 1938. Persons born between 1938 and 1953 receive a certain number of twentieths of their income-related pension as ATP and the remaining number of twentieths as inkomstpension and premium pension. The respective number of twentieths depends on the year of birth. The ATP system was a defined-benefit pension system. The ATP portion of the ATP is equivalent to 60 percent of the average pension points for the 15 years with the most pension points; the folkpension portion is equal to 96 percent of one price-related base amount for single pensioners and 78.5 percent for married pensioners. To receive a full pension, an individual must have at least 30 years of pension-qualifying income.

**balance index** — balansindex

when balancing is activated, pension balances and pensions are indexed by the change in a balance index instead of the income index. Changes in the balance index are dependent on the change in the income index and on the size of the balance ratio.

**balance ratio** balanstal

the assets of the pay-as-you-go system, that is, the contribution asset and the buffer fund, divided by the pension liability of the system. The balance ratio can be considered equivalent to the solvency ratio in a funded system. Unlike the solvency ratio, however, the balance ratio provides no information on the amount of funded assets in relation to the pension liability.

**balancing** balansering

a method of ensuring via indexation of the pension liability for the inkomstpension (pension balances and pensions paid) that the disbursements of the insurance system will not exceed its revenue. Balancing is activated if the balance ratio drops below 1.0000, that is, if the pension liability exceeds the assets of the system. In that case, the pension liability is compounded at a rate approximately equal to the system's internal rate of return.

**buffer fund** buffertfond

absorbs interperiod discrepancies between pension contributions and pension expenditure in a pay-as-you-go system. The primary purpose of the buffer fund is to stabilize pension disbursements and/or pension contributions in relation to economic and demographic variations. The buffer fund of the national public pension system consists of five different funds: the First–Fourth and Sixth National Pension Funds.

**ceiling on contributions** avgiftstak

8.07 income-related base amounts. The individual pension contribution and the central government pension contribution are paid on incomes up to this ceiling; the old-age pension contribution is paid on all earned income, but the contribution on the portion of income above the ceiling is not paid to the pension system, but to the central government.

**ceiling on pension-qualifying income*** intjänandetak

7.5 income-related base amounts. The maximum income – after deduction of the individual pension contribution – for which pension credit is earned.

**central government old-age pension contribution** statlig ålderspensionsavgift

a pension contribution paid by the central government. The contribution is 10.21 percent of pension-qualifying social-insurance benefits, except for sickness and activity compensation. For sickness and activity compensation and so-called pension qualifying amounts, the contribution is 18.5 percent.

**charge for costs of administration*** administrationsavgift

pension balances are reduced by the administrative costs of the inkomstpension and ATP systems. This charge is deducted from pension balances as a percentage based on an administrative cost factor. For the premium pension, the charge for costs of administration is taken as a percentage deduction from the premium pension capital of the insured (see Appendix A).

**compounding** förräntning

in this report, synonymous with indexation.

**contribution asset** avgiftstillgång

the value of the inflow of contributions to the inkomstpension. It is calculated through multiplication of smoothed annual contribution revenue by smoothed turnover duration.

**contribution base** avgiftsunderlag

the income and other amounts on which pension contributions are paid. The contribution base consists primarily of earned income, but also of social-insurance benefits such as sickness cash benefits and unemployment cash benefits, as well as pension-qualifying amounts.

**contribution revenue** avgiftsinkomst

the total pension contributions paid to the pay-as-you-go system in one year. In the calculation of the contribution asset, smoothed contribution revenue is used.

**conventional insurance** traditionell försäkring

pension insurance where the insurer guarantees that the insured will receive a specified nominal pension amount dependent on the pension balance of the insured. With conventional insurance, the insured have no say in the management of their pension balances. Thus, the level of investment risk is determined by the insurer, who also bears this risk.

**defined-benefit pension system** förmånsbestämt pensionssystem

a pension system in which the insurer bears the financial risk deriving from the variability over time in the mortality rate and in the rate of return on the assets of the system. In a public pension system, the insurer is the taxpayers, which means that contributions/taxes to the system may vary. The value of a pension is set in advance in terms of a certain amount or level, such as final earnings or average income.

**defined-contribution pension system** avgiftsbestämt pensionssystem

a pension system in which pension credit in monetary terms accrues by the same amount as the pension contribution paid by or for the individual. In a defined-contribution pension system, the insured bears the financial risk deriving from the variability over time in the mortality rate and in the rate of return on the assets of the system. This means that the value of a pension may vary.

**fund** fond

a legal entity operated by a fund management company. The fund management company invests in securities in which investors in turn can buy shares.

**fund asset** fondtillgång

the value of the assets at the end of the confirmation year.

**fund insurance** fondförsäkring

pension insurance with no guaranteed pension amount. Through their choice of funds, the insured decide how to invest their saving and bear the risk associated with the development of their pension balances.

**fund strength** — fondstyrka

the monetary amount of the buffer fund at the end of a given year divided by the pension disbursements for the same year. It is a measure of the size of the buffer fund in relation to the flow of pension payments.

**funded system** — fonderat system

a pension system in which premiums paid in are set aside and invested until the time of pension withdrawal. The premium pension system is an example of a funded system.

**guarantee rule/guaranteed supplement** — garantiregel/garantitillägg

a provision guaranteeing that individuals born between 1938 and 1953 will receive a pension at least equivalent to that which they had earned in the ATP system through 1994.

**guaranteed pension** — garantipension

provides basic income security for retired individuals who have had little or no income. The guaranteed pension is a supplement to the income-related pension.

**income index** — inkomstindex

the change in the income index shows the development of the average income. The measure of income used here is pension-qualifying income, without limitation by the ceiling, but after deduction of the individual pension contribution.

The change in the index is calculated as the average change in real income for the latest three-year period, with the addition of inflation in the latest 12-month period ending with June (see Appendix A).

**income-related base amount*** — inkomstbasbelopp

the base amount which is recalculated each year according to the change in the income index. The income-related base amount is used primarily to calculate the ceilings on contributions and pension-qualifying income.

**income-related old-age pension** — inkomstgrundad ålderspension

the inkomstpension and ATP plus the premium pension, sometimes also referred to as the earnings-related old-age pension.

**indexation*** — indexering

recalculation of pension balances by the change in the income index, or balance index, and the recalculation of pensions by adjustment indexation.

**individual pension contribution** — allmän pensionsavgift

the portion of the pension contribution, 7 percent of income up to the ceiling for contributions, paid by the insured together with tax withheld.

**inheritance gain*** — arvsvinst

the pension balances, or premium-pension capital, of deceased persons, which are "inherited" by the surviving insured (see Appendix A).

**inkomstpension** — inkomstpension

the portion of the earnings-related old-age pension linked to 16 percent of the pension base. The term inkomstpension sometimes includes the ATP.

Here the term is also used to designate the inkomstpension subsystem of the national public pension system. Like the premium pension system, the inkomstpension scheme is a defined-contribution pension system.

**internal rate of return** — internränta

in this report, compounding of the pension liability so that it increases at the same rate as the assets of the system. The internal rate of return is determined by the change in the contribution revenue of the system and the change in the extent to which these contributions can finance the pension liability – in other words, the change in turnover duration – and by the return on the buffer fund, as well as the cost (gain) due to changes in life expectancy. If balancing is activated, the pension liability is compounded at a rate approximating the internal rate of return of the pay-as-you-go system.

**National Pension Funds** — AP-fonderna

legally and administratively, the buffer fund of Sweden's pay-as-you-go pension system consists of five different funds: the First, Second, Third, Fourth and Sixth National Pension Funds. Pension contributions are apportioned equally to the First-Fourth National Pension Funds, which also contribute equally to the payment of pensions. The Sixth National Pension Fund receives no pension contributions and pays no pensions. From the standpoint of the pay-as-you-go system, the five buffer funds may be viewed in some respects as a single fund.

**national public pension** — den allmänna pensionen

Sweden's national pension system. The system comprises the inkomstpension, the premium pension and the guaranteed pension. The inkomstpension may also include the ATP.

**old-age pension contribution** — ålderspensionsavgift

paid by employers as an employer contribution and by self-employed persons as an individual pension contribution. The contribution rate for the old-age pension is 10.21 percent of total earnings; however, the contribution on the portion of income above the ceiling for contributions is not paid to the pension system, but to the central government.

**pay-as-you-go pension systems** — fördelningssystem

systems which do not require that the pension liability be matched by a certain amount of funded assets. A pay-as-you-go system is often described as a system where contribution revenue is used directly to finance pension disbursements. However, this description is not totally accurate in the case of a pay-as-you-go system with a buffer fund.

**pay-in duration** — intjänandetid

reflects the difference in number of years between the expected average age of earning pension credit and the expected average age of retirement.

**pay-out duration** utbetalningstid

reflects the difference in number of years between the expected average age of retirement and the expected average age of pension recipients.

**pension balance** pensionsbehållning

the total confirmed pension credit for the inkomstpension, recalculated annually by the income index (or the balance index), inheritance gains and the charge for costs of administration.

**pension base** pensionsunderlag

the total of an individual's pension-qualifying income and pension-qualifying amounts, but only up to the ceiling on pension-qualifying income.

**pension contribution** pensionsavgift

see individual pension contribution, old-age pension contribution and central-government old-age pension contribution.

**pension credit** pensionsrätt

an individual's pension credit is 18.5 percent of her/his total pension base and equal to her/his total contribution to the pension system. Individuals born in 1954 or thereafter are credited with 16 percent of their pension base for the inkomstpension and with 2.5 percent of their pension base for the premium pension. Pension credit increases the individual's pension balance and premium-pension capital.

**pension level** pensionsnivå

in this report, the average pension in relation to the average pension-qualifying income for persons aged 16–64.

**pension liability** pensionsskuld

in this report, the financial commitment of the pension system at the end of each year. For the inkomstpension, the pension liability to the economically active is calculated as the sum of the pension balances of all individuals. The pension liability to retirees is calculated by multiplying the annual pension amount of each birth cohort by the economic annuity divisor for that cohort. Through 2017 the pension liability will also be calculated for the ATP credit earned by the economically active. With fund insurance, the pension liability for the premium pension is calculated as the total value of all fund shares; with conventional insurance, the pension liability is calculated as each guaranteed amount multiplied by an annuity divisor.

**pension points** pensionspoäng

the measure of pension credit used in calculating the ATP. Pension points may be earned by persons up to age 64 and born before 1954. Pension points are calculated as follows:

$$\textit{Pension points} = \frac{PQI - HPBA}{HPBA}$$

where
*PQI* = pension-qualifying income
*HPBA* = the higher price-related base amount

**pension-qualifying amounts** pensionsgrundande belopp

a basis for pension credit not related to actual earned income. Pension-qualifying amounts may be credited for sickness or activity compensation, years with small children, study and compulsory national service.

**pension-qualifying income** pensionsgrundande inkomst

the income which together with pension-qualifying amounts is used to calculate the pension credit of the insured. In principle, pension-qualifying income consists of annual income (earnings, sickness cash benefits, parental cash benefits, unemployment cash benefits, etc.) reduced by the individual pension contribution. Beginning in 2003, annual income must exceed 42.3 percent of one price-related base amount to qualify for pension credit. Pension credit is granted only on income up to the ceiling on pension-qualifying income.

**premium pension** premiepension

the portion of the earnings-related old-age pension designed as a funded system. The pension credit earned for the premium pension is 2.5 percent of the pension base and is invested in securities funds chosen by the insured individual. The premium pension may be withdrawn as fund insurance or as a guaranteed nominal monthly benefit from a conventional insurance policy. Like the inkomstpension system, the premium pension system is a defined-contribution system.

**price-related base amount*** prisbasbelopp

an amount used in the national pension system for purposes that include calculating the guaranteed pension and in the tax system for determining the basic deduction, currently equivalent to 42.3 percent of one price-related base amount for the year in which the income reported was earned. The price-related base amount is adjusted each year by the change in the Consumer Price Index (for June). In addition there is a higher price-related based amount. It is used to calculate pension points and also follows changes in the Consumer Price Index.

**return** avkastning

income that results from an investment. For shares of stock, the return may consist of a dividend and the change in the market price. In this report, the concept refers to the direct return plus the change in value of the buffer fund and the premium-pension funds.

**turnover duration** omsättningstid

reflects the expected time from the earning of pension credit until the disbursement of inkomstpension. Turnover duration is the sum of pay-in duration and pay-out duration. Turnover duration is used for valuation of the contribution inflow. Turnover duration depends on the rules governing the earning of pension credit and the disbursement of pensions and on the patterns of labour force participation and mortality in each age group.

Further information on social security in Sweden is available at the SSIA website, www.forsakringskassan.se. Information on the premium pension system can be found at www.ppm.nu.

For information on the National Pension Funds, please see the websites of the respective funds: www.ap1.se, www.ap2.se, www.ap3.se, www.ap4.se and www.ap6.se.

Published by: the Swedish Social Insurance Agency (SSIA)
Editor: Ole Settergren
Project Managers: Helena Kristiansson-Torp and Gudrun Ehnsson

Adaptation and analyses of data: Atosa Anvarizadeh, Gudrun Ehnsson, Nils Holmgren, Claes Jonsson, Helena Kristiansson-Torp, Kristoffer Lundberg, Boguslaw D. Mikula. Also participating in the preparation of the report: Andrzej Dudziuk, Hans Karlsson, Lena Larsson, John Tseung, and from the PPM: Lars Billberg, Karin Leth, Olle Sylvén, Gerd Wallström.

Graphic production: Kristina Malm
Photo: cover + pages 2–6, Camilla Svensk; page 1, Torbjörn Sundqvist; page 9 (Riitta Korpiluoma), Uzi Varon; page 11, Michel Fainsilber
Image processing, pages 9–13: Jonas Engholm
Printed by: NRS Tryckeri, Sweden 2008

Swedish Social Insurance Agency
Head Office
Adolf Fredriks kyrkogata 8
SE-103 51 Stockholm
Telephone: +46-8-786 90 00
E-mail: huvudkontoret@forsakringskassan.se

ISSN 1654-4900
ISBN 978-91-7500-350-4

# The Orange Report – What Is It?

The Orange Report is the annual report of the Swedish pension system. The report describes the financial position, the development during the year and the future for the portion of the legislated pension system that provides a pension based on contributions paid in, as well as factors like the return on those contributions – in other words, the inkomstpension and the premium pension. The report also covers the legacy of the ATP. The authorities responsible for managing this pension system are the Swedish Social Insurance Agency (SSIA), the Premium Pension Authority (PPM) and the National Pension Funds. The Swedish National Tax Board also plays an important part, in collecting contributions and in other ways.

Annual contributions and premiums paid for national, occupational and private pensions add up to SEK 343 billion – total earnings in Sweden were SEK 1 157 billion. This means that we set aside the equivalent of 30 percent of our wages and salaries for various pensions.

The table and the diagrams show the distribution of premiums paid in, capital managed and pensions disbursed among the national pension, occupational pensions and private pensions.

To simplify, the Orange Report covers 68, 45 and 74 percent, respectively, of all pensions in Sweden. Thus, this report is appropriate reading both for those who wish to review the development of the national pension system and for those who would like to stay current more generally on pension-related issues in Sweden.

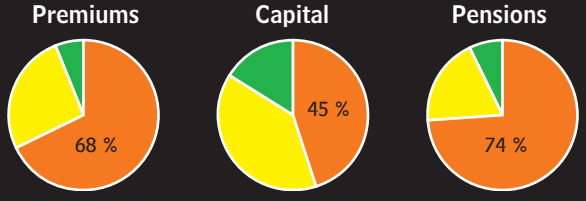
**Orange Report and Sweden's Pensions in 2006**

Billions of SEK

| | Paid-in premiums | Capital managed Dec. 31 | Disburse-ments | |
|---|---|---|---|---|
| National pension | 234 | 1 127 * | 176 ** | Orange Report |
| Occupational pensions | 90 | 960 | 44 | |
| Private pension insurance | 19 | 390 | 17 | |
| Total | 343 | 2 477 | 237 | |

* Contribution asset not included.

** Includes only income-related pensions. Aside from these, there are disbursements of the guaranteed pension (SEK 21 billion), survivor pensions (SEK 15 billion), housing supplements to pensioners and income support for the elderly (SEK 8 billion) provided by the central government.




Försäkringskassan