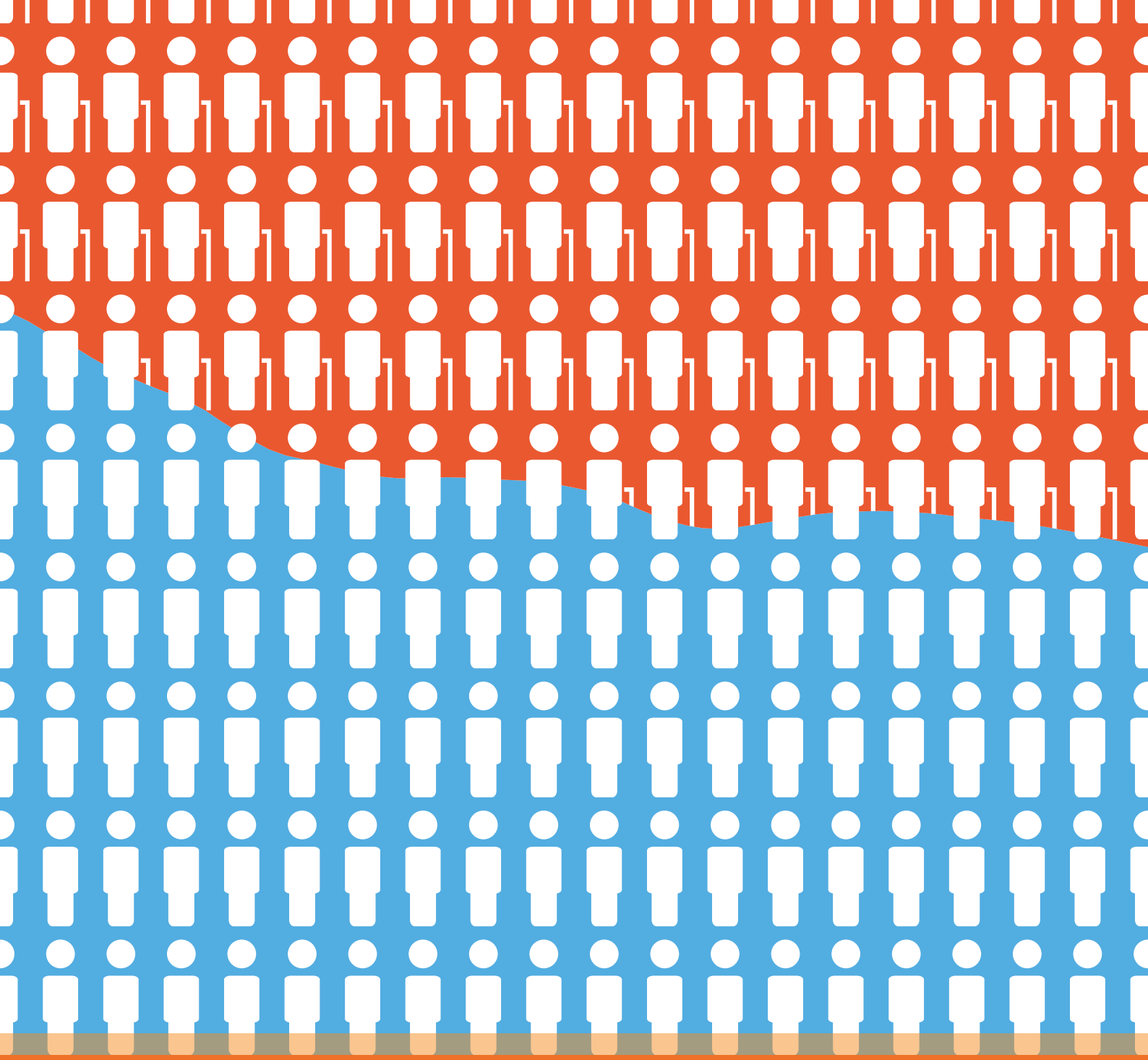


ORANGE REPORT 2014

Annual Report of the Swedish Pension System

SWEDISH
PENSIONS AGENCY

What is the Orange Report?

The Orange Report 2014 describes the financial status of the *national* income-based pension pension at year-end 2014, developments during 2014, and three future scenarios.

In addition to national inkomstpension and national premium pension there are also occupational pensions and pensions paid from private pension plans. For these, data is currently available only up to 2013. The following table shows contribution/premium income and payments in 2013, as well as funded capital at year-end 2013 for all three types of pension. However, the amounts for occupational and private pensions are only approximate. Occupational pensions may be secured by other means than through premium payments. For example, the employer may report occupational pension rights as a pension liability in the company balance sheet. In addition, there are funds set aside for occupational pension in a large number of pension funds. These funds are not included in the table below.

Total annual fees and premiums for national pension, occupational pensions, and private pensions are estimated at 429 billion SEK, of which the national pension's 263 billion SEK represents 62 percent. The wage bill in Sweden amounted to approximately 1,505 billion in 2013 (including earnings of the self-employed). This means that we set aside an amount equal to 29 percent of our salaries for various pensions.

Funded capital in the national pension amounted to 1,706 billion on 31 December 2013. That equates to approximately 42 percent of total funded pension capital in Sweden. The Swedish Pension Agency paid out 257 billion SEK in income and premium pension in 2013. This represents 71 percent of total pensions paid out that year according to the table below.

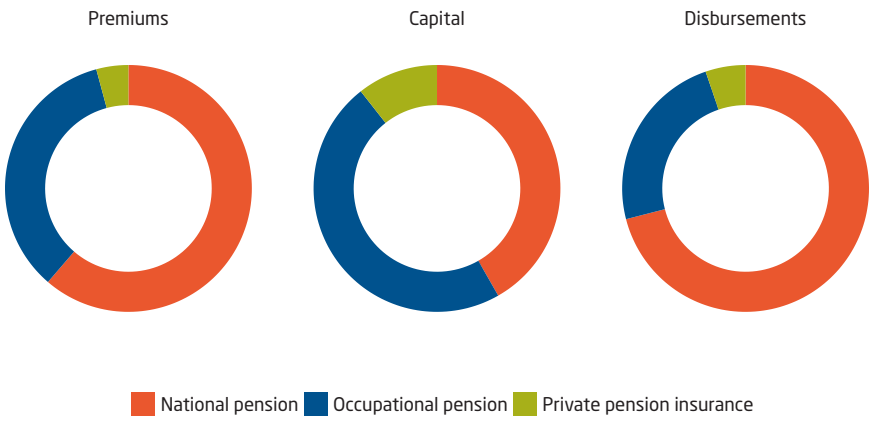
In 2013, in addition to inkomstpension and premium pension, the Swedish Pension Agency paid out guarantee pension to the amount of 17 billion SEK. Other pension-related benefits paid to the elderly are income-based widow's pension to the amount of 13 billion SEK, housing supplement to the amount of 8 billion SEK and support for the elderly to the amount of 0.7 billion SEK. These benefits are financed from the state budget and are not reported in the Orange Report.

The Orange Report covers well over half of Sweden's pension business regarding contributions and disbursements but a somewhat lower proportion regarding funded capital. This is because the inkomstpension scheme is a pay-as-you-go system with a buffer fund and not a fully funded pension system.

Swedish Pensions 2013 *
billions of SEK

	Premiums	Capital	Disbursements
Income-based pension	263 (61 %)	1,706 (42 %)	257 (71 %)
Occupational pension	148 (35 %)	1,948 (48 %)	86 (24 %)
Private pension	18 (4 %)	433 (10 %)	19 (5 %)
Total	**429 (100 %)**	**4,087 (100 %)**	**362 (100 %)**

* Disbursements for occupational pension and private pension refer only to persons aged 65 or over.



ORANGE REPORT

Annual Report of the Swedish Pension System 2014

Swedish Pensions Agency

Stockholm 2015

Further information on the Swedish national public pension system is available at the Swedish Pensions Agency website:
www.pensionsmyndigheten.se.

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.

We at the Swedish Pensions Agency thank the readers of Orange Report for their questions and views, which have helped enhance the quality of the report.

Published by the Swedish Pensions Agency
Editor: Estrella Zarate
Project Manager: Estrella Zarate
Technical Project Manager: Love Hansson
Translation: Peter Nickson, Richard Wathen

Adaptation and analyses of data: Atosa Anvarizadeh, Birgit Axelsson, Lars Billberg, Karl Birkholz, Rasmus Bjälkeson, Charlotta Brisell, Anders Carlsson, Sten Eriksson, Kristina Ericsson-Kenttä, Stefan Granbom, Love Hansson, Nils Holmgren, Hans Karlsson, Karin Kolmodin, Danne Mikula, Bengt Norrby, Niklas Näsström, Cédric Perriard, and Estrella Zarate
Also participating in the preparation of the report: Anna Sköld, Sten Eriksson, and Ole Settergren

Graphic production: Cédric Perriard and Love Hansson, Pensionsmyndigheten
Photo page 5: Magnus Glans
Printed by: DanagårdLiTHO AB, Ödeshög
Paper: Arctic Volume 250 gr (cover), 115 gr (insert)

Cover: Cédric Perriard and Love Hansson
The cover images illustrate a forecast of the demographic trend in Sweden for the years 2014-2089. The front cover shows the ratio between the working population and retirees, while the back cover shows the total population trend broken down by population age groups 0-64 and and 65 and older. The pictures are not to scale.

Swedish Pensions Agency
P.O. Box 38190
SE-100 64 Stockholm, Sweden
Telephone: +46 771-771 771
E-mail: registrator@pensionsmyndigheten.se

ISSN 1654-126X

Contents

Confidence in the pension system

One of the Swedish Pension Authority's most crucial tasks is to make pensions simpler. We accomplish this partly by explaining pensions in simple terms, partly by helping modify the pension system when necessary. We also ask pensioners and pension savers how easy it is for them to understand the system. And the response is encouraging. An increasing number find it is easy to understand pensions. Fewer people find it difficult. This is also true of those less interested in and less informed about pension issues.

Confidence in the pension system is also increasing. More people express confidence. Fewer state that they have low confidence. Pensioners have greater confidence in the pension system than those still earning their pensions. In 2014 there was actually a trend reversal. For the first time, more people expressed confidence in the system than low confidence. Somewhat remarkable perhaps, considering that inkomstpension actually decreased by 2.7 percent in 2014.

Citizens must have confidence in fundamental societal functions such as pension systems. But it is also essential to our work. It is easier for the Swedish Pension Authority to carry out its assignment when our clients – pensioners and pension savers – have confidence both in the system and the authority, and when they find pensions relatively easy to understand.

Some people still confuse the authority with the rules. But things are improving. Most people can in fact distinguish between authority and system and they realize that the pension system is a political artifact. We know this because there is greater confidence in the Swedish Pension Authority than in the pension system.

This booklet is of course an annual report of the actual pension system. We ourselves are keen to point out the need to see pensions in a long-term perspective. Pension savers build up their pensions over the course of 35-45 years. Only a few years ago it was reported that the USA was still paying out survivor's pensions from the American Civil War, which ended in 1865. That is what it means to work with long time periods. In the Orange Report we focus largely on the long cycles in order to describe how the system and pensions develop in different scenarios rather than because we think we can predict how things will actually turn out.

That said, it can be interesting to see what happened over a single year such as 2014. That year more contributions were paid in than during the preceding year, and the development of value in the buffer fund – managed by the AP Funds – was also positive. This shows that it was a relatively good year for the Swedish economy. This in turn means that pensions and pension credit can be adjusted upwards, and, according to the forecasts, we will leave the period of balancing somewhat sooner then we had previously estimated. During this year we also saw to it that pension savers for some time to come will not have to pay more than 0.89 percent in fund fees for Premium Pension.

Katrin Westling Palm
Director General, Swedish Pensions Agency

1 Results of the Pension System in Brief

Sweden's income-based pension consists of the inkomstpension and the premium pension. The inkomstpension referred to in this report includes the ATP (supplementary pension) which is being gradually phased out. The inkomstpension and the premium pension are defined-contribution, financially stable pension systems. With this design, liabilities and assets normally change by the same amount; in other words, the net income is more or less equal to zero. In principle, this is fully applicable to the premium pension system, whereas the inkomstpension allows substantial differences from year to year between the development of liabilities and assets, with the qualification, however, that accumulated deficits are not allowed to remain in the system.

Inkomstpension

The inkomstpension system is a pay-as-you-go system, and pension contributions paid in are used to pay retirees in the same year. The surpluses or deficits that arise when pension contributions are greater or less than pension disbursements are absorbed by the buffer fund.

The assets of the system are the value of future pension contributions, referred to as the contribution asset, and the buffer fund. The contribution asset is calculated as follows: contribution revenues (smoothed values for the latest three years) are multiplied by the expected average time that one krona will remain in the pension system, referred to as turnover duration.

The pension liability consists partly of a liability to the economically active and partly of a liability to retirees. The liability to the economically active is mainly the sum of the pension balances of everyone (the last row in the account statement of everyone's Orange Envelope). The pension liability to retirees is the expected total of all pensions paid to today's pensioners for the rest of their lives. The pension liability changes primarily with the annual indexation of pensions and pension account balances. Indexation is determined by the change in the average income in Sweden, in combination with the balance ratio in years when balancing is activated.

The result of the inkomstpension system is affected by numerous key economic and demographic factors. In the short run the development of employment is the most important factor, but the effect of the stock and bond markets on the buffer fund is also of significance, particularly in case of major changes. 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. Since 2008, however, the value of the buffer fund is calculated as the average of the market value of the fund on December 31 of the latest three years. If the balance ratio is less than 1.0000, that is, if the liabilities of the system exceed the assets, so-called balancing is activated to restore the long-term financial balance of the system. Balancing is a part of indexation and means that indexation of pensions and pension balances is reduced. The pension liability is then revalued at a slower rate, and the pension system is strengthened financially. Any surpluses that arise after balancing has been activated is used directly to increase indexation as much as possible and thus to restore the value of pensions.

The result for 2014 was SEK 296 billion. Together with a capital surplus of SEK 127 billion from 2013, this yields a capital surplus of SEK 423 billion at the end of 2014. The reason for the positive result for the year is that assets increased more than liabilities in 2014. Assets exceed liabilities by 5.2 percent.

The balance ratio of the system is calculated at 1.0375. The balance ratio will affect recalculation of pension balances and pension disbursements at the turn of 2015/2016.

Assets in 2014 increased by 4.7 percent during the year. The contribution asset rose by SEK 257 billion, or 3.6 percent, owing to higher earnings and other pension-qualifying income. The levelled-out turnover rate decreased, however, reducing the increase in the contribution asset by SEK 8 billion. The buffer fund – that is, the First–Fourth and Sixth National Pension Funds – increased by SEK 127 billion, or 12.0 percent. The return on the fund was SEK 148 billion, or 12.1 percent in relation to the opening balance. As with 2013, 2014 was a year when expenditure, pension disbursements and costs of administration, exceeded pension contributions paid into the inkomstpension system. The difference had a negative effect of SEK 21 billion. In total, the assets of the inkomstpension system increased by SEK 384 billion, or 4.7 percent.

The pension liability in 2014 increased during the year by SEK 88 billion, or 1.1 percent. The recalculation of the liability, or indexation, increased the liability to the economically active by SEK 124 billion, whereas recalculation of the liability to retirees meant a reduction by SEK 32 billion. In total, the effect was an increase of the pension liability by SEK 88 billion. The pension disbursements of the year exceeded pension credit earned for the year and ATP points, including certain adjustments, thus contributing to a reduction of the liability by SEK 4 billion. The liability to retirees is affected by changes in life expectancy. Compared to 2013, the average expected payout duration (economic life expectancy) for a 65-year-old has increased by 29 days. Because of the longer expected payout duration, the liability has grown by SEK 20 billion.

Six-Year Review

billions of SEK

Calculation year	2009	2010	2011	2012	2013	2014
Balancing year	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Buffer fund, mean value [1]	811	810	865	908	963	1,067
Buffer fund	827	895	873	958	1,058	1,185
Contribution asset	6,362	6,575	6,828	6,915	7,123	7,380
Total assets	7,189	7,469	7,700	7,873	8,180	8,565
Pension liability	7,512	7,367	7,543	7,952	8,053	8,141
Surplus/Deficit	-323	103	157	-80	127	423
Balance ratio	0.9549	1.0024	1.0198	0.9837	1.0040	1.0375
Financial position [2]	0.9570	1.0140	1.0208	0.9900	1.0158	1.0520

1 Mean value of the fund as of December 31 for the past three years.

2 The balance ratio according to the previous defintion (up to and including calculation year 2007), that is, it is calculated solely on the basis of the market value of the buffer funds as of December 31 of the respective year.

Premium Pension

The premium pension system is a funded system where pension savers and pensioners themselves choose the funds in which to invest their premium pension moneys. The pension is disbursed from the proceeds of selling off accumulated capital. The assets consist of the investments in funds by pension savers and pensioners. The pension liability to the economically active and to retirees is related primarily to fund shares. Changes in the value of fund shares affect the assets of pension savers and pensioners in the system, directly and to an equal degree. With traditional insurance, the pension liability is the value of the remaining guaranteed disbursements. That value is calculated with assumptions about

future return, life expectancy and operating costs. In the premium pension system all payments in and out of the system and all changes in value have in principle the same effect on system assets and liabilities. The positive result of the system belongs to pension savers and pensioners, and is invested in the consolidation fund as owner equity. The moneys in the consolidation fund for traditional insurance with profit annuity are disbursed as a bonus rate in connection with pension disbursements. Moneys in the consolidation fund for fund insurance are deducted from the following year's contributions to cover operational costs.

As of December 31, 2014, the value of pension savers' and pensioners' premium pension assets amounted to SEK 812,146 million. The increase in value for fund insurance was 20.7 percent.

The result for the year 2014 was SEK 2,491 million. In addition to a positive result of SEK 165 million from fund operations, the result was affected by SEK 2,343 million in traditional insurance, by SEK -10 million in trading inventory and by SEK -7 million in net interest.

The principal reason for the year's positive result in traditional insurance is a very high return on capital due to decreasing interest rates and increasing stock prices, that the proportion of retirees choosing traditional insurance have a greater stake in the premium pension system then in previous years. The result is also influenced by the fact that premiums paid in exceed pension disbursements.

The trading result consists of a fund price performance of SEK -2 billion and a foreign exchange result of SEK -8 billion. The level of trading profit is affected by the structure of the trading model, trading volume, and how fund / currency rates fluctuate while a fund switch is in progress.

Assets in 2014 increased during the year by SEK 162 billion. The change in insurance assets chiefly refers to newly-earned pension credit, positive changes in value, allocated management fees, and pension disbursements as noted above.

The pension liability in 2014 increased by SEK 162 billion. The change in the pension liability refers in principle to the same newly earned pension credit, positive changes in value, allocated management fees and pension disbursements as noted above.

Six-Year Review

millions of SEK

	2009	2010	2011	2012	2013	2014
Fund insurance	341,371	409,640	394,468	472,437	603,540	761,156
Traditional insurance	2,212	4,953	8,870	10,868	12,907	18,091
In temporary management	27,584	28,652	30,191	31,455	32,039	32,899
Insurance assets	**371,167**	**443,245**	**433,529**	**514,760**	**644,874**	**812,146**
Pension liability	370,502	441,576	431,144	511,522	643,889	805,187
Net income/loss for the year	547	1,249	1,018	1,052	1,684	2,491

2 Income Statement and Balance Sheet

Inkomstpension, Income Statement and Balance Sheet

Income Statement
millions of SEK

	Note	2013	2014	Change
Change in fund assets		99,561	126,903	27,342
Pension contributions	1	227,370	235,526	8,156
Pension disbursements	2	-253,966	-255,111	-1,145
Return on funded capital	3	127,899	148,248	20,349
Costs of administration	4	-1,742	-1,760	-18
Change in contribution asset		208,325	257,308	48,983
Value of change in contribution revenue	5	214,619	265,772	51,153
Value of change in turnover duration	6	-6,294	-8,464	-2,170
Change in pension liability [1]		-101,067	-87,894	13,173
New pension credit	7	-242,027	-230,335	11,692
Pension disbursements	2	253,960	255,102	1,142
Indexation	8	-96,141	-92,152	3,989
Value of change in life expectancy	9	-16,064	-19,816	-3,752
Inheritance gains arising	10	12,055	11,711	-344
Inheritance gains distributed	10	-14,264	-13,952	312
Deduction for costs of administration	11	1,414	1,548	134
Net income/-loss for the year		**206,819**	**296,317**	**89,498**

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

Balance sheet
millions of SEK

	Note	2 013	2 014	Change
Assets				
Fund assets	12	1,057,551	1,184,454	126,903
Contribution assets	13	7,122,892	7,380,199	257,308
Total Assets		**8,180,443**	**8,564,653**	**384,211**
Liabilities and results brought forward				
Closing results brought forward		127,060	423,376	296,317
Opening results brought forward		-79,759	127,060	206,819
Net income/-loss for the year		206,819	296,316	89,497
Pension liability	14	8,053,383	8,141,277	87,894
Total Liabilities and results brought forward		**8,180,443**	**8,564,653**	**384,211**

Premium Pension, Income Statement and Balance Sheet

Income Statement
millions of SEK

	Note	2013	2014	Change
Change in fund assets		136,686	165,641	28,954
Pension contributions	1	35,969	35,713	256
Pension disbursements	15	-3,197	-4,456	-1,259
Return on funded capital	16	104,278	134,777	30,499
Costs of administration	17	-363	-393	-30
Change in pension liability [1]		-135,002	-163,150	-28,148
New pension credit	18	-35,969	-35,713	256
Pension disbursements	15	3,197	4,456	1,259
Change in value	16	-102,704	-132,435	-29,731
Inheritance gains arising	19	1,152	1,447	295
Inheritance gains distributed	19	-1,152	-1,447	-295
Deduction for costs of administration	20	474	542	68
Net income/-loss for the year		**1,684**	**2,491**	**807**

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

Balance sheet
millions of SEK

	Note	2013	2014	Change
Assets				
Insurance assets	21	648,481	812,146	163,665
Fund insurance		603,540	761,156	157,616
Traditional insurance		12,907	18,091	5,184
Temporary management		32,034	32,899	865
Other assets	22	3,716	4,255	539
Total Assets		**652,197**	**816,401**	**164,204**
Liabilities and results brought forward				
Closing results brought forward	23	3,709	5,917	2,208
Opening results brought forward		2,025	3,426	1,401
Net income/-loss for the year		1,684	2,491	807
Liabilities		648,488	810,484	161,996
Pension liability	24	643,889	805,543	161,654
Other liabilities	25	4,599	4,941	342
Total Liabilities and results brought forward		**652,197**	**816,401**	**164,204**

Inkomstpension and Premium Pension, Income Statement and Balance Sheet

Income Statement

millions of SEK

	2013	2014	Change
Change in fund assets	236,247	292,544	56,297
Pension contributions	263,339	271,239	7,900
Pension disbursements	-257,163	-259,567	-2,404
Return on funded capital	232,177	283,025	50,848
Costs of administration	-2,105	-2,153	-48
Change in contribution asset	208,325	257,308	48,983
Value of change in contribution revenue	214,619	265,772	51,153
Value of change in turnover duration	-6,294	-8,464	-2,170
Change in pension liability [1]	-236,069	-251,044	-14,975
New pension credit	-277,996	-266,048	11,948
Pension disbursements	257,157	259,558	2,401
Indexation	-96,141	-92,152	3,989
Value of change in life expectancy	-16,064	-19,816	-3,752
Inheritance gains arising	13,207	13,158	-49
Inheritance gains distributed	-15,416	-15,399	17
Deduction for costs of administration	1,888	2,090	202
Net income/-loss for the year	**208,503**	**298,808**	**90,305**

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

Balance sheet

millions of SEK

	2013	2014	Change
Other assets	**3,716**	**4,255**	**539**
Contribution assets	7,122,892	7,380,199	257,307
Fund assets	1,057,551	1,184,454	126,903
Total Assets	8,832,640	9,381,054	548,414
Assets			
Insurance assets	**648,481**	**812,146**	**163,665**
Liabilities and results brought forward			
Closing results brought forward	130,769	429,293	298,524
Opening results brought forward [1]	-77,734	130,486	208,220
Net income/-loss for the year	208,503	298,807	90,304
Liabilities	8,701,871	8,951,761	249,890
Pension liability	8,697,272	8,946,820	249,548
Other liabilities	4,599	4,941	342
Total Liabilities and results brought forward	**8,832,640**	**9,381,054**	**548,414**

1 Opening results brought forward differs from Closing results brought forward last year, see Note 23.

3 Accounting Principles

The data on the financial position of the inkomstpension have been presented previously in the annual report of the Swedish Pensions Agency. Certain data, however, were preliminary at the time the annual report of the Pensions Agency was confirmed, and in the Orange Report they have been revised where needed. The audit of the information in the balance sheet and income statement is performed in connection with the confirmation of the Pensions Agency's annual report. Information concerning the premium pension has also been presented previously in the annual report of the Pensions Agency. However, certain adjustments and simplifications of the information on the premium pension have been made to facilitate comparisons between the two systems.

Regulations and Guidelines

The Annual Report of the Pension System has been prepared in accordance with Chapter 55 § 4 of the Social Insurance Code (2010:110) on the Earnings Related Old Age Pension (SFB) and Regulation (2002:135) Annual Reporting of the Financial Position and Development of the Old-Age Pension System.

The income-related old-age pension system includes the benefits provided by the inkomstpension, the ATP and the premium pension.[1]

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 Chapter 58 § 14 SFB, 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 proceeds of selling accumulated capital are used to pay pensions.

According to the Regulations for the Annual Report (2002:135), the Orange Report is to include a projection of the assumed long-term development of the pension system. See chapter 7 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 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 Swedish Pensions Agency describes the accounting principles used for the premium pension, these are only presented in summary form in this report. For further information, see www.pensionsmyndigheten.se.

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

Where Do the Figures Come From?

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

In the Annual Report of the Swedish Pension System, information on the operations of the First–Fourth and Sixth National Pension Funds has been taken primarily from the annual reports of the respective funds.[2] The buffer funds prepare their annual reports according to the Law on National Pension Funds (2000:192). Furthermore, on the basis of applicable provisions for comparable financial companies, the funds have developed common principles for accounting and valuation.

In the Annual Report of the Swedish Pension System, information on the premium pension has been taken from the annual report of the Swedish Pensions Agency, which was prepared as provided in Regulation (2000:605) on Annual Reports and Supporting Documentation for Budgeting. Invested assets (and the corresponding liabilities) of the premium pension system have been valued according to the provisions of the Law (1995:1560) on Annual Reports of Insurance Companies and according to the regulations and general guidelines of the Swedish Financial Supervisory Authority for Annual Reports of Insurance Companies. The assets and liabilities of the premium pension systems are included in the consolidated balance sheet of the Swedish Pensions Agency, and the operations of the premium pension system are reported in a separate section of the income statement. Certain revisions, simplifications and consolidations have been made to facilitate comparison between the presentation and that of the inkomstpension.

Assets and liabilities included in the temporary management of pension contributions are reported in the Orange report as an insurance asset and pension liability. This is a deviation compared to the Swedish Pensions Agency annual report.

Reporting of the share of the joint assets, liabilities and result of the Swedish Pensions Agency has been simplified by reporting a net amount as part of the balance sheet so that the balance sheet will balance.

Principles for Valuation of Assets and Liabilities

The assets and liabilities are valued mainly on the basis of events and transactions that are verifiable at the time of valuation. For example, the fact that contribution revenue normally changes at the rate of economic growth is not considered in the calculation of the contribution asset. Nor is consideration given in the valuation of the pension liability to the fact that pension disbursements, through indexation and other factors, will change in the future. The principle of valuing assets and liabilities without regard to the future arises from the fact that the financial position of the system is determined totally by the relationship between assets and liabilities, that is, the ratio termed the balance ratio.

Through the design of the inkomstpension, there is a strong link between the development of the system's assets and liabilities, respectively. When balancing is activated, there is basically an absolute link between the respective rates of change in liabilities and in assets.[3]

The way in which the assets and liabilities of the inkomstpension system are valued is based on the assumption that these will change at the same rate after each valuation. To put it another way, the method of valuation is based on the assumption that the system's future internal rate of return will be the same as the future change in the value of the pension liability, even though this is certain only if

[2]The accounting of the inkomstpension system in the annual report of the Swedish Pensions Agency for 2014 is based on preliminary information in regard to the operations of the National Pension Funds.

[3]With the method for calculating turnover duration, there is an implied assumption that the size of the economically active population will remain constant. If the population decreases, there is consequently a risk that the accounts will (somewhat) overestimate the system's assets in relation to its liabilities. It is reasonable to take for granted, however, that the population decrease will end at some point. If events take this course, the underestimation, and the possible resulting deficit in the buffer fund, will be temporary. The buffer fund will in time return to a level of at least SEK zero.

balancing is activated. When balancing is not 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 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 the changes are reflected in the events and transactions on which the accounting is 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 here, in addition to the rules of the pension system, are economic and demographic. The economic conditions consist of the average pension-qualifying income of each annual birth cohort and the sum of these incomes. The demographic factors relate to mortality at different ages. The relevant rules for the pension system are those that govern the calculation and the indexation of 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 of the accounting year by the turnover duration for the same year.[4] Turnover duration expresses how much time it takes, on average, from the payment of SEK 1 in revenue into the system to the disbursement of a pension based on the pension credit arising at the time the pension credit was earned. Thus, turnover duration reflects the age difference between the average pension contributor and the average pensioner that would result if the economic, demographic and legal conditions were constant.

The fact that the valuation of the contribution flow is determined by multiplying the year's flow by turnover duration is equivalent to valuing the contribution flow by an assumedly permanent stream of contributions, with the inflow each year equal to the contributions of the previous year, discounted by a rate of one (1) divided by turnover duration. If turnover duration increases, the rate of discount decreases, and the value of the contribution flow increases. If turnover duration goes down, the rate of discount goes up, and the value of the contribution flow decreases.

In order to limit fluctuations in the balance ratio, which is the same as reducing fluctuations in the annual result of the pension system, the contribution flow included 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 income index 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 revenue for the last three years is calculated, and the resulting number is adjusted upward by the average annual percentage change in the contribution flow for the most recent three years, after the change in consumer prices during the same period has been eliminated from the calculation. Then the change in consumer prices for the most recent year is added back into the calculation. Moreover, and also to limit fluctuations in the balance ratio, the median of the turnover duration for the most recent three years is used in calculating the contribution asset.[5]

[4]The calculation of turnover duration is described in Appendix B, Formula B.3.1.

[5]The Swedish Pensions Agency has shown that the smoothing made is inefficient and in some cases even counterproductive. See the report "Fördjupad analys av vissa beräkningsregler i inkomstpensionssystemet" (A Deeper Analysis of Certain Calculation Rules in the Inkomstpension System), February 25, 2013. The government has in the memorandum "A smoother and more timely development of inkomstpension" proposed changes that are in line with the Swedish Pensions Agency's proposal and would reduce the problem.

The assets of the National Pension Funds are valued at their so-called true value. This means that the assets are valued preferably at their latest price paid on the final trading day of the year, otherwise at their latest price bid. To limit variation, the mean value of the assets of the National Pension Funds for the last three years is used in calculating the balance ratio.

Valuation of Inkomstpension Liabilities

The liability of the inkomstpension to persons who have not 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 less than three percent of the total pension liability. The difference between estimated and confirmed pension credit is deducted in the accounts for the following year.[6]

The pension liability to retirees is calculated by multiplying the pensions granted (annual amount) by the expected number of years for which the 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 or balance index with a reduction of 1.6 percentage points. [7] The expected number of pay-out years is calculated from measurements of the pay-out period of pension amounts according to Swedish Pensions Agency records and is expressed in terms of so-called economic annuity divisors.[8] In economic annuity divisors consideration is given to any correlation between the size of pensions and the 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. That liability is to be calculated according to the principles set forth by the Government in Bill 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 growth in the income index.

On these conditions, the ATP liability as of December 31 of the year covered by the financial statements is calculated by estimating the ATP to be received at age 65 by each annual birth cohort. This amount is multiplied by the established economic annuity divisor of the accounting year for persons aged 65. It is assumed that persons older than 65 who have not yet drawn their full pension at the time of calculation will do so in the following year. The present value of the future pension amounts is then calculated through discounting it by the assumed annual change of two percent in the income index from the year of retirement until the year of the accounts. That amount is reduced by the similarly discounted value of the expected contribution inflow of individuals until age 64. Pension credit for income earned after that age is calculated entirely according to the provisions for the inkomstpension.

Parliament has decided that pension rights will be adjusted downward during the balancing periods (SFS 2014:1548). Therefore, the value of estimated pension rights relating to income year 2014 is adjusted downward by the ratio of the fixed balance index for 2015 and the fixed income index for 2015. In next year's annual report, the pension rights of the income year 2014 will also be adjusted downward by the same ratio.

---

[6] See Note 14, Table A.

[7] The recalculation of inkomstpension is made using the ratio between the new and old income index divided by 1,016. For those years when balancing is activated, the income index is replaced by the balance index.

[8] See formula B.6.4 in Appendix B.

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 2009:12) 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.

Temporary management consists of pension contributions paid in periodically during the year in which pension credit is earned; these are transferred to the premium pension system when the pension credit for the year has been confirmed. Assets under temporary management are reported at their accrued acquisition value.

Fund insurance assets refer to pension savers' investment in funds and are reported at the redemption price for fund assets. The pension liability for fund insurance consists of fund insurance assets and of liquid assets not yet converted into fund shares. Traditional insurance assets are invested in equity and interest funds and are reported at their true value.

The pension liability for traditional insurance with profit annuity is determined for each insurance policy as the capital value of the remaining guaranteed disbursements. That value is calculated on assumptions about future returns, life expectancy and operating expenses. The return is dependent on the market rates of interest on government bonds of varying maturities. The market rate of interest is determined on the basis of the time remaining to maturity for guaranteed disbursements. The market valuation of the liability means that provisions set aside for life insurance are affected by changes in interest rates. Paid-in premiums are reported as lump-sum premiums and increase the guaranteed amount. Assumptions about life spans are based on the population forecast of Statistics Sweden from 2012. Operating expenses are assumed to be 0.1 percent of the insurance capital. In total, this means that the guarantees in traditional insurance with profit annuity have been satisfactorily valued in accordance with generally accepted actuarial methods.

4 How the National Pension System Works

The principles of the inkomstpension and the premium pension are simple. A portion of your earnings each year is set aside in two different accounts. The pension is calculated on the basis of how much money you have in your accounts and how many years you are expected to live from the time when you start taking out your pension. The purpose of this section is to provide those who so desire with somewhat more advanced knowledge than these elementary basic premises.

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

With pension insurance 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.

One purpose of pension insurance is 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 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 (disability pension), years with small children (child-care years), and studies. Up until 2010, pension-qualifying amounts were also granted for compulsory national service. The maximum pension base is 7.5 income-related base amounts (SEK 426 750 in 2014). 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.[5]

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.[6] 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 2014 was SEK 78,949.

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.[7] 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 to retirees.

---

[1] Pension credit for the premium pension may be transferred between spouses. Transferred pension capital is currently reduced by 8 percent, since more transfers are made to women than to men and women on average live longer than men.

[2] In 2014: 8.07 × 56,900 = SEK 459,183.

[3] In 2014: 0.423 × 44,400 = SEK 18,781. Under current rules, which provide for rounding up to the nearest SEK 100, pension credit is earned on incomes of SEK 18,800 or more.

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

[5] This tax was SEK 16.5 billion in 2014; see Note 1.

[6] 0.1721 / 0.93 ≈ 0.185

[7] 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.

The moneys allocated to the premium pension, 2.5 percent of the pension base, are invested in interest-bearing assets until the final tax settlement. Only then can it be determined how much pension credit for the premium pension has been earned by each insured. When pension credit has been confirmed, shares are purchased in the funds chosen by the insured. For those who have not chosen a fund, their moneys will be invested in the Seventh National Pension Fund, AP7 Såfa, the government pension management alternative based on birth cohorts, which has a generation-fund profile. At the turn of the year 2014/2015, there were 851 funds in the premium pension system, administered by 103 different fund management companies. With each disbursement of pensions, enough fund shares are sold to provide the monthly amount.

Funds in the Premium Pension System in 2014 and Capital Managed 2010-2014
December 31, billions of SEK

	Number of registered funds 2014	Managed capital 2010	2011	2012	2013	2014
Equity funds	572	214	159	193	240	295
Mixed funds	103	17	41	51	63	77
Generation funds	34	43	60	71	90	114
Interest funds	142	24	28	24	27	27
AP7 Såfa/Premium Savings Fund [1]		110	105	132	182	246
Total	**851**	**408**	**393**	**471**	**602**	**759**

1 The Premium Savings Fund was replaced by AP7 Såfa from May 2010. AP7 Såfa consists of one part AP7 Equity Fund and one part AP7 Interest Fund, which are registered as an equity fund and an interest fund, respectively, in the table above.

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. The average return of the inkomstpension system (income-/balance index) has been 2.4 percent since 1995. [8] During the same period, the Premium Pension system has generated an annual rate of return of 6.4 percent.

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

[8] Capital-weighted return. For further information, see the chapter Changes in the Value of the Pension System, section on measures of change in value in the premium pension system.

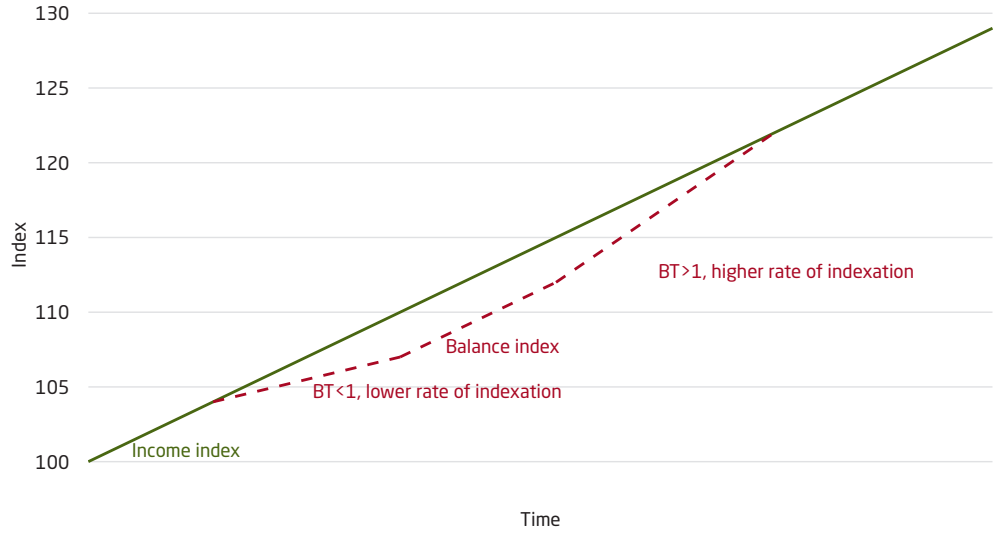
the contribution rate at 16 percent, income indexation must be suspended in such a situation. This is done by activation of balancing.

The assets of the system divided by the pension liability provides a measure of its financial position, a ratio referred to as the balance ratio (balanstal, BT). If the balance ratio is greater than the number one, assets exceed liabilities. If the balance ratio is less than one, liabilities exceed assets, and balancing is activated. When balancing is activated, pension balances and pensions are indexed by the change in a balance index instead of the change in the income index. The change in the balance index is determined by the change in the income index and the size of 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.[9] Indexation of pensions is reduced to the same extent.

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.

Figure 4.1 Balancing



BT 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 draw a pension. At current cost levels, the deduction for costs will reduce the inkomstpension by approximately 1 percent compared to what it would have been without the deduction.

[9]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.

Similarly, the costs of administration and fund management in the premium pension system are deducted from premium pension capital. In this case, however, the deduction continues to be made after the insured begins to draw a pension. The present cost deduction is 0.35 percent of premium pension capital per year. However, costs of administration are expected to decrease and the average deduction is estimated to be 0.28 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 8 percent from what it would have been without any cost deduction. In order to reduce the costs of pension savers, capital managers associated with the premium pension system are required to grant a rebate on the ordinary expenses of the funds. The rebates to pension savers in 2014 are equivalent to a reduction in fund management fees of about 0.59 percentage points. Without the rebates, pensions would be approximately 18 percent lower.

How is the Inkomstpension Calculated?

The inkomstpension is calculated by dividing the balance of the inkomstpension account by an annuity divisor (see Appendix A) at the time of retirement. Divisors are specific for each birth cohort and reflect remaining life expectancy when a pension is first withdrawn as well as an interest rate of 1.6 percent. 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.

An example: An individual who retires at age 65 has a remaining life expectancy of about 20 years. The interest of 1.6 percent reduces the annuity divisor to 17. If the individual has an inkomstpension account of SEK 2.5 million, he/she will receive an inkomstpension of SEK 149,059 per year (SEK 2.5 million/17), or SEK 12,255 per month.

The inkomstpension is recalculated annually according to the change in the income index after deducting the interest of 1.6 percentage points credited in the annuity divisor, so-called adjustment indexation.[10] This means that if the income index increases by exactly 1.6 percent more than inflation, as measured by the Consumer Price Index, pensions will increase at exactly the same rate as inflation. If the income index increases by more than 1.6 percent above the inflation rate, pensions will rise in constant prices, and vice versa. When balancing is activated, the income index is replaced by the balance index when pensions are recalculated.

How Is the Premium Pension Calculated?

The premium pension can be drawn either as traditional insurance with profit annuity 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 2.9 percent both in traditional insurance with profit annuity and in fund insurance, after a cost deduction of 0.1 percent from the so-called advance interest rate.

If the premium pension is drawn in the form of traditional insurance with profit annuity , the pension is calculated as a guaranteed life-long annuity payable in nominal monthly instalments. The fund shares of the insured are sold, and the Swedish Pensions Agency assumes responsibility for the investment as well as 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 if the traditional insurance with profit annuity so-called bonus rate reports a positive result (see Appendix A).

[10]The inkomstpension is recalculated as the ratio between the new and the old income index divided by 1.016. In years for which a balance ratio has been set, the income index is replaced by the balance index.

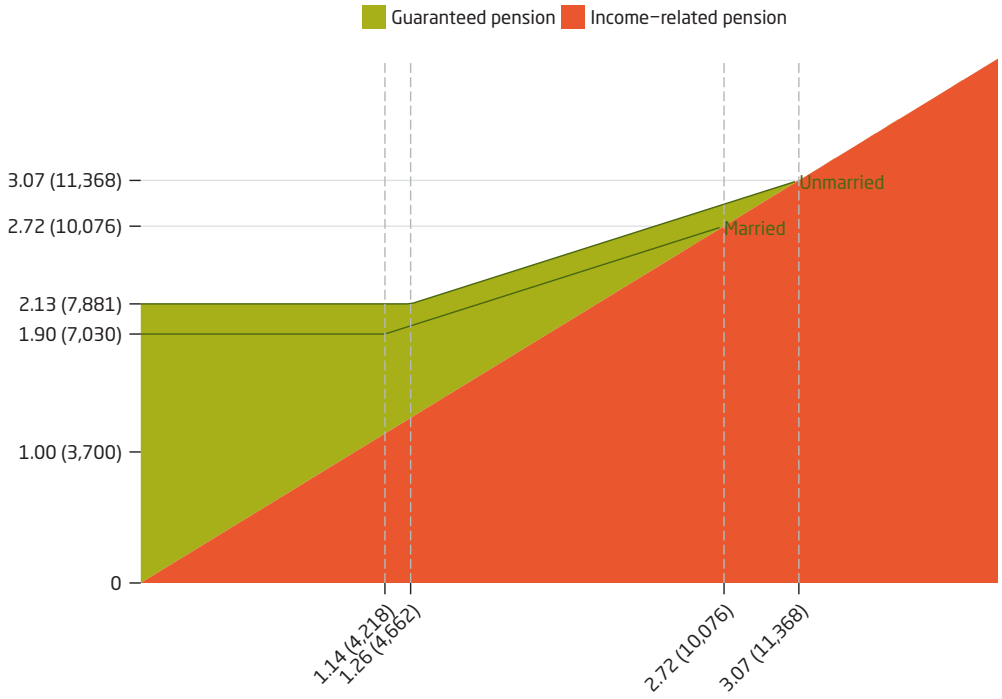
Fund insurance means that the pension savings remain in the premium pension funds chosen by the insured. With fund insurance, the amount of the premium pension is recalculated once each year based on the value of fund shares in December. In each month of the following year, a sufficient number of fund 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 insured elects to include a survivor benefit, the monthly pension will be lower, as the expected pay-out duration of the premium pension will then be longer.

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/EEA country is also credited toward a guaranteed pension.

Figure 4.2 Income-related Pension and Guaranteed Pension



Annual pension in price-related base amounts (monthly pension in SEK, 2014)

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

In 2014 the maximum guaranteed pension for a single pensioner was SEK 7,881 per month (2.13 price-related base amounts[12]) and for a married pensioner SEK 7,030 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 11,368 or more received no guaranteed pension in 2014. For a married pensioner the corresponding income limit was SEK 9,986.

An example: A pensioner living alone has an earnings-related pension equivalent to 2.26 price-related base amounts. The guaranteed pension is first reduced by the full amount of income up to 1.26 price-related base amounts. The remainder of 0.87 price-related base amount [=2.13-1.26] is reduced by 48 percent of the income above 1.26 price-related base amounts, or by 0.48 price-related base amount, which in this example gives a guaranteed pension of 0.39 price-related base amount [=0.87-0.48*(2.26-1.26)]. The total inkomstpension and guaranteed pension will then be 2.65 price-related base amounts [0.39+2.26].

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 simplify administration of the guaranteed pension.

The guaranteed pension is financed 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 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 later earn their entire pensions under the provisions for the inkomstpension and the premium pension.

For pension withdrawals before the year when the individual turns 65, the ATP is price-indexed. If the balancing is activated the year when the individual reaches age 65, the ATP is recalculated according to special rules. The month when the person reaches age 65, the ATP is recalculated by multiplication by all the balance ratios that have been set during that balance period. From the following year, the ATP is adjustment-indexed in the same manner as the inkomstpension.

[12] In 2014 the price-related base amount was SEK 44,400.

Proportion Granted a National Pension at Ages 61-75 *

percent

Birth cohort	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
1938	3.6	2.3	2.3	2.1	77.3	4.1	3.2	0.8	0.3	0.3	0.1	0.1	0.1	0.1	0.0
1939	3.9	1.9	2.1	2.3	75.5	6.5	2.3	0.8	0.3	0.3	0.2	0.1	0.1	0.1	0.0
1940	3.0	2.1	2.5	3.1	75.8	5.0	2.6	0.8	0.4	0.5	0.2	0.1	0.1	0.1	
1941	2.9	2.2	3.0	3.7	73.1	6.3	2.8	0.8	0.5	0.4	0.2	0.1	0.1		
1942	3.4	2.9	3.4	3.9	70.8	6.2	3.4	1.2	0.5	0.4	0.2	0.1			
1943	3.9	3.1	3.6	5.3	66.4	7.1	4.4	1.2	0.4	0.5	0.2				
1944	4.7	3.4	4.7	5.9	63.1	7.9	4.0	1.1	0.5	0.5					
1945	5.1	4.2	5.3	6.1	61.6	7.2	4.0	1.3	0.5						
1946	6.0	4.8	5.4	6.7	59.3	6.7	4.3	1.2							
1947	6.3	4.6	6.0	7.5	57.0	7.0	4.7								
1948	6.0	5.0	6.7	7.9	55.1	7.4									
1949	5.9	5.5	7.0	8.8	53.0										
1950	5.9	5.5	7.8	9.3											
1951	6.6	6.4	8.2												
1952	6.9	6.9													
1953	7.8														

* The proportions are for new retirees in relation to the potential number of retirees as of December 2014. Ages are as of December 31 of the year when the pensioner began drawing an inkomstpension/guaranteed pension.

The National Pension System in 2014 - in Illustrations and Figures

This section describes the pension system in figures. Figures that show pension credit acquisition and pensions, 4.3–4.7, have been calculated on the basis of all 5,548,000 individuals who earned pension credit in 2013. Pension credit attributed to pension accounts for 2014 refers to incomes earned in 2013.

Incomes, Pension Credit and Pension Disbursed

In Figure 4.3 it can be seen that the average income rises until about age 45, or more correctly, up to the birth cohort that reached age 45 in 2014. For subsequent ages or birth cohorts the average income is more or less the same as for 45-year-olds until around age 60, after which it falls sharply. One reason for the drop is the increase in the proportion of persons with sickness compensation (disability pensioners) with lower average incomes. Another reason for the drop in average income is that certain individuals have reduced their work hours, or have fully retired during the year.

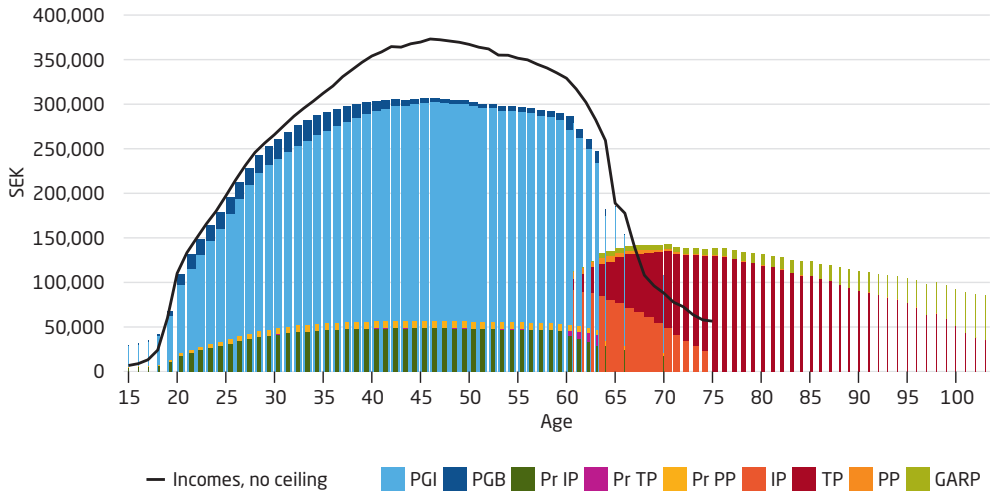
The importance of the ceiling on the earning of pension credit is shown in the figure – the average pension-qualifying income (pensionsgrundande inkomst, PGI) would follow the line for *incomes with no ceiling* if there had not been a ceiling.

The share of the earnings margin, 17.21 percent, used for the contribution to inkomstpension and premium pension respectively is shown in the bars of the graph.

The figure provides general information on the level of compensation for the 2,097,000 people who in December 2014 had received benefits from the national pension system. It also shows that current pensioners for the most part have had their pensions calculated according to the rules for ATP. Furthermore, the importance of the guaranteed pension is evident, particularly for older birth cohorts. In addition, it is shown that the inkomstpension has begun to replace the ATP for birth cohort 1938 and subsequent cohorts. The growing importance of the premium pension is not shown as clearly – but that development is also part of the picture.

The width of the bars reflects the number of people in the annual cohort, with cohort 1948 as the norm.

Figure 4.3 Average income, pension credit earned and pension disbursed



PGI	Pension-qualifying income	Pr TP	Pension credit, ATP	TP	ATP
PGB	Pension-qualifying amounts	Pr PP	Pension credit, premium pension	PP	Premium pension
Pr IP	Pension credit, inkomstpension	IP	Inkomstpension	GARP	Garanteed pension

Figure 4.4 Average income, pension credit earned and pension disbursed, women

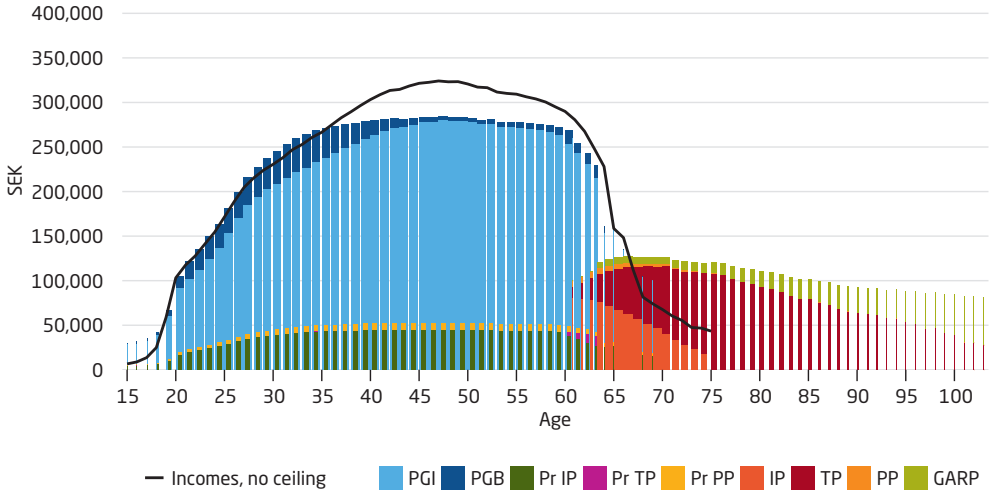
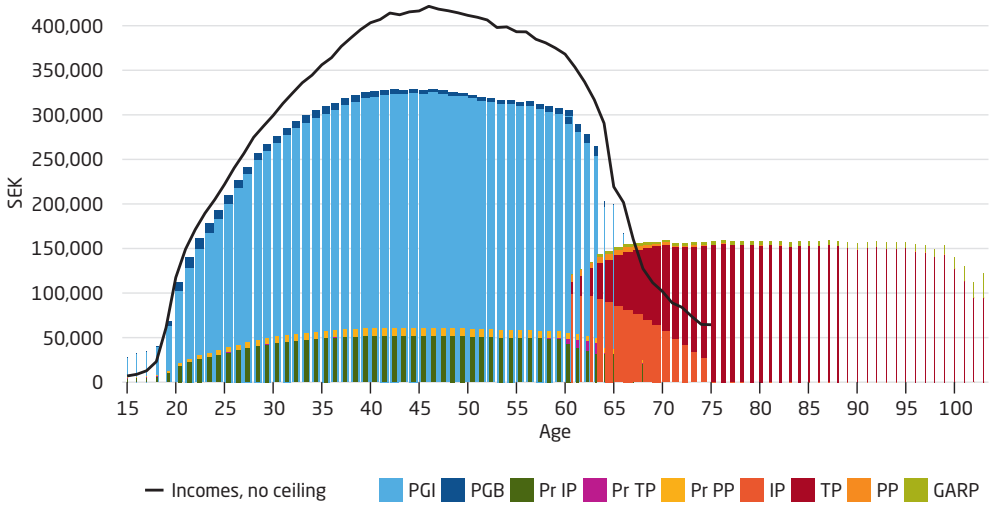


Figure 4.5 Average income, pension credit earned and pension disbursed, men

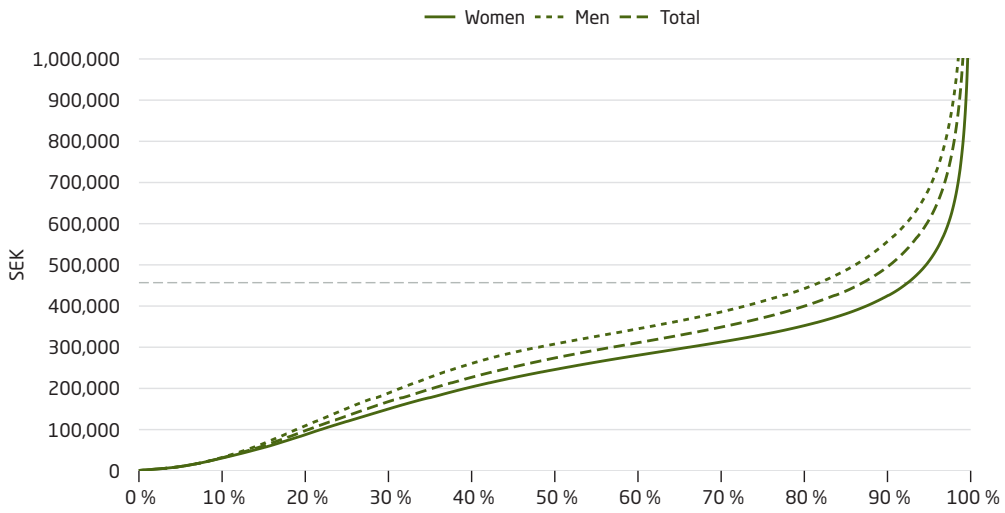


Figures 4.4 and 4.5 show that women on average have lower incomes than men. We also see that the ceiling on pension-qualifying income has a greater negative influence for men than for women, since a larger share of men's incomes are above the ceiling. That women receive more of the pension-qualifying amounts than do men is shown by the greater share of dark blue in their pension-qualifying incomes – more details about pension-qualifying amounts can be found in Figure 4.8. Moreover, women on average have lower pensions and considerably more guaranteed pension than men.

Earned Income

Figures 4.6 and 4.7 below show earned income divided between women and men. Incomes up to 8.07 income-related base amounts (SEK 456,800 for income year 2013) form the base for the national pension. The diagram below shows incomes for the income year 2013 divided up in rising order (in total 5,382,000 persons, of which 2,643,000 women and 2,739,000 men). Of these, 4,628,000 had an income below the ceiling (2,427,000 women and 2,201,000 men).

Figure 4.6 Earned Income for Women and Men, Income Year 2013



Refers to tax-assessed earned income (wages and salaries, income from active and passive business operations, sickness cash benefits, parental allowances, sickness and activity compensation, unemployment compensation etc.). The income is before deduction of the individual pension contribution and is shown for persons with incomes above the minimum for the obligation to file a tax declaration, 42.3 percent of the price-related base amount. The horizontal line at SEK 456,800 designates the ceiling on contributions.

Roughly 538,000 men, or 20 percent of men, had an income above the ceiling on pension-qualifying income. The corresponding proportion for women was 8 percent or approximately 216,000 women. The table below shows the average tax-assessed earnings and pension-qualifying income for women and men. From the table it can be seen that women's incomes are lower than men's (77 percent of tax-assessed income and 84 percent of pension-qualifying income).

Average Earned Income and Pension-Qualifying Income, Income Year 2013
SEK

	Tax-assessed earned income	Pension-qualifying income
Women	244,400	232,900
Men	315,700	277,000
Total	**280,700**	**255,300**

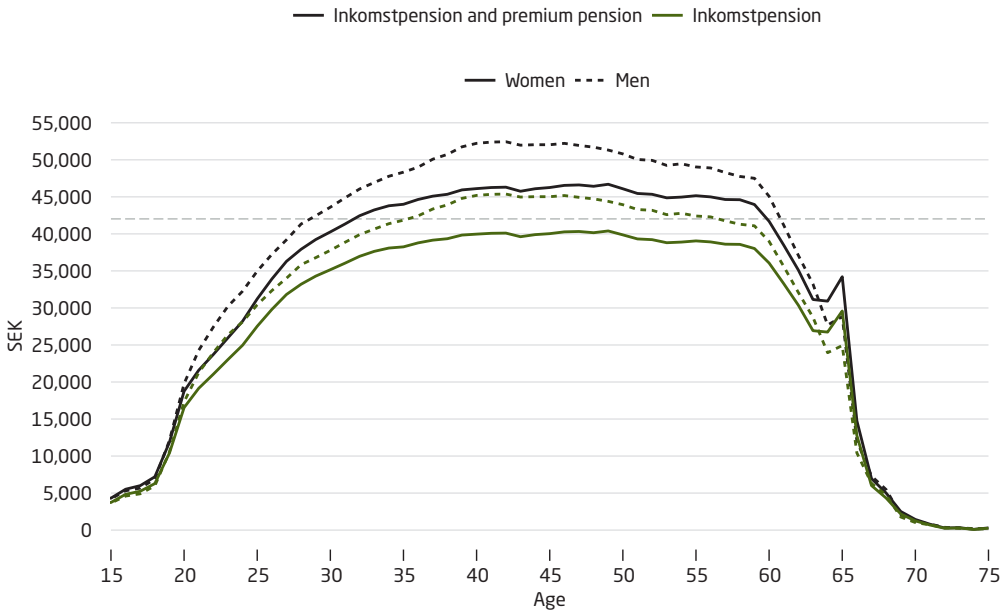
Pension Credit for the Inkomstpension and the Premium Pension

In 2014, the average allocated pension credit for inkomstpension and premium pension was SEK 42,100 - lower for women (SEK 39,900) and higher for men (SEK 44,000); see the table below.

Average Pension Credit Earned, 2013
SEK

	Inkomstpension	Premium pension	Total
Women	34,700	5,200	39,900
Men	38,100	5,900	44,000
Total	**36,500**	**5,600**	**42,100**

Figure 4.7 Average Pension Credit Earned, Women and Men, 2013



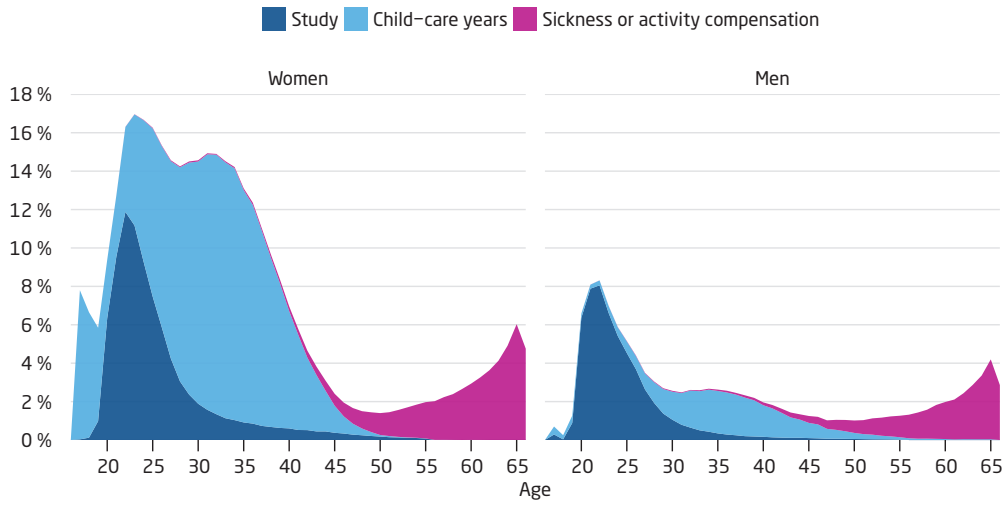
The horizontal line at SEK 42,000 shows the average for all individuals.

From the table and the figure above it can be seen that the average amount is approximately 9 percent less for women than for men. The average earned pension credit for inkomstpension and premium pension increases somewhat from age 64 to 65 (age at year-end). That is because at age 65 and later, the total income base is included in the inkomstpension and premium pension system. Before age 65, these cohorts have a certain proportion of their income-qualifying old age pension in the form of supplementary pension and the remaining proportion in the form of inkomstpension and premium pension (twentieth-part phasing-in).

Pension-Qualifying Amounts

Credit is granted for pension-qualifying amounts in particular phases of individuals' lives, such as years with small children or of studies. In 2014 pension-qualifying amounts constituted 7 percent of the allocated pension base for women and approximately 2 percent for men. The largest portion for women, 4 percent, consisted of amounts for years with small children. For men sickness and activity compensation accounted for the largest share, or just less than 1 percent of the entire pension base. Viewed over a life cycle, pension-qualifying amounts are received by younger people for study and years with children, and later in life amounts are received for sickness compensation.

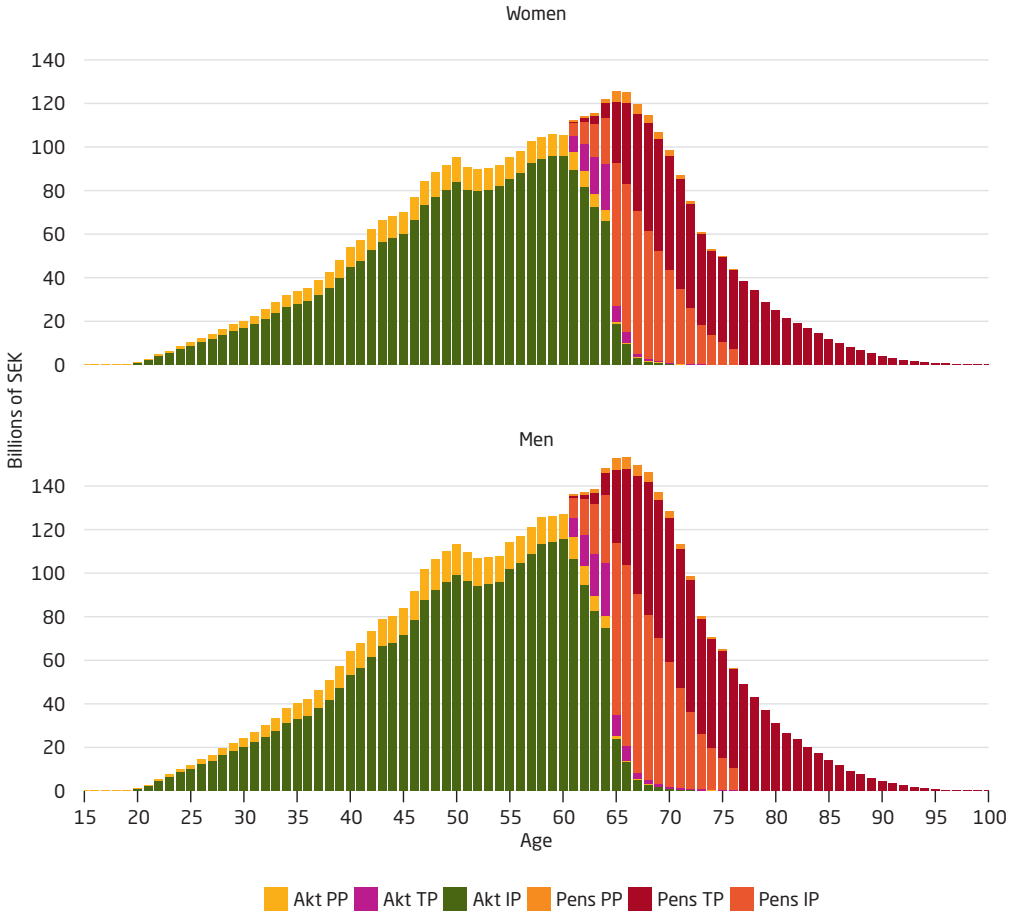
Figure 4.8 Pension-Qualifying Amounts, Income Year 2013
percent of pension base



Pension Liability

The pension liability – the pension capital of the insured – in the inkomstpension and the premium pension system was SEK 8,946 billion as of December 31, 2014. This liability, divided between women and men and for every age from 15 to 100, is shown in Figure 4.9. It can be seen that the pension capital is less for women than for men. It is also evident that supplementary pension (ATP) is the principal pension asset for current pensioners, but the ATP will soon disappear completely for the economically active birth cohorts. The year 2017 is the last one when ATP credit can be earned – and the amounts earned will be very small. For the economically active, the inkomstpension will be the predominant pension, while at the same time the growing importance of the premium pension can be detected. If it is assumed that the individual's first earnings come at around age 20, all who were 39 years old or younger in 2014 have earned inkomstpension and premium pension credit for their entire economically active lives since the allocations began in 1995. Those who are older than this have instead earned more credit for their inkomstpension.

Figure 4.9 Pension liability, women and men, at year-end 2014



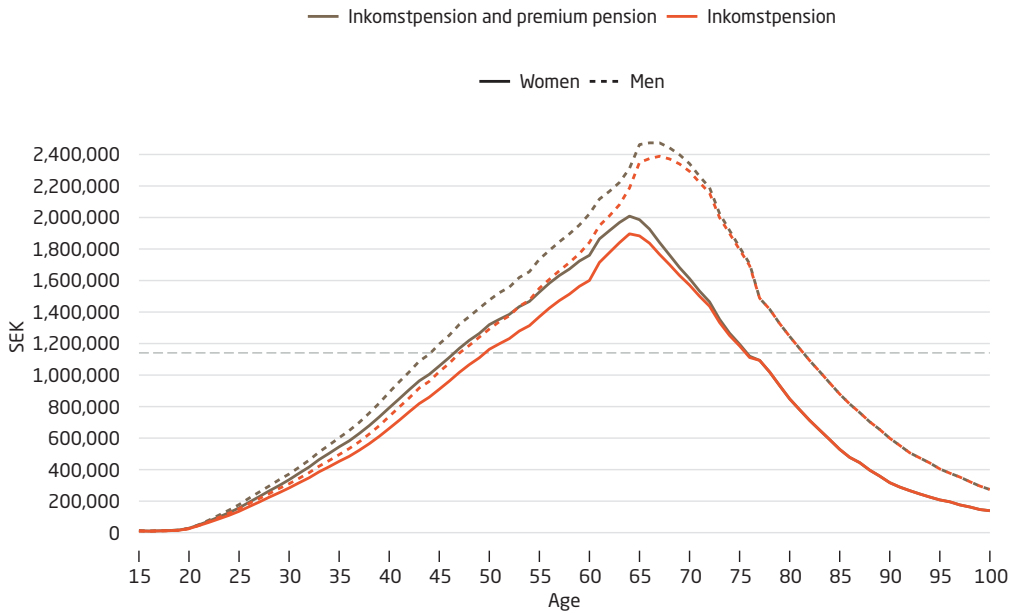
Akt PP	Premium pension, economically active	Pens PP	Premium pension, retirees
Akt TP	ATP, economically active	Pens TP	ATP, retirees
Akt IP	Inkomstpension, economically active	Pens IP	Inkomstpension, retirees

Average pension liability (the sum of all years of earned pension credit for inkomstpension and premium pension) amounted to just over SEK 1 million at the end of 2014. See the table below.

Average Pension Liability
SEK

	Inkomstpension	Premium Pension	Total
Women	931,700	106,700	1,019,066
Men	1,154,600	124,400	1,260,031
Total	**1,044,300**	**115,800**	**1,140,809**

Figure 4.10 Average Pension Liability, 2013



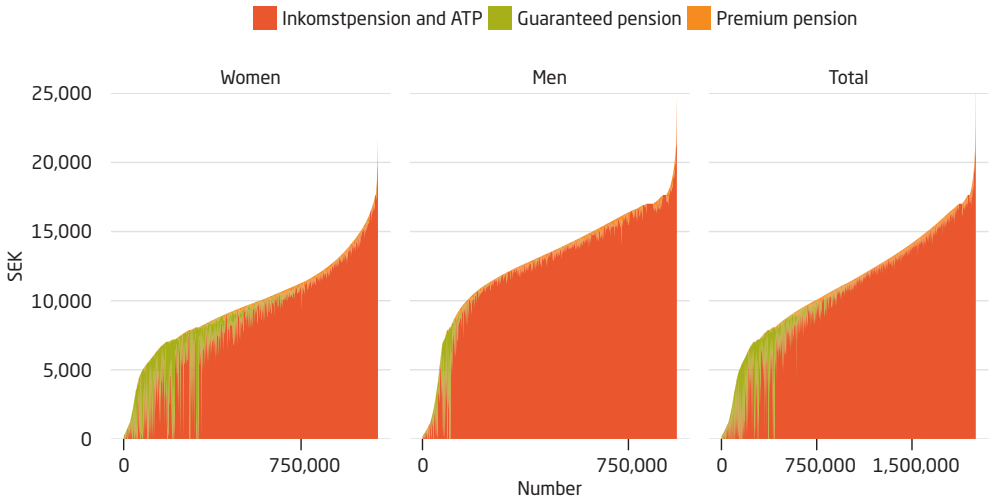
The horizontal line at SEK 1,140,809 shows the average for all individuals.

The figure above shows that average liability increases with increasing age up to and including the age of 65. After that, liability decreases, since many have entered retirement.

Pension Disbursements

In the figures below the disbursements of the national pension in December 2014 for men and women born in 1949 or earlier are shown in rising order of size (1,120,000 women and 978,000 men). For total pensions disbursed during 2014, see Note 2 in the chapter Notes and Comments.

Figure 4.11 Pension Disbursements, Women and Men, December 2014



The difference in level and composition of different parts of pensions for men and women is the most striking feature of the figure. The average pension for women – income-based pension and guaranteed pension – was SEK 9,700. The corresponding amount for men was SEK 12,800. Of women's national pensions, 90 percent consisted of income-based pensions and 10 percent of guaranteed pensions. However, a full 56 percent of women had some portion of guaranteed pension. That the proportion with guaranteed pension increases sharply with age is not shown by the diagram. Of the national pension for men, 98 percent consisted of income-based pension and 2 percent of a guaranteed pension. A total of 16 percent of men had some proportion of guaranteed pension. Neither the widow's pension nor the housing supplement, each of which is paid primarily to women, is included in the figure.

The pattern that emerges from the figure – with swathes of people receiving only guaranteed pension – is clearest in the case of one group, consisting mostly of women, that receives maximum guaranteed pension, that is, forty fortieths of guaranteed pension. This explains the concentration of green at the maximum guaranteed pension for "married persons" (SEK 7,038 per month in 2014) and for "unmarried persons" (SEK 7,881 per month). Those with a lower guaranteed pension, but also without any income-based pension, have fewer years of residence in Sweden. Only persons born in 1938 or later can receive premium pension – based on their own income, but only on that part earned since 1995. Thus the impact of premium pension is still so limited that it is difficult to detect in the figure. However, the importance of premium pension is growing with each new annual cohort that draws a pension. The few individuals with a national pension exceeding SEK 20,000 per month have reached that pension level in part by postponing pension withdrawal. The maximum public pension paid in 2014 was SEK 32,100 per month. That was to a person born later than 1938 who had continued to work after the age of 65.

5 Costs of Administration and Capital Management

The income statements of the inkomstpension and the premium pension show the costs reported by the Swedish Pensions Agency and the National Pension Funds in their own income statements as "costs reported gross." The capital management costs of the National Pension Funds and the premium pension system that are reported "net,"[1] that is, against revenue or as a lower return on funds, are not shown directly in the income statement of the pension system.

In this section, costs reported gross and costs reported net are compiled, as are transaction costs that can only be captured partly in the accounts of the National Pension Funds and the Swedish Pensions Agency. The purpose is to provide as full a picture as possible of the total costs of the old-age pension system. It is important to keep in mind that the costs reported net in this section, as well as transaction costs, have already had a negative impact on the National Pension Funds.

As far as the insured are concerned, the effects of costs reported net differ for the premium pension and for the inkomstpension. In the premium pension system these costs decrease either the return or the premium pension account through a deduction for costs. Thus costs reduce assets and thereby the future premium pension of the insured. On the other hand, the costs reported net by the National Pension Funds are not included in the costs deducted from the pension account. Rather, the costs of the National Pension Funds reported net affect the assets and return of those funds directly. Since only system assets, not liabilities, are reduced by these costs, their impact on the result of the system is negative. This means that the balance ratio is negatively affected. However, as the costs reported net are very minor in relation to the pension liability, the impact on the balance ratio is quite limited. When balancing is activated, the costs reported net affect the indexation of inkomstpension and inkomstpension capital.

Accounting for Total Costs

The total cost of insurance administration and capital management for the pension system, in addition to other charges, amounted to SEK 6.0 billion, of which SEK 2.1 billion is reported in the income statement of the pension system. The SEK 2.1 billion is the sum of insurance administration (SEK 1,276 million) and the operating expenses of the National Pension Funds (SEK 865 million). See the table Total Costs and Charges of the Old-Age Pension System.

For the inkomstpension, the costs reported in the income statement for 2014 were SEK 1,736 million, of which SEK 871 million are for insurance administration and SEK 865 million are for operating expenses of the National Pension Funds. In addition to the SEK 865 million in operating expenses, the National Pension Funds had fixed management fees of SEK 828 million. The sum of reported capital management costs shown in the income statements of the National Pension Funds was thus SEK 1,693 million. Performance-based fees and transaction costs, such as brokerage, are not reported as direct costs of the National Pension Funds, but instead negatively affect the rate of return. Performance-based fees are not an ordinary cost of administration but a way for the National Pension Funds to share risk and return with their outside managers. In total the National Pension Funds paid SEK 298 million

[1]The concept of costs reported net is used here for the costs which consist of fixed management fees in the accounts of the National Pension Funds and which in the accounts of the premium pension system represent the net of the items referred to as administrative costs and rebates on administrative costs.

in performance-based fees and SEK 256 million in brokerage and other transaction costs. When these costs and charges are included, the total costs of the inkomstpension are SEK 3,109 million.

The Swedish Pensions Agency's income statement for the premium pension system shows that administrative costs were SEK 393 million. That sum does not include SEK 9.5 million for administrative costs for traditional insurance with profit annuity. This cost is reported net through reduction of the return on funded capital (see Note 17). Nor does that sum include instalment repayments for the cost of setting up the premium pension system. In 2014, this cost amounted to SEK 165 million and was charged to premium pension savers and pensioners via Agency fees. The total cost of insurance administration for the premium pension amounts to SEK 405 million. See the item Total Insurance administration in the table below. If instalment repayments are included, the Agency's costs for the premium pension system totals SEK 559 million. See the table below.

In the premium pension system, the item Fixed management fees refers to both fixed and performance-based fees charged by the premium pension funds (including the 7th AP Fund) after payment of rebates to premium pension savers. The gross management fee for premium pension funds was SEK 5.75 billion. Of this, funds totalling SEK 3.882 billion were reimbursed in the form of rebates. The net total of fees is thus SEK 1.868 billion. As of 1 January 2015, a new discount model is used, limiting maximum fee charges to a percentage of the funds. For equity funds, the fee is limited to a maximum of 0.89 per cent after repaid discount, for fixed-income funds it is limited to 0.42 percent, and for mixed and generation funds it is limited to 0.62 percent. The new discount model will help increase discounts in the coming years. In addition to the 1,868 million in fixed management fees, an estimate of transaction costs for premium pension funds is also shown. Transaction costs consist primarily of broker commissions paid by funds as part of buying and selling liquid capital when funds purchase securities. In 2014, these were estimated at SEK 650 million.

Use of Contribution Income as Liquidity
millions of SEK

	2012	2013	2014
Agency fees	**436**	**489**	**559**
Management Costs for the Swedish Pensions Agency	-307	-292	-323
Interest Relating to Debt at The Swedish National Debt Office	-23	-16	-7
Payments to Other Agencies	-59	-59	-64
Remainder Available for Repayment to the The Swedish National Debt Office	-47	-122	-165

Costs and Charges of the Old-Age Pension System, 2014

millions of SEK

	Inkomstpension	Premium pension	Total
Insurance administration			
Collection of contributions, etc. (Swedish Tax Agency)	408	64	472
Pension administration [1]	463	341	804
Total Insurance administration	**871**	**405**	**1,276**
Capital management costs and charges			
Reported capital management costs	1,693	1,868	3,561
Operating expenses of the National Pension Funds (reported gross)	865		865
Fixed management fees (reported net)	828	1,868	2,696
Performance-based fees [2]	289		289
Transaction costs [3]	256	650	906
Total Capital management costs and charges	**2,238**	**2,518**	**4,756**
Total	**3,109**	**2,923**	**6,032**

1 The amount for the inkomstpension refers to actual cost, whereas the amount in Note 4 refers to the compensation paid by the National Pension Funds for costs of administration.

2 This item represents fees that the National Pension Funds pay only if a particular manager achieves a certain agreed result.

3 Transaction costs refer to brokerage and clearing fees charged on the stock and derivatives market. These charges are included directly in the transaction and have a negative effect on the return earned by the funds. Interest and foreign-currency transactions are paid for through the difference between buying and selling prices and thus cannot be reported as a separate charge. Premium pension: The costs included here are only those of the funds that report the so-called total cost share (TCS) to the Swedish Pensions Agency. These funds account for roughly 84 percent of the capital in the premium pension system. The amount also includes costs of interest and coupon (dividend) taxes in the funds.

Development of Costs 2010-2014

Below, cost items are shown for the past five years. Costs are reported in millions of SEK and in SEK per number of insured, that is, the number of persons with a pension account, including pensioners.

Costs of the Inkomstpension

millions of SEK

	2010	2011	2012	2013	2014
Insurance administration					
Collection of contributions, etc. (Swedish Tax Agency)	402	377	380	380	408
Pension administration [1]	568	506	491	449	463
Total Insurance administration	**970**	**883**	**871**	**829**	**871**
Capital management costs and charges					
Reported capital management costs	1,297	1,228	1,351	1,499	1,693
Operating expenses of the National Pension Funds (reported gross)	820	791	845	820	865
Fixed management fees (reported net)	477	437	506	679	828
Performance-based fees	368	241	209	315	289
Transaction costs [2]	186	179	192	209	256
Total Capital management costs and charges	**1,851**	**1,648**	**1,752**	**2,023**	**2,238**
Total	**2,821**	**2,531**	**2,623**	**2,852**	**3,109**

1 The amount for the inkomstpension refers to actual cost, whereas the amount in Note 4 refers to the compensation paid by the National Pension Funds for costs of administration.

2 See the explanation in the table Total Costs and Charges of the Old-Age Pension System

Costs of the Premium Pension

millions of SEK

	2010	2011	2012	2013	2014
Insurance administration					
Collection of contributions, etc. (Swedish Tax Agency)	63	59	59	59	64
Pension administration	283	281	307	291	341
Total Insurance administration	**346**	**340**	**366**	**350**	**405**
Capital management costs and charges					
Reported capital management costs	1,141	1,155	1,371	1,646	1,868
Fixed management fees (reported net)	1,141	1,155	1,371	1,646	1,868
Transaction costs	663	645	635	527	650
Total Capital management costs and charges	**1,804**	**1,800**	**2,006**	**2,173**	**2,518**
Total	**2,150**	**2,140**	**2,372**	**2,523**	**2,923**

Figure 5.1 Insurance Administration, Inkomstpension

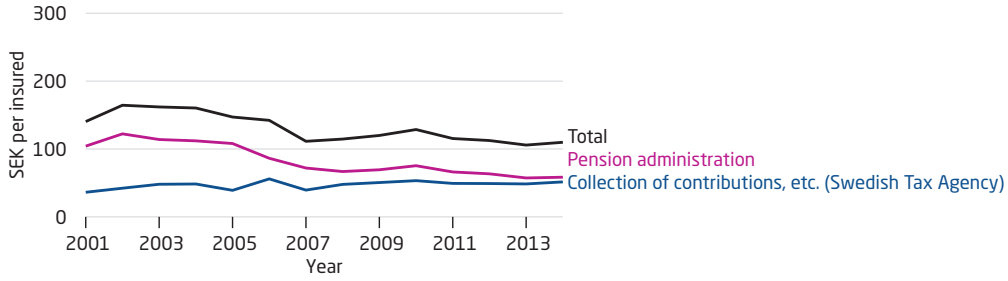


Figure 5.2 Insurance Administration, Premium Pension

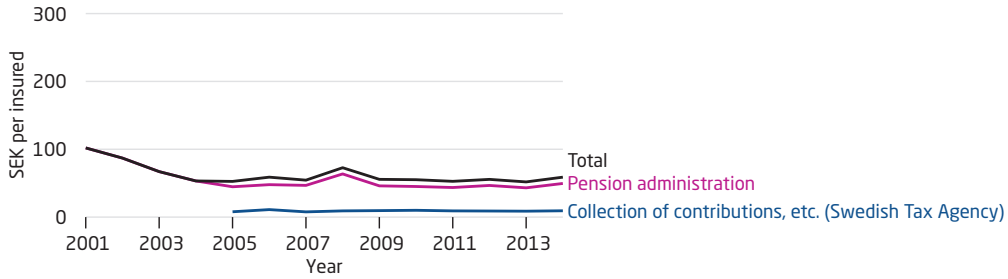


Figure 5.3 Capital management costs and charges, Inkomstpension

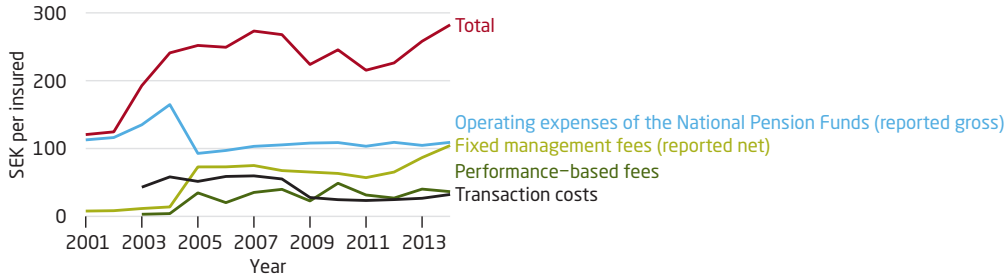
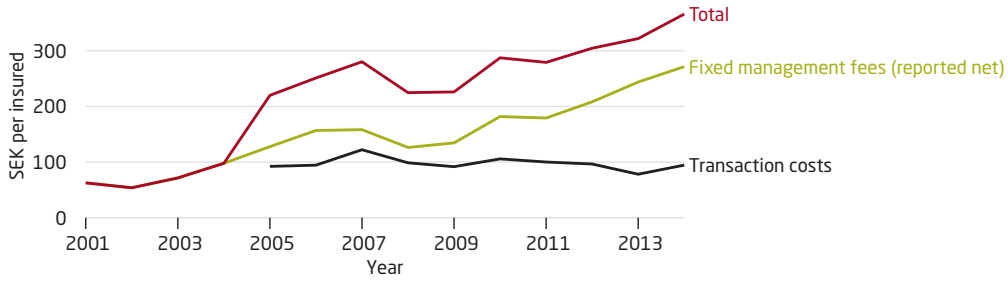


Figure 5.4 Capital management costs and charges, Premium Pension



The above tables show that inkomstpension costs have increased somewhat over the past year. Premium pension costs have also increased from 2013 to 2014. The development of capital management costs and fees largely depends on how average managed capital develops since capital management costs are charged as a percentage of managed capital.

There are a number of cost items within insurance administration that are common to inkomstpension and premium pension. Examples are the production and distribution of the Orange Envelope, and the Swedish National Tax Board's reimbursement for tax collection, etc. Such costs are spread between the various branches of insurance in proportion to the number of insurees, volume of fees or other distribution key. Capital management costs for inkomstpension refer to the First–Fourth National Pension Funds and the Sixth National Pension Fund. Capital management costs for premium pension are mainly fees charged by the premium pension funds, including the Seventh National Pension Fund, after rebates. Within premium pension managed capital is increasing so costs in SEK are also increasing since the percentual fee does not fall at a rate sufficient to ensure unchanged charging in SEK per insured.

Capital Management Costs in Relation to 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 premium pension system for traditional life insurance with profit annuity. In 2014 the total capital management costs for the First–Fourth National Pension Funds and for the much smaller Sixth National Pension Fund was 0.15 percent of the capital managed. The performance-based fees of the National Pension Funds were 0.03 percent, and transaction costs were 0.02 percent; thus, total capital management costs and charges amounted to 0.20 percent of the capital managed. Premium pension capital management costs refer to costs charged by the premium pension funds. In SEK, costs are determined by each fund's percentual contribution and by savers' chosen distribution between the premium pension funds. The premium pension uses one of the market's most powerful discount models, obliging funds to repay retroactively a large part of the charged fees to the Swedish Pension Agency, for redistribution to savers and pensioners. The capital management costs reported for approximately 850 funds within the premium pension system amounted after rebates to 0,28 percent, while the funds' transaction costs are estimated at 0.10 percent. The total of capital management costs and charges was thus 0.38 percent of the capital managed. Cost differences in percent between inkomstpension reserve funds and premium pension funds are due partly to economies of scale in the inkomstpension, and partly to the fact that the funds of the inkomstpension invest about 39 percent of their capital in bonds or similar assets with lower costs of administration relative to stocks. In the premium pension system, approximately 17 percent of total assets are invested in holdings of this type.

Average capital managed
billions of SEK

	2010	2011	2012	2013	2014
Inkomstpension	861	884	915	1,008	1,121
Premium pension	353	385	429	527	662

Capital Management Costs in Relation to Capital Managed

percent

	2010	2011	2012	2013	2014
Inkomstpension					
Reported capital management costs	0.15	0.14	0.15	0.15	0.15
Operating expenses of the National Pension Funds (reported gross)	0.10	0.09	0.09	0.08	0.08
Fixed management fees (reported net)	0.06	0.05	0.06	0.07	0.07
Performance-based fees	0.04	0.03	0.02	0.03	0.03
Transaction costs	0.02	0.02	0.02	0.02	0.02
Total Inkomstpension	**0.21**	**0.19**	**0.19**	**0.20**	**0.20**
Premium pension					
Reported capital management costs	0.32	0.30	0.32	0.31	0.28
Fixed management fees (reported net)	0.32	0.30	0.32	0.31	0.28
Transaction costs	0.19	0.17	0.15	0.10	0.10
Total Premium pension	**0.51**	**0.47**	**0.47**	**0.41**	**0.38**

Insurance Administration Costs in Relation to Capital Managed

To cover the administrative costs for inkomstpension, an annual cost deduction from pension balances is made. For the year 2014, cost deduction for inkomstpension from pension balances was 0.03 percent. The deduction for costs is made only up to the time pension disbursement begins. Neither the fixed management fees of 0.07 percent of capital managed, the performance-based fees of 0.03 percent of capital managed, nor the transaction costs of 0.02 percent of capital managed are charged to pension savers through a deduction for costs. The cost deducted from inkomstpension balances shall correspond to the cost declared in the inkomstpension income statement. This amount, divided by the pension liability – the insured persons' balances in their inkomstpension accounts – that has not started to be paid out ought to be the cost deduction expressed as a percentage. One reason this is not the case relates to the phasing in of the system; up to 2021 the deduction for costs increases incrementally, see note 11. Another reason is that it is budgeted expenses which are deducted from the accounts. The (small) discrepancies between costs deducted and actual costs thus seen are followed up and corrected in the next year's cost deduction.

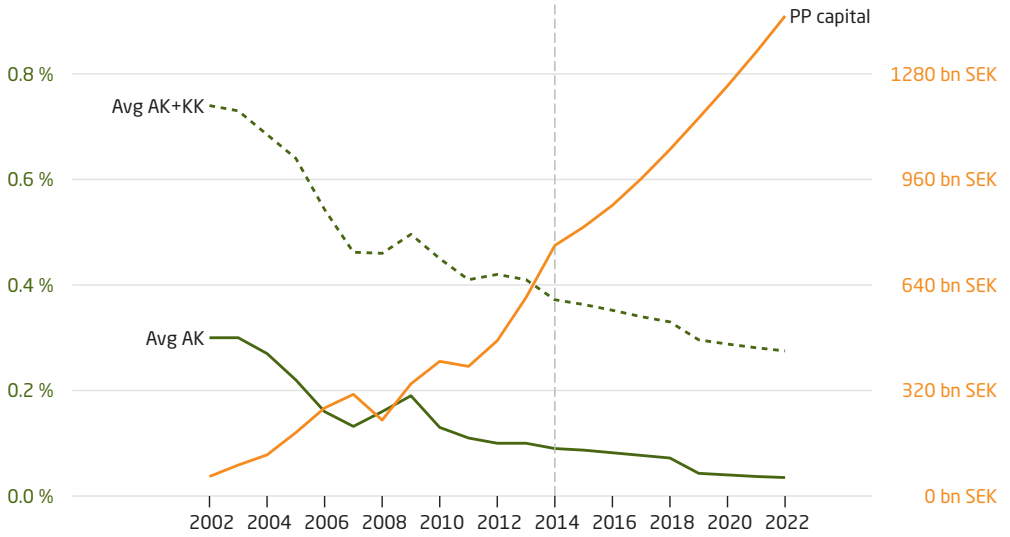
The deduction for premium pension administration costs was on average 0.09 percent in 2014. The maximum cost charged for 2014 was SEK 120 per account holder. The premium pension has equivalent small periodic discrepancies between the fee charged and the actual cost. These deviations too are corrected continuously.

Insurance administration costs

percent

	2010	2011	2012	2013	2014
Inkomstpension	0.0343	0.0340	0.0300	0.0307	0.0326
Premium pension	0.16	0.11	0.10	0.10	0.09

Figure 5.5 Costs of the Premium Pension



Avg AK+KK	Costs of administration including capital management costs
Avg AK	Costs of administration
PP capital	Premium pension capital

What Difference Do Costs Make in the Size of a Pension?

Costs are an important factor in determining the size of a future pension. A seemingly low annual fee can reduce pensions considerably 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. Also the insured are able to influence certain costs for the premium pension.

The following simplified calculation provides a fairly accurate 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 inkomstpension 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 charge for administrative costs will reduce the inkomstpension to $(1–0{,}0004)^{21} \approx 99$ percent of what it would have been without the charge, or by roughly 1 percent. If the costs of the premium pension decrease, for example, to 0.3 percent, the charge for costs will still reduce the premium pension appreciably to $(1–0.0003)^{33} \approx 91$ percent of what it would have been without the charge, or by 9 percent. The reason why the charge for costs is deducted for 33 years is that in the premium pension system the deduction continues during the period of pension disbursement and that the expected return is somewhat higher, givng a longer turnover period. 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 charge for costs for the same period as in the example above is 1 percent, pension capital savings will be 72 percent of what they would have been with a fee of 0 percent; in other words, 28 percent is lost in charges for costs.

6 Changes in the Value of the Pension System

Sweden's national pension is based primarily on earnings. In each of their economically active years, gainfully employed individuals contribute a certain portion of their income toward a pension. The bulk of their contribution goes to the inkomstpension system, a lesser share to the premium pension system. Pension credit is accumulated over a long period, 40–45 years, sometimes even more. The size of future pensions will thus depend heavily on the change in the value of contributions paid into the system. For example, someone who deposits a constant amount each year for 40 years, at an annual interest rate of 2 percent, will end up with a final balance that is 54 percent higher than that of a saver with no annual return.

In the inkomstpension system the change in value is normally determined by the percentage increase in the income index. This index follows the average rate of growth in the earnings of the economically active. In the premium pension system, on the other hand, the change in value is determined by the return on the funds of pension savers. For pensioners choosing traditional insurance with profit annuity, the development of value is determined by that of the assets in which the Swedish Pensions Agency has invested. The discussion below applies hereafter to the development within fund insurance. Another difference is that the change in the value of the inkomstpension is the same for everyone, whereas the return of the premium pension may vary from one individual to another, depending on the type of funds chosen. Even though the annual change in inkomstpension is the same for everyone, pension rights determined during a balancing period benefit from a positive balancing despite not having fully shared in the negative balancing. This will be changed as of 2015.

Changes In Value During 2014

In the inkomstpension system, pension balances are normally revalued by the change in the income index. The change in value takes place only at the outset of each year, unlike the premium pension system, where changes take place on a daily basis. Since so-called balancing took effect in 2010, it is relevant to measure the change in value by the balance index, which is used as the index as long as balancing remains activated. The balance index decreased in 2010 by 1.4 percent and in 2011 by 2.7 percent. By contrast, the years 2012 and 2013 saw increases in the balance index of 5.2 percent and 5.8 percent respectively. In 2014, the balance index once again fell by 1.1 percent only to rise again in 2015 by 2.5 percent. See the table below. Thus, the inkomstpension credit earned by the gainfully employed was changed by these percentages at the turn of each year.

For pensioners the inkomstpension and the ATP are recalculated each year by the change in the income-/balance index, reduced by 1.6 percent. The reduction is due to the fact that an interest rate of 1.6 percent has already been credited to the inkomstpension in the annuity divisor.[1]

During a period of balancing, the inkomstpension is affected by the development of capital markets since the value of the National Pension Funds is included in the calculation of the balance ratio. Since the National Pension Funds are equivalent to only about 14 percent of all assets, the effect is not very great. The decrease in the market value of investments in the record drop of 2008 was one of the main reasons why balancing was activated in 2010..

[1] For a more detailed description of the income index and the balance index, see the chapter How the National Pension System Works.

The change in the value of the premium pension system depends entirely on the development of capital markets. Both the Swedish and the global stock market showed a positive tendency in 2014 as in the previous year. The change in value of the premium pension funds in 2014 was 20.7 percent, which may be compared to the return of the previous year, 21.1 percent.

Annual Indexation of Inkomstpension Accounts and Return on Premium Pensions
percent

	2000	2001	2002	2003	2004	2005	2006	2007
Income-/balance index	1.4	2.9	5.3	3.4	2.4	2.7	3.2	4.5
Premium pension index [1]	-4.5	-11.1	-31.2	17.8	8.8	30.6	12.1	5.7
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	
	6.2	-1.4	-2.7	5.2	5.8	-1.1	2.5	
	-34.2	34.7	12.2	-10.7	12.1	21.1	20.7	

1 The premium pension index measures how much an amount paid into the system at a certain point in time has changed over a certain period (so-called time-weighted return). In this case the period is the same as a calendar year. The return for individual pension savers will normally have varied depending on the funds that they have chosen.

Measures of Change in Value in the Premium Pension System

The change of value in the premium pension system can be measured in several ways. The measures presented in this chapter are so-called time-weighted return and capital-weighted return. Another term for capital-weighted return is internal rate of return.

Time-weighted return is used to describe the change in value of a fund or an index. The time-weighted return shows the return on one krona deposited at the outset of the period. No consideration is given to whether deposits or withdrawals have been made during the period.

Capital-weighted return can be used for evaluating the premium pension on an overall basis, but also individual accounts. Consideration is given to the timing and amount of all deposits and withdrawals for the account, and to the balance at the end of the period. The capital-weighted return matches the average annual interest rate during the period.

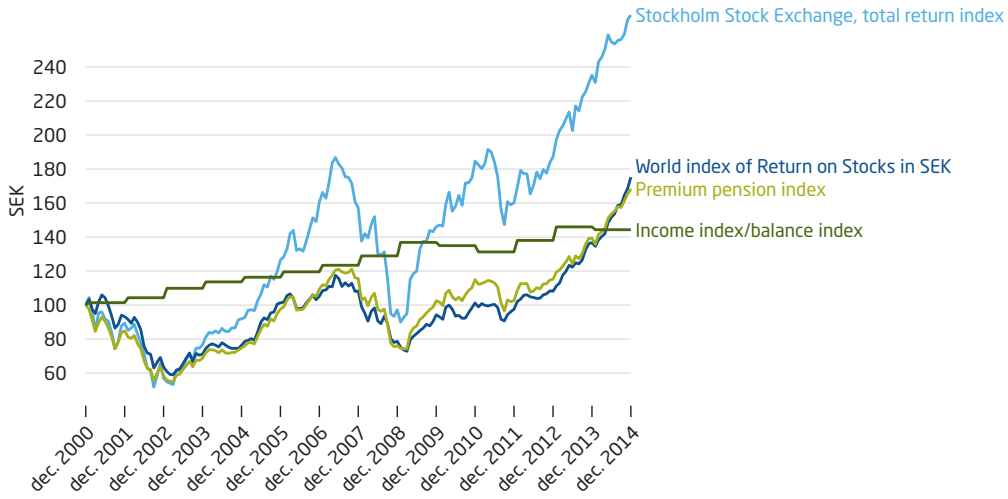
In the section Income and Premium Pensions as Complementary, time-weighted return is used, whereas capital-weighted return is used in the section Change in Value of Pension Savers' Accounts. (For a more thorough description of the time- and capital-weighted return, see Appendix A.)

Income and Premium Pensions as Complementary

One reason for establishing the premium pension as complement to the inkomstpension was that variations over the years in the growth of earnings and return on capital could tend to offset each other. Developments in recent years provide examples of cases where this distribution of risk has functioned as intended. In 2008 the relatively substantial increase in the income index compensated for the negative return on capital and resulted in a relatively substantial overall return for the pension system. In 2009 and 2010 the return on capital was positive while the negative interest rate on the inkomstpension account in the same period contributed to the balancing that occurred in 2010 and 2011. In 2011 the balance index increased, with the result that inkomstpensions were revalued upward even though the return of the premium pension system was negative. In 2012 the balance index rose again, while at the same time the return of the premium pension system was positive. In 2013 the two indexes once again moved in different directions, but then developed positively in 2014.

The importance of spreading risk may increase in the future, when the premium pension funds will account for a larger share of total pension capital. Spreading of risk will not always work; in some years decreases in the asset values of the premium pension may coincide with a fall in the income index / balance index.

Figure 6.1 Value of SEK 100



Value of SEK 100 paid into the inkomstpension system in december 2000 (income index) and into the premium pension system (premium pension index), and invested in an average portfolio of stocks on the Stockholm Stock Exchange and on the Global Equity Market, respectively.
Return index for the Stockholm Stock Exchange according to OMX, World Index of Return on Stocks according to Morgan Stanley Capital International Inc., converted into SEK.

In December, 2000, premium pension savers could begin investing their capital in the funds of the system. Before then, the capital had been under temporary management, which had invested it in an interest-bearing account with the Swedish National Debt Office (Riksgälden). The value of an amount deposited at the start in 2000 has varied substantially over the years.

The return index for the Stockholm Stock Exchange rose much more than the premium pension index in 2003–2007; it then dropped more precipitously in 2008. The recovery in 2009–2010, like the decline in 2011, was also much greater on the Stockholm Stock Exchange than in the premium pension index. The same is true for 2012, and 2013 when the Stockholm Stock Exchange rose more than the premium pension index. In 2014 the premium pension index and the global stock market rose by over 20 percent, which was more than the Stockholm Stock Exchange. The development of the premium pension index is due to premium pension savers investing primarily in foreign shares, where the development of exchange rates during 2014 had a significant positive effect due to the weakening of Swedish krona.

Those who refrained from selecting funds, and thus had their moneys invested in the AP7 Såfa, the Central Government Fund Management Alternative (Statens Årskullsförvaltningsalternativ), had by December 31, 2014 obtained a return on moneys invested in December, 2000, greater by 42 percentage points than that of the average fund saver (premium pension index, which includes AP7 Såfa).

Change in Value of Pension Savers' Accounts

The time-weighted return shown above does not take into account changes in the amount of capital during the period of saving, most notably deposits, but disbursements as well. For individual savers, but also for the premium pension system as a whole, it is important to show the return as measured by the capital-weighted rate of return. One reason is that the capital in pension savers' accounts has increased considerably since the beginning because the system is being built up. At the end of 2007, there was six times as much capital in the funds as at the end of 2000. Thus, the amount on which the extremely high return was obtained in 2005 was much larger than the amount adversely affected by the equally negative return of 2002. The capital-weighted rate of return takes this difference into account by assigning greater weight to 2005 than to 2002. In the Swedish Pensions Agency's calculations of internal rate of return, consideration is also given to other factors, such as management fees, rebates and inheritance gains.

Figure 6.2 Average Capital-Weighted Rate of Return for All Premium Pension Savers up to Different Points in Time during the Years 2000–2014

Each point on the curve shows the average annual internal rate of return (after 1995) until the time concerned.

Figure 6.2 shows the progression by year of the average annual capital-weighted rate of return for the premium pension built up at different points in time, as well as the corresponding rate of return if the premium pension had instead developed like the income/balance index. With this return, the capital-weighted rate of return through the end of 2014 would have been 2.5 percent per year. This may be compared with the actual average capital-weighted rate of return for the premium pension, 6.4 percent through 2014. The diagram shows that the corresponding calculation through 2008 was minus 0.8 percent for the premium pension system and plus 3.5 percent if the premium pension system had developed like the income/balance index. Note that the curve does not show the actual capital-weighted rate of return for inkomstpension savers, since the capital structure of the inkomstpension system is considerably different.

Figures 6.1 and 6.2 reflect two points of view for the saver, based on time-weighted and capital-weighted return as explained above. In the first diagram SEK 100 is deposited in the premium pension system in December, 2000, and it is worth about SEK 168 at the end of December, 2014. The value reached its low point of SEK 55 during 2002–2003. To take into account the deposits of premium pension savers into the system each year, and the long-term nature of pension saving, the second dia-

gram shows the average annual capital-weighted return up until a certain point in time. The average annual capital-weighted return on moneys paid into the premium pension system was 6,4 percent in December, 2014. The annual average capital-weighted return was lowest, at over -8.5 percent, in 2001, and highest, at about 7 percent, during 2007. As the premium pension system matures, the annual variation in capital-weighted return will diminish, as is clearly shown in the diagram.

Figure 6.3 shows the average capital-weighted rate of return for pension savers sorted according to their first year of contributing to the system. The difference in return decreases the longer the birth cohorts have participated and been paying into the system. All groups have shown a positive tendency on average in the development of their premium pension saving. Individuals who started participating in 2013 have not had their pension credit placed in funds by the end of 2014, so their capital-weighted return depends solely on interest from the interim administration.

Figure 6.3 Average Capital-Weighted Rate of Return Annually from the Saver's First Pension Qualifying Year

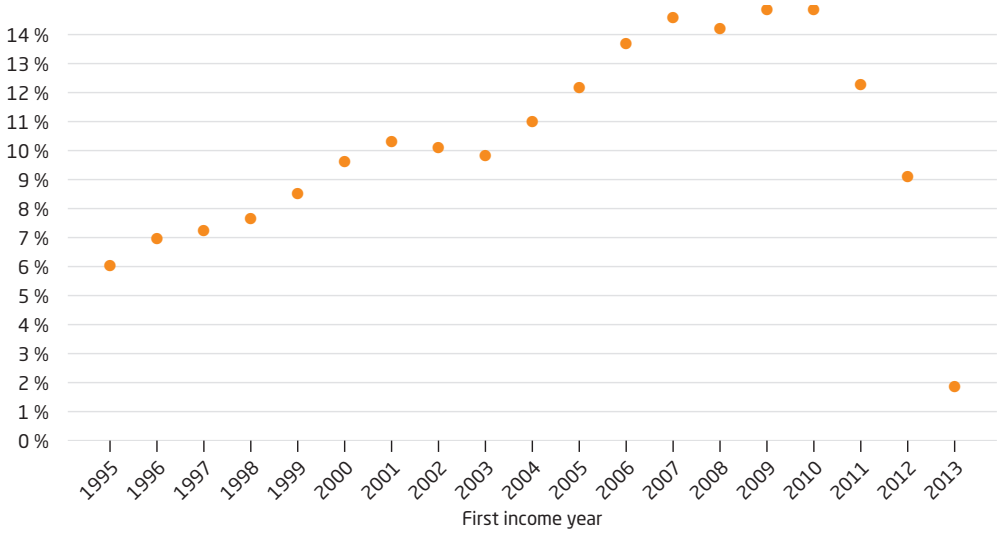
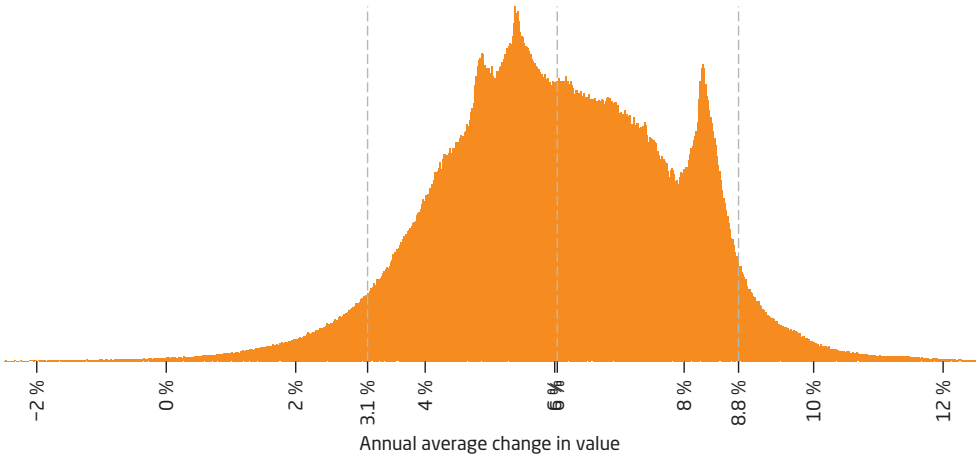


Figure 6.4 shows the distribution of the capital-weighted rate of return among pension savers who have been in the system for an equally long time. Among pension savers who began earning pension credit in 1995 and who then invested it in funds in 2000, just over 99 percent reported a positive change in value at the end of 2014. The sharp peak around 8.5 percent in the figure below mainly consists of individuals who have their capital invested in the state preselection option.

Figure 6.4 Pension Savers who Began Earning Pension Rights in the Premium Pension System 1995, Sorted According to Annual Capital-Weighted Rate of Return up to and including 2014



The dashed lines indicate the median and the percentiles for 5 and 95 percent.

Since the data refer to participants since 1995, the explanation for the spread is not that they entered the system at different times. Compare Figure 6.3, which shows the distribution by first year of credit earning. Rather, the principal reason is the choice of fund investments with differences in rate of return.

The table below summarizes the average annual change in value with the time- and capital-weighted rates of return during the existence of the premium pension system. From 1995 on, allocations were set aside for the premium pension, but not until December, 2000, were the moneys paid into funds. During the period 1995–2000 the moneys were invested in interest-bearing assets.

Nominal Average Annual Change in Value and Inflation, Respectively
percent

	1995-2014	2000-2014
Premium pension index (time-weighted)	4.0	3.8
Premium pension (capital-weighted)	6.4	6.6
Income/balance index (time-weighted)	2.6	2.7
Income/balance index (capital-weighted)	2.5	2.5
Inflation	1.1	1.3

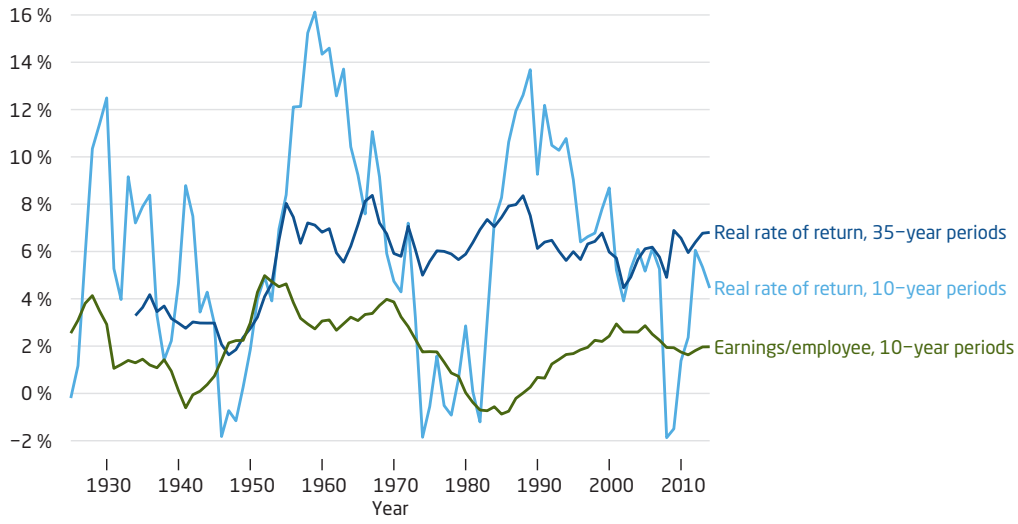
Importance of a Long-Term View

The aspects of the pension system that relate to its change in value cannot be judged on the basis of the changes in value over only a few years. The importance of a long-term view is easily underestimated, both when stock prices are rising and when they are falling. For the 90-year period 1924–2014, the average real rate of return globally was 6,1 percent per year. However, this does not guarantee such a return in 10 or even in 20 to 30 years. For different 10-year periods since 1930, the real rate of return has varied considerably, on the Stockholm Stock Exchange, from 23 percent per year (1980–89) down to negative figures in certain other periods. There have often been major changes between adjacent 10-year averages, both on the Stockholm Stock Exchange and world-wide.

One conclusion is that "long term" is not 5-7 years, or even 10 years, as is sometimes said, but that in the matter of equity returns one should imagine a much longer period. In the context of pensions, it is reasonable for younger people to have a 30-40-year perspective. Historically, the real value development for 35-year periods has also been much more stable, as is clear from the diagram. In the diagram, you can compare real wage growth (per employee) during 10-year periods with real global equity returns during 10- and 35-year periods respectively. That the global rate of return is used in this case is because most of the premium pension capital is invested in foreign stocks. The major part of the AP funds' capital also consists of foreign equities.

Only over a term of at least 35 years is the real value growth for global equities comparable in stability with Swedish real wage development over 10 years. Real wage growth is the factor above all that governs the value growth of inkomstpension. The real wage per employee increased over the period 1918–2012 by an estimated 2.1 percent per year, thus significantly slower than the annual 6.1 percent of real stock returns. The difference was most pronounced during the 1980s and 1990s.

Figure 6.5 Real World-Wide Rate of Return and the Development of Swedish Real Earnings per Employee



For each year the curves show the average real total return per year (including dividends) over the preceding 10 and 35 years, respectively, and the percentage change per year in real earnings per employee over the preceding 10 years.

7 Three Scenarios for the Future of the National Pension System

To show how the financial position of the national-pension system and the size of pensions can be affected in the long term by different paths of development, this section presents projections of the system's development for the next 75 years.

The long-term financial position of the inkomstpension system is described below in three different projections, or scenarios. These are referred to as the base, optimistic and pessimistic scenarios. The following three aspects of financial position treated are:

- Net contribution
- Fund strength
- Balance ratio

The net contribution is the difference between the system's contribution revenue and pension disbursements. For a better comparison, the net contribution is expressed in the scenarios as a percentage of total paid-in contributions; this adjusts for the volume effect of long-term economic growth. The net contribution is currently -7.5 percent; in other words, contributions are about eight percent less than pension disbursements.

Net Lending of the Inkomstpension System *
billions of SEK

	2014
Primary net lending	
Net contribution	-19
Contribution	236
Pensions	-255
Costs of administration etc., net	-2
Total Primary net lending	**-21**
Return	
Interest income	2
Dividends on shares	17
Total Return	**19**
Net lending	**-2**

* There may be some minor deviations from the National Accounts.

The net contribution corresponds (after deduction for costs of administration etc.) to the *primary* net lending of the system. Total net lending includes the net return of the National Pension Funds, which consists of interest income and dividends on shares.

Net lending contributes to the change in the size of the National Pension Funds. In addition, there are upward and downward fluctuations, sometimes considerable, in the market value of the securi-

ties held. In 2014 the assets of the buffer fund (the First–Fourth and Sixth National Pension Funds) increased by a total of SEK 148 billion.

Fund strength is the market value of National Pension Fund capital divided by pension disbursements for the year. Fund strength shows how many years of pension disbursements can be financed by the fund. For the year 2014 fund strength was 4.6.

The balance ratio is a measure that summarizes the financial position of the pension system. The balance ratio is the ratio between the total assets of the system and its liabilities. The assets consist of the contribution asset with the addition of the market value of the National Pension Funds. (For a more detailed discussion, see How the National Pension System Works and Appendix B). Calculated on the basis of assets and liabilities as of December 31, 2014, the balance ratio was 1.0375.

The future financial position of the inkomstpension system will depend on the development of several demographic and economic factors. The three scenarios studied differ in the following respects:

- Demographic development
- Change in average income
- Return on the National Pension Funds

The detailed assumptions for the scenarios are presented last in this chapter under the heading Assumptions in the Calculations for the Three Scenarios.

The number **paying contributions** is determined by the working-age population and the proportion thereof with earned income or other pension-qualifying income subject to contributions. The development of the working-age population depends primarily on net immigration and – in the longer term – the birth rate. The development of the number paying contributions is of significance for the financial position of the system. Pensions and the pension credit earned by the gainfully employed are revalued annually by the change in average income (the income index, or the balance ratio in years when balancing is activated). If there is an increase in the number of people with incomes who are paying contributions, the consequences will be that total contributions rise more than average income, and that the net contribution, the buffer fund and the balance ratio all increase.

The change in the **average income** of the economically active is of limited importance for the net lending of the pension system, for pensions are linked to the income index, which follows average income. A change in average income results in corresponding changes in both contribution inflow and pension disbursements. In principle, therefore, a change in average income will have no effect on the relative net contribution. But because the system is designed with delays in the effect of income changes on the income index, a change in average income will give rise to certain discrepancies, and these will also have repercussions on the balance ratio. By contrast, the level of future pensions, with a given net contribution, will of course be heavily influenced by the long-term change in the income index.

The **return** on the National Pension Funds affects the size of the Funds and thus fund strength and the balance ratio as well. The negative effect of weak growth in the net contribution on fund strength and the balance ratio can be offset by a high return on fund capital. In the base scenario, the real annual return assumed is 3.25 percent; in the optimistic and pessimistic scenarios, the respective returns assumed are 5.5 percent and 1.0 percent. A factor of importance for both fund strength and the balance ratio is the difference between the return and the average income. This is due to the fact that both pension disbursements and the system's pension liability grow at the same rate as average income, whereas the market value of the National Pension Funds grows with the return and is included in the numerator both for the measure of fund strength and for the balance ratio. See Appendix B.

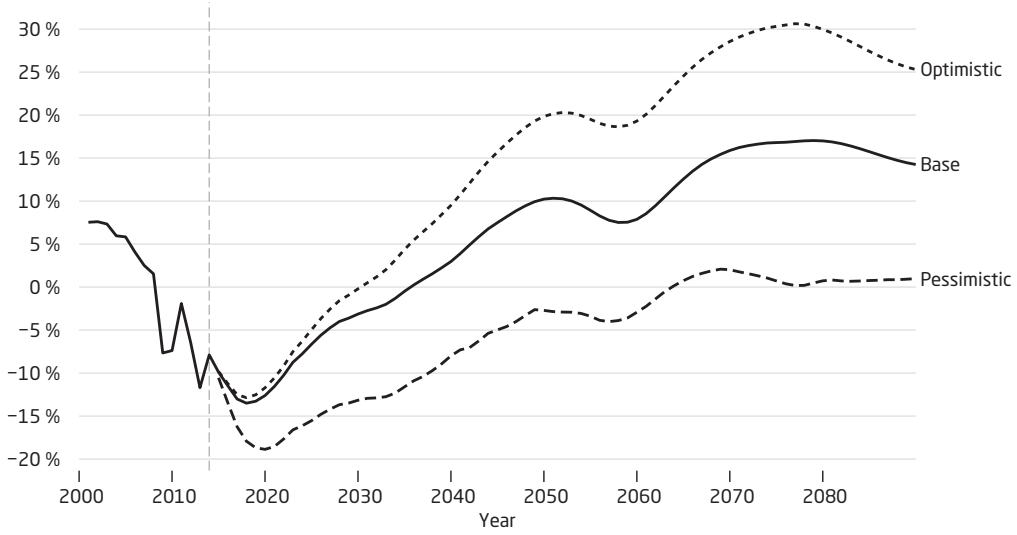
In summary, the net contribution will be negative in all three scenarios for many years to come. Pension disbursements are thus forecast to exceed contribution revenue. Parliament has decided that as of 1 January 2015 also pension rights are to be adjusted downward during balancing periods (SFS

2014: 1548). The new rules outlined in the balance ratio section no longer lead in the pessimistic scenario to the buffer fund being drained at the end of the projection period as was the case in earlier forecasts. The impact on the pension system is that pension liability will be less, affecting financial strength positively and reducing the risk of balancing.

Net Contribution

As previously noted, the net contribution is the difference between contribution revenue and pension disbursements in relation to contributions. Since the birth cohorts in the population differ in size and have worked to differing degrees, the contribution revenue and pension disbursements of the system will vary over time. For a better comparison of the net contribution in the three scenarios, the net contribution has been divided by the inflow of contributions in the scenario. This eliminates the volume effect of the differing growth rates on the net contribution in monetary terms.

Figure 7.1 Net Contribution



Contribution revenue less pension disbursements as a percentage of contribution revenue.

The net contribution was negative for the first time in 2009 and is expected to remain so for many years. The explanation is that to a large extent the large birth cohorts of the 1940's have left the labour force and retired. The balancing in 2010 and 2011 can be seen in the diagram in the form of an improved net contribution. Around 2025 the weakening will lessen, and the contribution deficit will decrease. After 2036 revenue will exceed expenditure in the base scenario. The principal reason is that the large birth cohorts of the 1990s and the 2010s will be of working age at the same time as the cohorts of the 1960s with pension disbursements will be decreasing; see figure 7.12 at the end of this chapter. The effect of demography is also reflected in the peaks and troughs in the figure above. The difference in timing of the peaks and troughs between the pessimistic and other scenarios is due to different assumptions of life expectancy and employment. The net contribution is negative until 2031 in the optimistic scenario and until 2064 in the pessimistic one.

This year's simulations show improved outcomes, compared with previous years. A contributing factor is mainly new estimates of the model's transition probabilities. The relatively stable development after the crisis of 2009 begins to dominate. Because the model imitates this process, the future picture

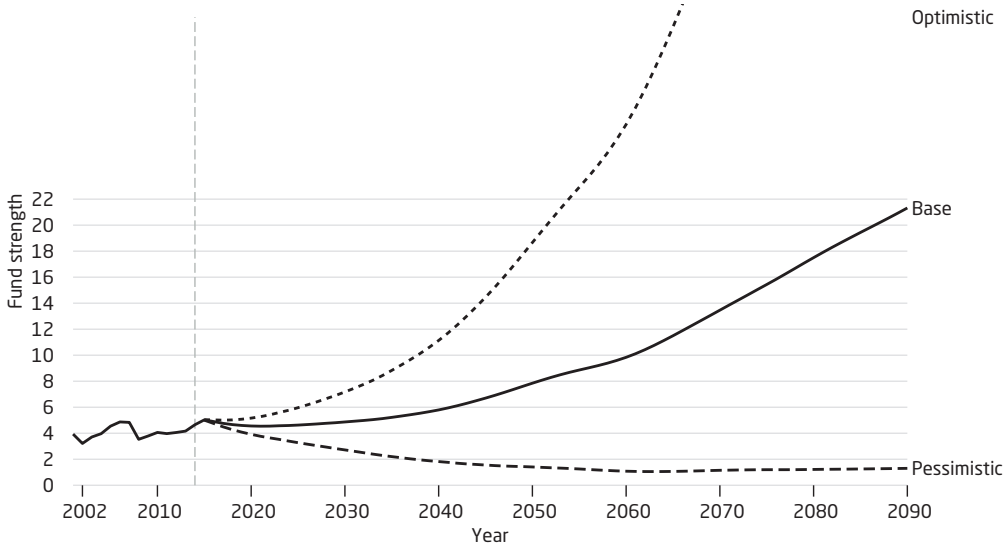
becomes somewhat brighter. A further factor is the adaptation of the model's starting year to observed values and improvements of several of the model calculation rules.

The Buffer Fund - Fund Strength

The size of the buffer fund is expressed in terms of fund strength, that is, the fund capital at year-end divided by pension disbursements for the year. Fund strength shows how many years of pension disbursements the fund can finance without additional contributions or return in the future. The different development of the buffer fund in the three scenarios is due to differences in net contribution and in the assumed return on the fund.

Fund strength has averaged 4–5 years since 1990. At the end of 2014, it was just over 4 years and 6 months.

Figure 7.2 Fund Strength



Size of buffer fund divided by pension disbursements the same year.

In the **base scenario** the contribution deficit leads to scarcely any reduction at all anymore. This is because the buffer funds have had a better result than expected, resulting in a capital surplus of SEK 423 billion at the end of 2014. Fund strength reaches its low point around 2021 at just below 4.5 years of disbursements, earlier 2.6 years. Thereafter, fund strength increases in the base scenario owing to a positive net contribution and the fact that the return of the fund (3.25 percent) exceeds the increase in average income (1.8 percent). In addition to the improved net contribution there is also a change in principle for the current year. Up to April, when these projections were carried out, the AP funds showed a very good increase in value. A standard assumption of the buffer fund's real return of 3.25% would in practice mean that the AP funds must show strong negative returns during the remainder of 2015. Therefore, the model adheres to the assumptions used in the regular short-term forecast, raising the starting value of the fund compared to if the previous principle were used in the projection.

In the **optimistic scenario** fund strength increases every year; the reason is that the deterioration in the net contribution is more limited than in the base scenario and that the return of the fund is high (5.5 percent) in relation to the development of average income (2.5 percent). In 2030 fund strength is equivalent to about 7 years of pension disbursements and will continually grow further.

In the **pessimistic scenario** fund strength gradually weakens throughout the projection period. The new rules on balancing prevent the buffer fund from being exhausted in the future.

The Balance Ratio

The financial position of the inkomstpension is expressed in terms of a ratio: the system's assets in relation to pension liabilities. See the section Another Rate of Interest than the Income Index – Balancing in chapter 4, How the National Pension System Works. When the ratio is less than one, liabilities exceed assets. A ratio of 2.0 means that assets are twice as great as liabilities and that the system in principle is fully funded, that is, the buffer fund, the contribution asset and the pension liability are of equal size.

In 2010 balancing was activated for the first time, which meant that indexation of pensions and pension balances will decrease. Balancing is still activated and will remain so until the indexation of the system resumes the level where it would have been if balancing had not been activated. When balancing is activated, "interest" is credited to pensions and pension balances through the change in the income index and the balance ratio. As long as balancing is activated, the cumulative indexation is less than it would have been without balancing. In particular years of a period of balancing, however, balancing may result in higher indexation; these are years when the balance ratio is greater than one.

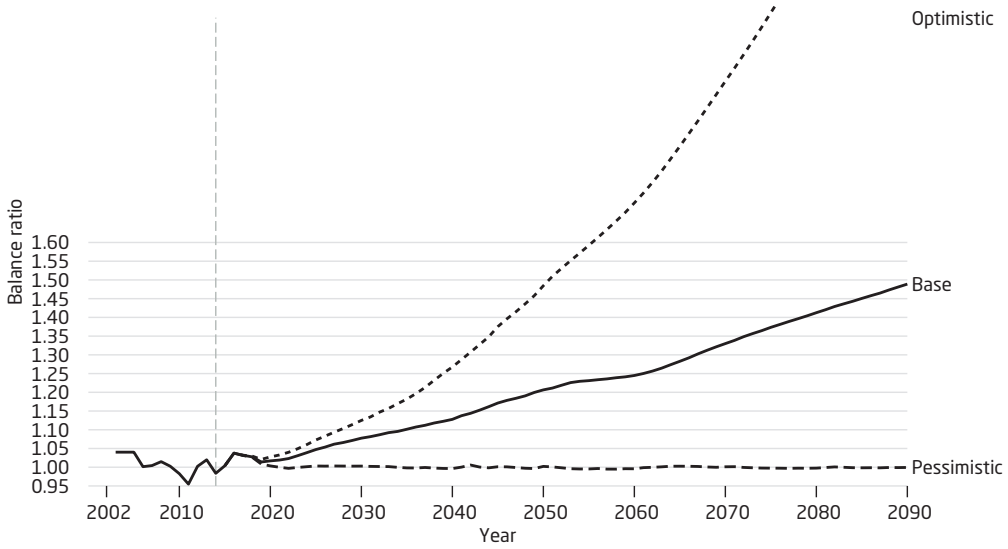
Cumulative balance-ratio product *

Year	Base	Optimistic	Pessimistic
2009	1.0000	1.0000	1.0000
2010	0.9826	0.9826	0.9826
2011	0.9383	0.9383	0.9383
2012	0.9406	0.9406	0.9406
2013	0.9592	0.9592	0.9592
2014	0.9436	0.9436	0.9436
2015	0.9474	0.9474	0.9474
2016	0.9830	0.9830	0.9830
2017	1.0000	1.0000	1.0000
2018	1.0000	1.0000	1.0000
2019	1.0000	1.0000	1.0000
2020	1.0000	1.0000	1.0000
2021	1.0000	1.0000	0.9999
2022	1.0000	1.0000	0.9968
2023	1.0000	1.0000	0.9962
2024	1.0000	1.0000	0.9976
2025	1.0000	1.0000	1.0000

* The cumulative balance-ratio product in the current period of balancing. When the product reaches 1.0000, balancing ends. Beginning with 2016 the balance ratios are based on predictions.

The best prediction of the balance ratio in the short term is reported in the latest Swedish Pension Agency report "Anslagsbelastningen och prognos för anslag inom Pensionsmyndighetens ansvarsområde" (Appropriations Available and Forecast in the Swedish Pension Agency's Remit)."

Figure 7.3 Balance Ratio



(Contribution asset + buffer fund) / pension liability

In the **base scenario** the balance ratio is greater than 1 throughout the projection period. In the base scenario the balance ratio strengthens gradually because of demographic factors and the fact that the return on the buffer fund is greater than the income index. The balance ratio reaches 1.1 around 2035, a level that according to the proposal in "Utdelning av överskott i inkomstpensionssystemet" (Distribution of Surpluses in the Inkomstpension System, (SOU 2004:105) would mean that there were distributable surpluses. However, no such proposal has been presented to the Swedish Parliament.

In the **optimistic scenario** the balance ratio is also greater than 1 throughout the projection period. As of 2028 the balance ratio exceeds 1.1.

In the **pessimistic scenario** the balance ratio falls below 1 for certain periods (see figure). After 2072 the system enters balancing and remains in balancing for the rest of the projection period.

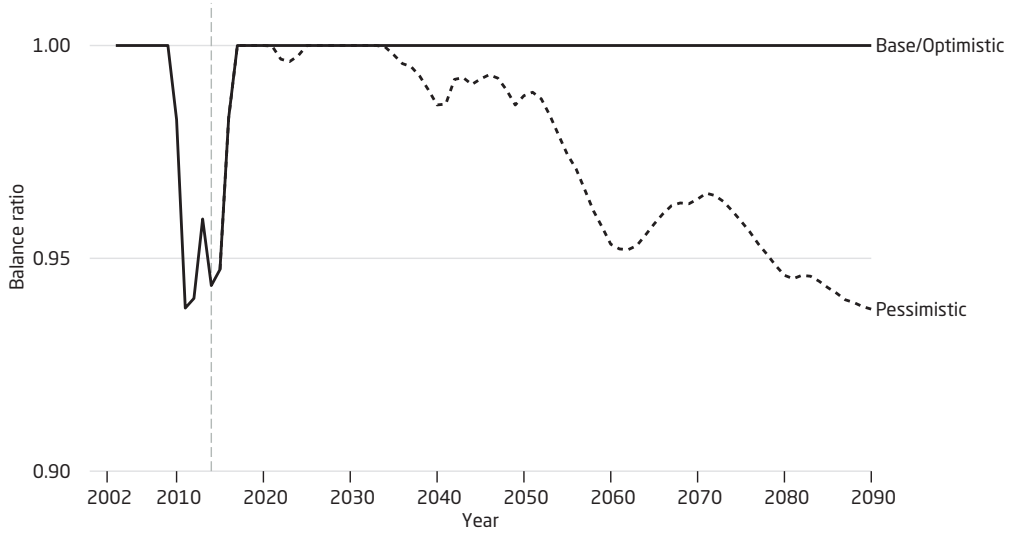
The lag in the income index and other factors causes a cyclical volatility of the balance ratio that is observable in the diagram for the first 20 years. In the report "Fördjupad analys av vissa beräkningsregler i inkomstpensionssystemet" (A Deeper Analysis of Certain Calculation Rules in the Inkomstpension System), February 25, 2013, the Swedish Pensions Agency, offers some suggestions for eliminating this volatility. This has subsequently been further developed in the memorandum Ds 2015:6 from the Ministry of Health and Social Affairs.

Effects of the statutory amendment eliminating "the over-compensation problem"

Parliament has decided that as of 1 January 2015 pension rights are also to be adjusted downward during balancing periods (SFS 2014: 1548). Under the new rules newly earned pension rights determined during a balancing period are to decrease to the same extent that pension balances hitherto have decreased during the balancing period. In this way new pension rights are added to the account at a reduced value corresponding to the value the pension rights would have had if they had remained in the account the whole time. The decrease will be made by multiplying the pension right determined – before adding it to the income account – by the ratio between the balance index and the income index that have been determined for the same year.

Of the three simulated alternatives only the pessimistic scenario is affected to any appreciable extent by the new rule. In reality, the rules may be used in many smaller negative sequences due to the underlying stochastic variation of the components involved. The effect is then short-lived and only affects those in the disbursement phase. The current pessimistic scenario puts the pension system under a constant strain which eventually causes all following earned pension rights to decrease by approximately five percent before being added to the balance (see Figure 7.4). In practice, the contribution rate of 14.88 percent will yield pension rights for 14.1 to 14.2 percent in all cases as long as the trend remains so negative. The new proposal provides a more equitable distribution of the adjustment burden between generations.

Figure 7.4 Adjusted Balance Index



Balance Index / Income Index

Premium Pension

In addition to projections of growth for the pay-as-you-go system, the Swedish Pensions Agency has calculated premium pension growth during the same period. The scenarios are the same: base, optimistic and pessimistic. The estimate is based, somewhat simplified, on the assumption that premium pension returns are spread equally among different age groups and remain constant throughout the simulation period. This is of course unrealistic. Variation from year to year will most likely resemble the high degree of variation seen historically. But since the purpose of the calculation is to highlight long-term average features, such expected volatility is disregarded.

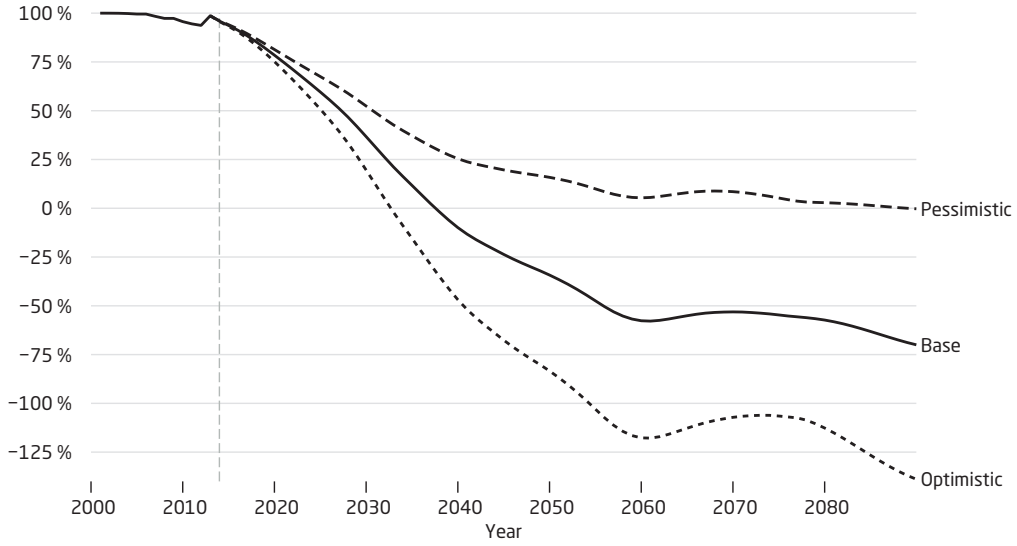
Fund returns are assumed to be the same as in each scenario's assumption of real AP fund returns. That means 3.25 percent for the base scenario, 5.5 percent for the optimistic scenario and 1.0 percent for the pessimistic scenario. To this is added inflation of 2.0 percent. In addition to the return on premium reserve there is an assumption of annual interest rate in the so-called interim administration, the period from when the pension premium is paid out by the employer or the state to when it is placed in the pension saver's account. This involves an approximate time span of 18 months. The interest during the interim administration is nominally 2.0 percent in the base scenario, 3.0 percent in the optimistic scenario and 1.0 percent in the pessimistic scenario. In addition to return on capital

the premium pension accounts are charged an administration fee that is assumed in the long run to stabilize at 0.28 percent per year of premium pension capital.

As pension schemes go, premium pension is relatively young. Earning started first in 1995. Only people born in 1938 or later have been able to earn the premium pension and the eldest did so with a contribution of only 0.5 rather then 2.5 percent. The system is however growing rapidly. People born in 1970 were 25 years old when contributions to the system started. When these people approach retirement around 2035 - 2040, they will have been able to earn premium pension more or less throughout their whole active period. Around 2060, most pensioners will have been able to earn premium pension throughout the whole of their professional lives and premium pension will then enter into its mature phase.

A revealing measure of the system's maturity phase is the net contribution, ie the difference between the system's income and disbursements. This is divided as before by the contributions themselves.

Figure 7.5 Net Contribution Premium Pension



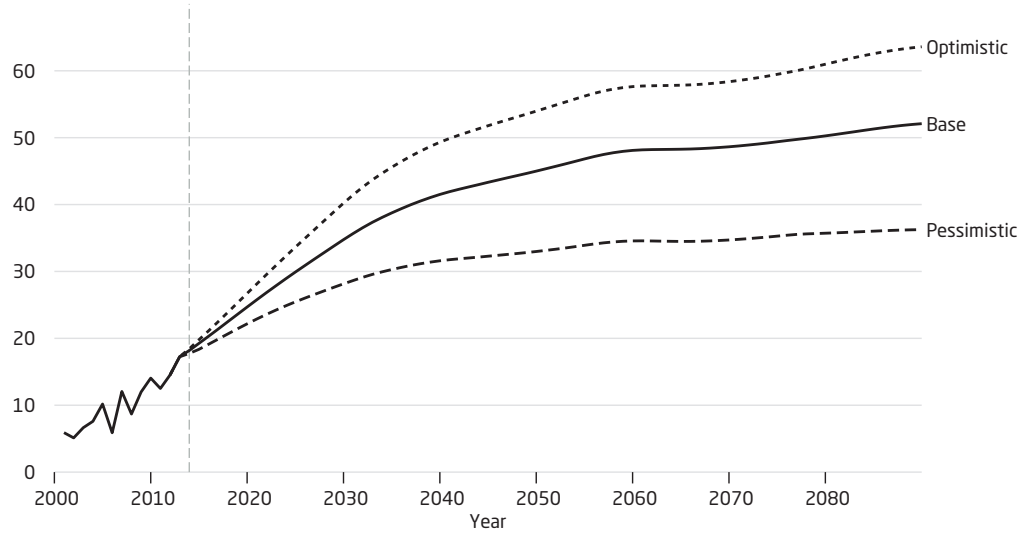
Contribution revenue less pension disbursements as a percentage of contribution revenue.

The net contribution is almost 100 percent in the beginning, since the volume of disbursements is extremely small. As today's younger age cohorts begin retiring, a greater volume of disbursements will affect the net value.

When the system has been phased in, around 2060, the pessimistic scenario will begin to fluctuate around zero. This scenario gives no other return than wage growth (excess return); variations in net contribution follow demographic variations in different cohorts. Assuming a greater return than wage growth, the premium pension scheme will pay higher pensions than incoming contributions. The greater the return, the higher the possible disbursements, and consequently a more negative net contribution. Returns are an additional inflow of disbursable funds. In the optimistic scenario, excess returns are around 3.2 percent (5.5 - 2.0 - 0.28) per year. Assuming a lifetime of savings, each premium payment will then be worth 2-3 times more than without excess return. The high returns usually associated with high risk-taking is not apparent here. A more comprehensive picture would also show the effect of variations in returns. The high volatility of real life can lead to individuals risking negative returns on their savings over the life cycle, even if the long-term trend may be more or less favourable.

Another way to consider the maturity of the system is to study the overall size of the premium funds. During the construction phase, the fund is relatively small. The system is mature for an age cohort when its individuals have been able to earn premium pension rights throughout their working lives. The system is mature in its entirety when it consists wholly of such cohorts. If all cohorts had the same size, the same incomes relative to the current level of income, followed each other's mortality patterns, and their excess returns beyond wage growth corresponded to the deducted administration fee, annual pension payments would be equal to the total annual pension premium. Fund assets would then stabilize at about 32 - 33 times the annual premium payment. The closest we can get to this situation is represented in figure 7.6 by the pessimistic scenario. Population growth is subdued and excess return is zero. 33 corresponds to the expected average time that each contribution remains in the fund between payment and disbursement. The fund can be seen as a 33-year-long series of annual payments which increase only with general wage growth. The same amount that is deposited each year is paid out in the form of disbursements. Since all individuals eventually transition from a professionally active period of life to retirement, roughly the same amount is transferred annually from the savings phase to the disbursement phase as is paid in and paid out.

Figure 7.6 Size of Premium Funds in Relation to Contributions Received during the Corresponding Year



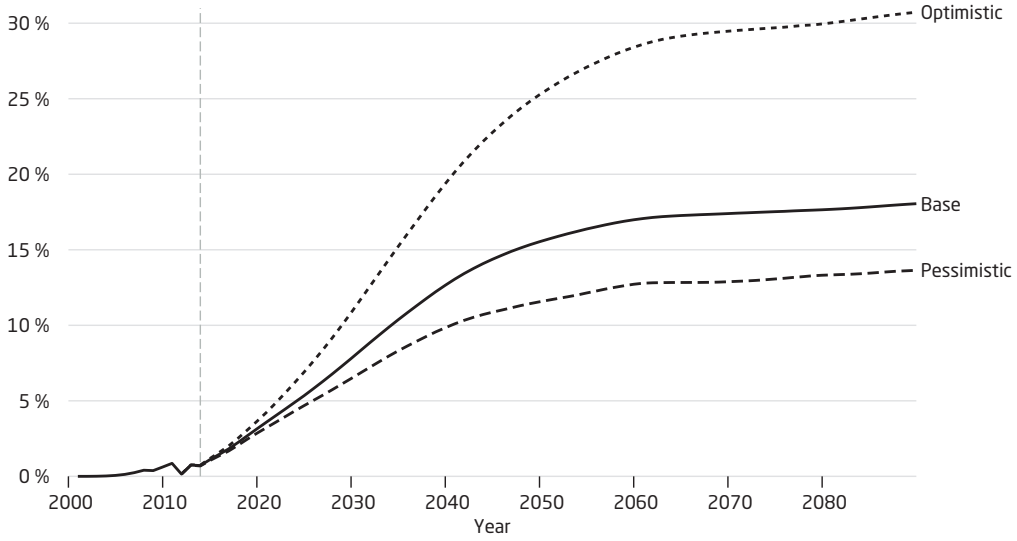
Both base and optimistic scenarios lead to a much larger fund. This is due to higher excess returns. The fund grows faster than contribution income. This will lead to higher pension disbursements as shown in figure 7.5.

Figure 7.6 can be said to illustrate fund strength: fund size relative to the size of payments received. In the early stage of premium pension history - without disbursements and without excess yield - funds match, in principle, the number of contribution years. The starting value of the curves is based on the number of years since the start of the system, the varying historical returns, and the historical change in contribution rate.

Another way to present the the future role of the premium pension is to show it as a part of the total national pension. Earning points for premium pension first began in 1995. This means that those cohorts retiring today only get a small portion of their pension from the funded part.

The phasing-in will continue up to 2040–2050, which means an ever increasing share of the pension will be paid from premium pension funds. Of current contributions, 13.5 percent goes to premium pension. In the absence of excess return, also disbursements will be paid with the same relative proportion. Assuming an excess return, the picture changes. In the optimistic scenario premium pension accounts for over 30 percent.

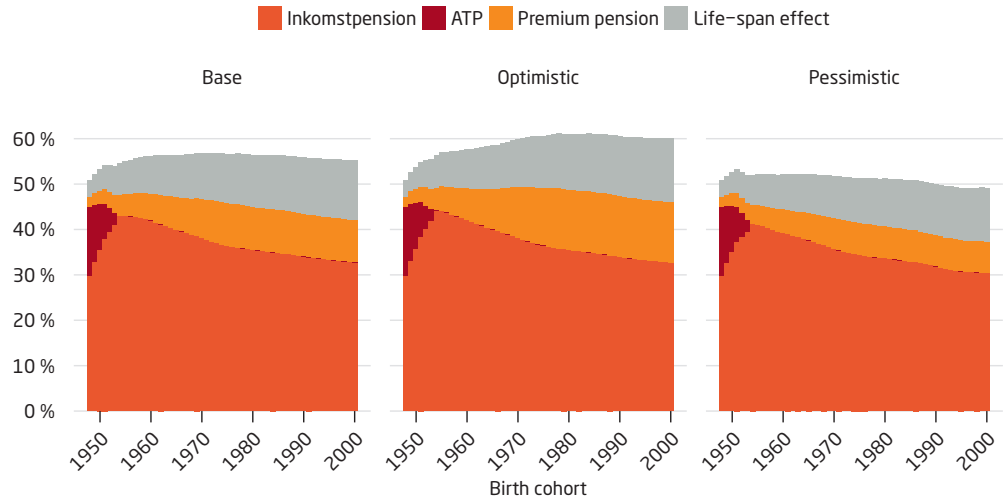
Figure 7.7 Premium Pension as a Proportion of the Earnings-Related Public Pension



Development of Pension Levels for Typical Cases

This section describes the development of the pension level at age 65 for typical cases born 1948–2000 in the three different scenarios. The effect of the scenarios on the pension level has been isolated by calculating pensions for an individual who has worked for 42 years before retiring at age 65 with an income that increases at the same rate at the general level of income. The pension level is calculated as the newly granted income-based national pension at age 65 in relation to final earnings.

Figure 7.8 Pension in Proportion to Final Earnings, Different Birth Cohorts



The pension levels in the scenarios at age 65 are described in the figures above, one for each scenario. The figures show a life-expectancy effect in the form of the total national pension received if the typical case postpones retirement to the extent required to compensate for the increase in life expectancy. Also visible are the phase-out of the supplementary pension and the phase-in of the inkomstpension and the premium pension.

A longer working life gives a higher pension, both because new pension credit is earned and because a lower annuity divisor is used in calculating the pension. Of the total increase in life expectancy, roughly two thirds must be added to working life in order to obtain the same pension level, while one third goes to increased life expectancy in the years as a pensioner. The retirement age required for the pension level not to decrease because of the increase in life expectancy is shown in the table in the next section, Life Expectancy Effect and Alternative Retirement Age. In the figure the pension level for the typical cases, alternative retirement ages are market by light grey.

In the **base scenario** the pension level at age 65 decreases successively from 50 percent of final earnings for birth cohort 1948 to about 42 percent for birth cohort 2000. One reason for this decrease is the expected increase in the average life span. If working life is lengthened so that the effect of the increased life expectancy is neutralized, the pension level stabilizes around 55 percent of previous earnings from work. The higher pension level is attributable to the premium pension, which yields a return above wage growth by 1.45 percentage points. As a result of this excess return, the premium pension accounts for a larger share of the national pension than is reflected in its contributions.[1]

For the youngest birth cohorts, the premium pension at age 65 is roughly 9 percent of final earnings and the inkomstpension about 33 percent. At the alternative retirement age the corresponding figures are 12 percent and 43 percent, respectively. In the **optimistic and pessimistic scenarios** average growth is higher and lower, respectively, than in the base scenario. There is also a difference in the return on the premium pension.

[1]Another reason why the newly granted premium pension is relatively larger is that the preliminary interest in the annuity divisor is higher for the premium pension than for the inkomstpension; see the chapter How the National Pension System Works and Appendix A.

When balancing is not activated, the inkomstpension accrues interest (is indexed) by the change in average income, and inkomstpensions are changed at the same rate as average income. In this case the relationship between the inkomstpension and final salary is not affected by the growth in real earnings, and the inkomstpension as a percentage of income remains unchanged. On the other hand, the inkomstpension will naturally be lower in monetary terms with lower growth and higher with higher growth.

The relationship between the return of the premium pension system and the increase in average income affects the relative size of the premium pension. The larger the positive discrepancy between return and wage growth, the greater the share constituted by the premium pension.

The pension levels increase for the typical cases if they are assumed to have occupational pensions. The increase is roughly 15–20 percentage points at age 65 and roughly 20 percentage points with the alternative retirement age.

Life Expectancy Effect and Alternative Retirement Age

The table below shows, among other things the life expectancy for persons at age 65 for birth cohorts 1930–1995. The expected average remaining life span at age 65 increases from 17 years and 5 months for persons born in 1930 to 24 years and two months for persons born in 1995, an increase in remaining life span of almost 7 years. If those born in 1995 are to have the same pension level that they would have had if life expectancy had not increased, a portion of the increased life span after age 65 must be devoted to working longer. For birth cohort 1995 working life must be prolonged to 69 years and 6 months. At the same time, it is anticipated that those born in 1995, despite the higher retirement age, can look forward to a retirement period 3 years longer than those born in 1930.

Alternative Retirement Ages and Time Spent Retired *

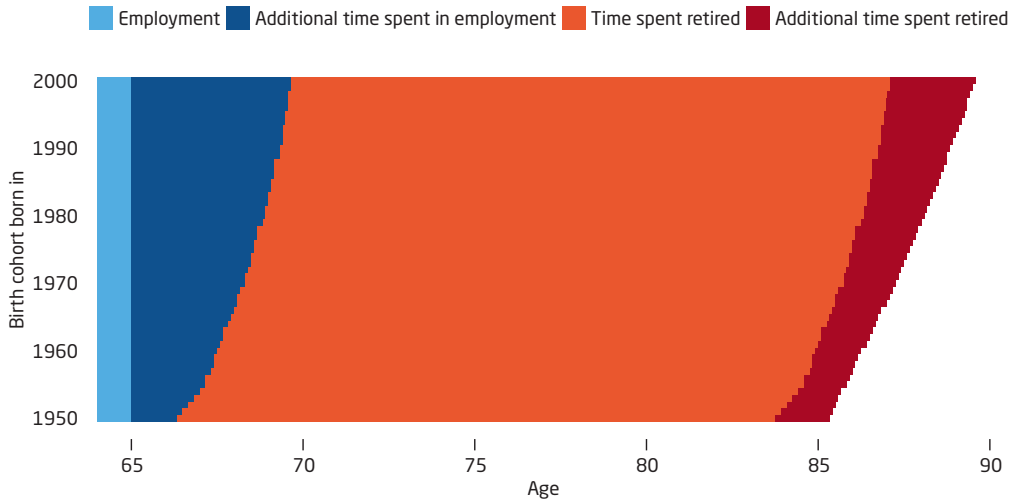
Birth cohort born in	… reaches 65 in	Life expectancy at 65	Alternative age of retirement	Time spent retired	… compared to birth cohort 1930
1930	1995	82 yr 5 mo	65 yr 0 mo	17 yr 5 mo	0 yr 0 mo
1940	2005	84 yr 0 mo	65 yr 2 mo	18 yr 10 mo	1 yr 5 mo
1945	2010	84 yr 8 mo	66 yr 4 mo	19 yr 3 mo	1 yr 10 mo
1950	2015	85 yr 4 mo	66 yr 4 mo	19 yr 4 mo	1 yr 11 mo
1955	2020	85 yr 10 mo	67 yr 2 mo	19 yr 2 mo	1 yr 9 mo
1960	2025	86 yr 3 mo	67 yr 6 mo	19 yr 5 mo	2 yr 0 mo
1965	2030	86 yr 9 mo	67 yr 11 mo	19 yr 6 mo	2 yr 1 mo
1970	2035	87 yr 3 mo	68 yr 4 mo	19 yr 8 mo	2 yr 3 mo
1975	2040	87 yr 8 mo	68 yr 7 mo	19 yr 10 mo	2 yr 5 mo
1980	2045	88 yr 1 mo	68 yr 11 mo	19 yr 11 mo	2 yr 6 mo
1985	2050	88 yr 6 mo	69 yr 1 mo	20 yr 2 mo	2 yr 9 mo
1990	2055	88 yr 10 mo	69 yr 4 mo	20 yr 3 mo	2 yr 10 mo
1995	2060	89 yr 3 mo	69 yr 6 mo	20 yr 5 mo	3 yr 0 mo

* Time spent retired refers to expected remaining life span at alternative retirement ages.

Figur 7.9 shows a graphic representation of the same trend. As shown by the dark red part of the graph, younger generations are expected to have a much longer period of retirement than those born in 1930. For those born in 1954 and thereafter (that is, for individuals covered entirely by the rules of the new

pension system), the alternative retirement age means that on average 2/3 of the increased life span will be spent working, and about 1/3 on a longer period of retirement.

Figure 7.9 Alternative age of retirement



The Level of the National Pension in the Projection of the Orange Envelope

In the Orange Envelope, pension projections are made each year for each insured person based on that individual's actual pension credit earned. When the envelope is mailed in February/March income data are available up to and including the calendar year two years before the envelope is mailed. Thus, the envelope sent out in 2015 is based on all incomes earned by each individual through 2013. In the forecast, consideration is given to balancing in 2015, but not to positive or negative balancing, if any, in coming years. The projection is calculated on the basis of zero-percent growth for coming years, both in the individual's own income and in the national average income.

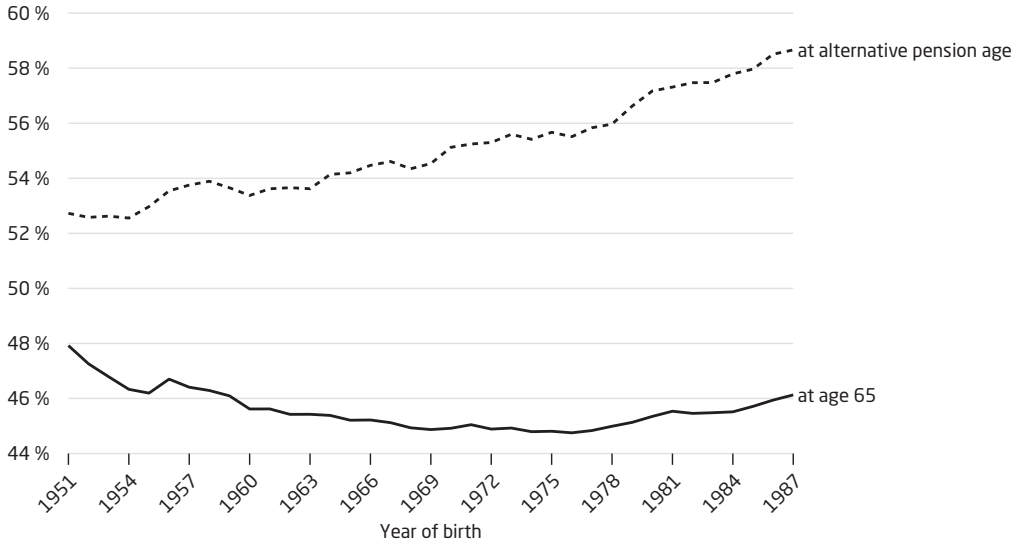
As a complement to the pension level for the typical case, the pension level in the projections of the Orange Envelope are calculated as follows: the pension projection of each individual at age 65, excluding any guaranteed pension, divided by the pension-qualifying income of the same individual in 2013,[2] hereafter referred to as the replacement rate. The equivalent is also done for alternative retirement age; see description above. An average for each annual birth cohort between birth year 1951 and 1987 has thereafter been calculated by adding up all replacement rates and dividing the sum by the number of individuals in the birth cohort.

Both the assumptions underlying this calculation and the method applied differ from those used in the calculation of pension levels previously in the chapter under the heading Pension Levels for Typical Cases. In the figure 7.10 the comparison income is the income below the ceiling on earnings in 2013 for the respective individual, corresponding to forecast final earnings since no growth in real earnings is assumed. For young individuals, with few years of pension credit earned, this means that the replacement rate has been calculated with a virtually flat earnings profile. For persons relatively

[2]For persons with no income that year, no replacement rate can be calculated, and they have been excluded from the calculation. Persons with a replacement rate greater than 150 percent have also been excluded from the calculation. The reason for doing so is that such high replacement rates generally apply to incomes so low that they are temporary.

close to retirement age, the pension is calculated on the basis of many years' actual income history, which on average is reflected in a concave profile.

Figure 7.10 Orange Envelope Disbursement Rates – Average Values for Income-Based Pension at Age 65 and at Alternative Retirement Age as a Percentage of Pensionable Final Earnings



Source: 3,870,898 individual projections in the Orange Envelope 2015. Guarantee pension is not included.

The high replacement rates calculated at the pension age of 65 for the oldest birth cohorts are partly explainable by the fact that their own incomes have begun to decrease. As a result, the replacement rate will be higher with the method used here. An additional explanation is that for older birth cohorts a portion of their pensions is calculated by the ATP rules, which on average are more generous. The replacement rate, calculated at the alternative pension age, increases for younger birth cohorts. The younger cohorts are expected in the forecast to have many years of earning pension credit ahead of them. This produces relatively high replacement rates. For older cohorts, new persons are added each year who have not previously earned pension credit. This lowers the replacement rate for older cohorts compared with younger ones. The replacement rate for younger cohorts is also expected to decrease in time as their salaries increase. A person's income generally tends to increase more dramatically at the beginning of working life, only to slow down later on.

In calculations of the pension level in the national pension system, it is necessary to decide whether or not incomes above the ceiling should be included in the calculation of comparison income. In the pension levels presented in this section, consideration has not been given to incomes above the ceiling. Of all pension-qualifying incomes in Sweden, 10 percent exceed the pension-credit ceiling. If incomes above the ceiling for comparison income are added, comparison income increases by 10 percent. This lowers the average pension level by nearly 9 percent. In addition, gross pensions are compared with gross incomes. In 2007 a tax credit for gainful employment was introduced, which means that the tax is no longer the same on pensions as on most of the incomes included in pension-qualifying income. In 2008, 2009 and 2010 reinforced tax credits on earned income were passed. Tax relief in the form of a higher basic deduction was provided in 2009 for those who had reached age 65 by the outset of that year. In 2010, 2011, 2013 and 2014 taxes for older persons were reduced further. Of the pension-qualifying

incomes below the ceiling, roughly 95 percent consist of income from work. With the enactment of the tax deductions, the pension level drops by about 3.1 percentage points if differences in taxation for different types of income are taken into account.

Assumptions in the Calculations for the Three Scenarios

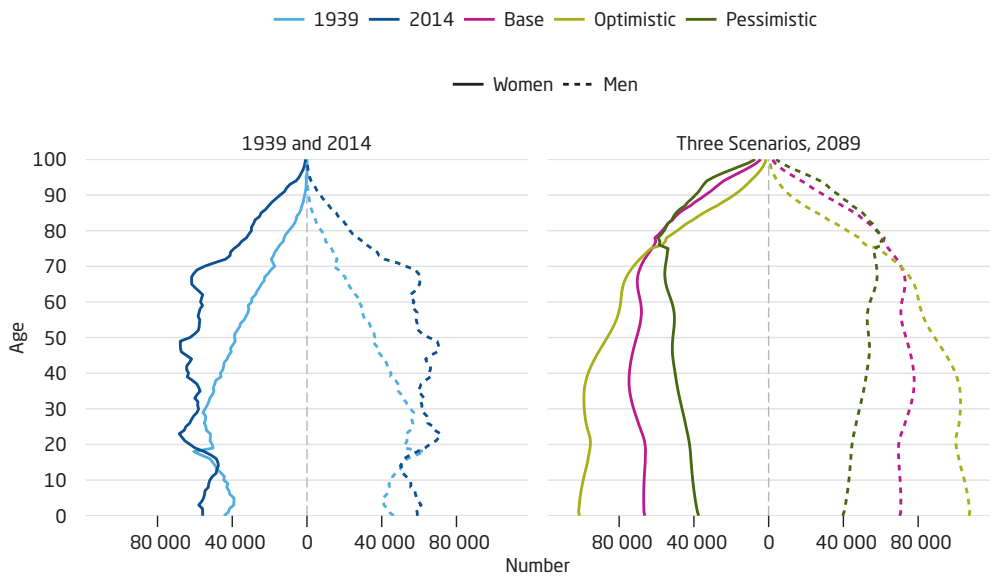
In the table and in the figure below, the various assumptions in the scenarios are summarized.

Bases for Calculation

percent

	Base	Pessimistic	Optimistic
Inflation	2.00	2.00	2.00
Change in average income	1.80	1.00	2.50
Real return, net, after fees to fund management companies			
Premium pension funds	3.25	1.00	5.50
Buffer fund	3.25	1.00	5.50
National Debt Office	2.00	1.00	3.00

Figure 7.11 Population for 1939 and 2014, Projection for 2089 in the Three Scenarios



Base Scenario

The demographic development in the base scenario follows the latest population forecast of Statistics Sweden from 2013. In this projection the birth rate during the period is assumed to be 1.89 children per woman. The average life span for men born in 2013 is 80.2 years and is expected to increase to 85.7 years in 2050. For women the average life span is expected to increase from 83.9 to 87.9 years during the same period. For the remainder of the time until the end of the projection period in 2088, the average life span will increase by approximately 3 years for both men and women. In the past 20

years net immigration has averaged 33,800 persons per year. Since 2006 net immigration has averaged around 50,000 persons per year. In the initial years of the projection through 2017, net immigration is assumed to be 70,000 persons. Between 2017 and 2026, net immigration will gradually decline to 17,500 per year. Employment follows Statistics Sweden's latest employment forecast (main alternative) where the proportion of persons employed increases from today's level mainly among those born abroad, Swedish-born women, and older people. The real average income is assumed to increase by 1.8 percent per year. The real rate of return on the buffer fund is set at 3.25 percent per year. The same return, after costs of administration, has been assumed for the premium pension fund, whereas the National Debt Office is assumed to have an interest rate of 2 percent.

Optimistic Scenario

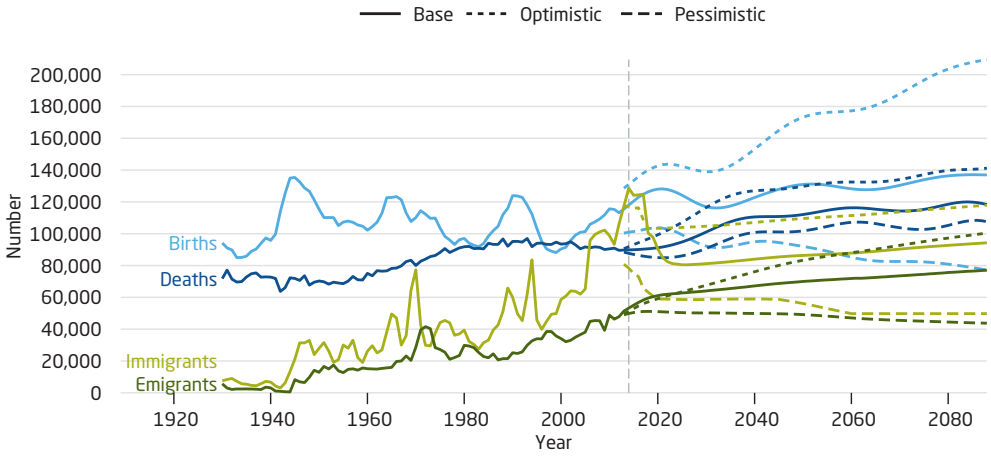
The demographic assumptions do not follow the base scenario and are based on Statistics Sweden's forecasts from 2012. Both nativity and net immigration are higher than in the base alternative. In the long run, nativity is estimated at 2.10 children per woman. Long-term immigration is assumed on average to show a surplus of some 30,000 persons. Mortality is assumed to be constant and to retain the same 2012 values throughout the whole of the forecast period. Employment is assumed to follow the same path as in the base scenario. The real growth in average income is 2.5 percent after 2013, and the real rate of return on the buffer fund is assumed to be 5.5 percent per year in the future. The real return for the premium pension is also assumed to be 5.5 percent, after costs of administration. The National Debt Office is assumed to fix an interest rate of 3 percent.

Pessimistic Scenario

The assumptions in the pessimistic scenario about birth rates and net immigration are lower than in the base alternative. The birth rate is assumed to be 1.65 children per woman. Net immigration drops sharply until 2020, when it stabilizes at around 8,000 per year; it then falls to approximately 5,000. The birth rate and migration follow the low assumptions of Statistics Sweden in the population forecast from 2012. Life expectancy increases for women from 84.0 years to 90.6 in 2050. The corresponding ages for men are from 80.3 to 88.6 years. The proportion employed is assumed to remain unchanged for the time ahead. The real growth in average income is assumed to be 1 percent per year. The real rate of return for the Buffer Fund, the National Debt Office and the premium pension funds is also assumed to be 1 percent per year. With a return equal to the growth in average income, the return of the buffer fund does not, in principle, contribute to the long-run financing of pensions. The buffer fund is then demographically determined and serves as a neutral repository of pension capital for the purposes of the system's financing. The assumptions in the pessimistic scenario mean that the contribution flow grows slowly in relation to the desired indexation of the average income. The pessimistic scenario describes how pensions are affected by prolonged weakness in the development of demographic and economic factors.

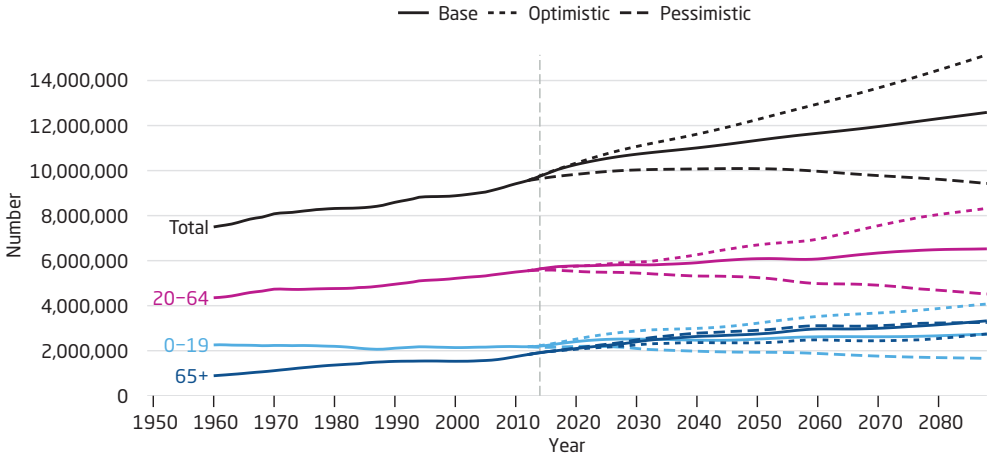
Description of the Assumptions in the Scenarios

Figure 7.12 Births, Deaths, Immigration and Emigration, 1935-2014, and Assumptions Through 2088



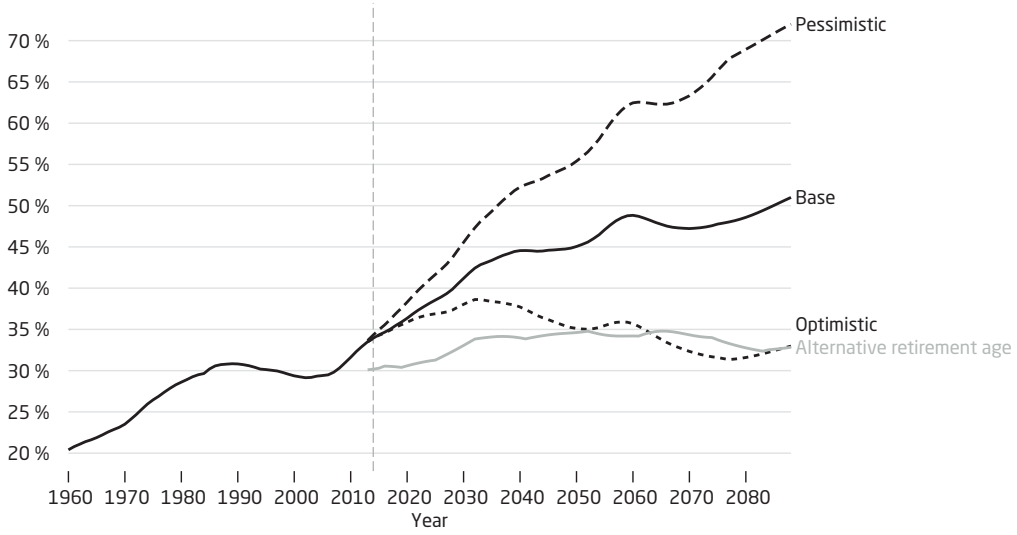
The diagram shows the development of the population since 1930 and the assumptions for 75 years into the future. The large birth cohorts of the 1940's, 1960's, 1990's and 2010's are evident. The number dying increases each year, not because of rising mortality, but because of a growing population. The peak years of immigration are the 1960's and 1970's, when there was substantial immigration of labour, particularly from Finland. There was another peak at the outset of the 1990's, when many refugees arrived, primarily from ex-Yugoslavia. The large immigrant cohorts in recent years are also reflected in the diagram.

Figure 7.13 Size of Population



The total population increases in both the positive and base scenarios, the reasons being a high birth rate and net immigration. The number of persons over 65 is more or less the same from one scenario to another. The historical data are estimates.

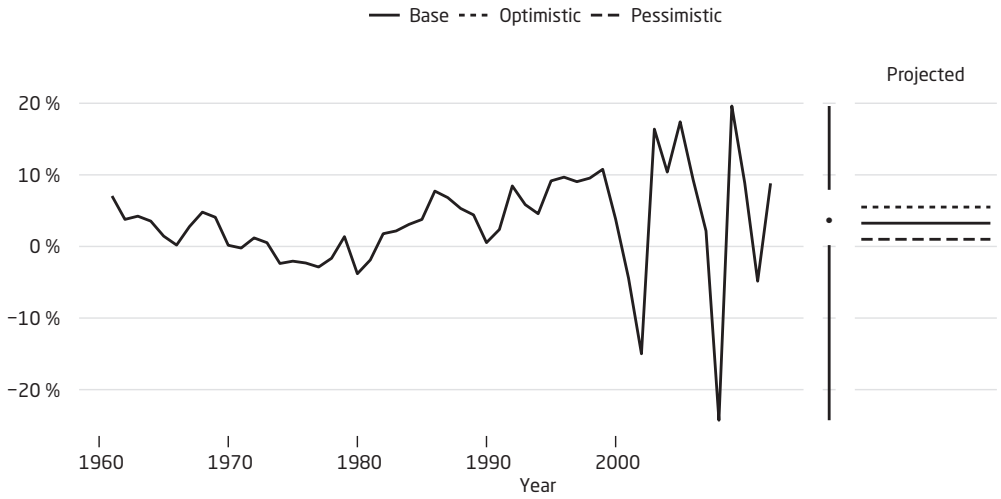
Figure 7.14 Support Ratio During 1960–2014 and Projection According to Statistics Sweden's Three Scenarios for 2013–2088



For the three scenarios the support ratio is calculated as the number of persons 65 years of age or older divided by the number aged 20–64. The support ratio for the base scenario has also been calculated with alternative retirement ages instead of age 65 as a limit. For this curve, a smoothed mean value for the burden of support is used.

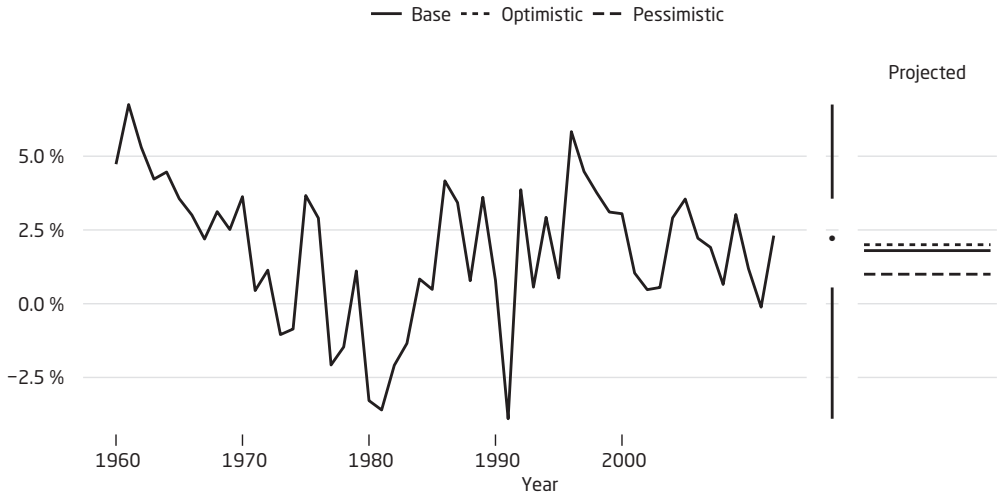
In the calculation of net contribution, fund strength and the balance ratio for the three scenarios, a constant retirement age of 65 is used over the simulation period. If the retirement age is adjusted upward – a likely development in view of increasing life expectancies – this means that the net contribution, fund strength and the balance ratio improve. Figure 7.14 also shows the burden of support calculated with an alternative retirement age instead of 65. Since an entire cohort, those born in 1948, is reclassified from retirement to economically active with an alternative retirement age, the initial value is 3 percentage points lower than for the three scenarios in 2012. With a rising alternative retirement age as life expectancy increases, the burden of support is between 30 and 35 percent. This may be viewed in relation to the rising burdens of support in scenarios with a fixed retirement age of 65 years.

Figure 7.15 Real Return on the Buffer Fund, 1960-2013, and Assumptions until 2088



The historical return of the buffer fund for the last 53 years. The point between the vertical lines is the median value. The starting point for the upper vertical line is the 75th percentile; the ending point is the maximum value. The starting point for the lower vertical line is the 25th percentile; the ending point is the minimum value.

Figure 7.16 Real Growth in Earnings, 1960-2013, and Assumptions until 2088



The development of real earnings for the last 54 years. The point between the vertical lines is the median value. The starting point for the upper vertical line is the 75th percentile; the ending point is the maximum value. The starting point for the lower vertical line is the 25th percentile; the ending point is the minimum value.

8 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 income-related national pension system. All amounts are shown in millions of SEK.

Note 1 Pension Contributions

The table below shows pension contributions recorded in 2014 by the Swedish Social Insurance Agency and the Swedish Pensions Agency. Employer contributions or self-employment contributions are recorded by the Social Insurance Agency. The contributions for the inkomstpension system are transferred to the Pensions Agency and thereafter to the National Pension Funds. The contributions calculated as corresponding to the pension credit for the premium pension are forwarded to the National Debt Office. The individual social security contribution and the general old-age pension contributions are recorded with the Pensions Agency before being transferred to the National Pension Funds and the premium pension system, respectively. Of the contributions recorded in a particular year, a portion relate to the preceding year or, in some cases, to several years further back. Employer contributions, for example, are recorded at least one month later than the equivalent salaries are paid.

The general pension contribution is transferred in its entirety to the National Pension Funds. For employer contributions and self-employment 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 contributions are preliminarily allocated by set percentages between the National Pension Funds and the premium pension system.

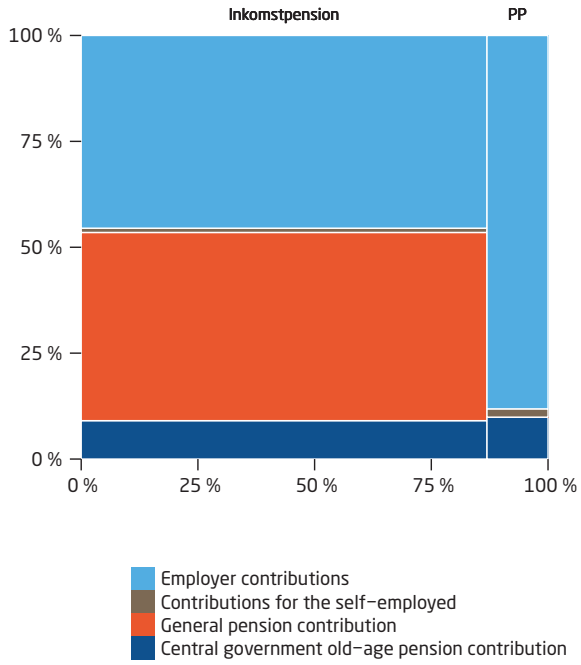
Pension Contributions by Type, 2014 *
millions of SEK

	Inkomst-pension	Premium pension	Central govern-ment budget	Total 2014	Total 2013
Employer contributions	107,066	31,186	16,405	154,657	149,060
Contributions for the self-employed	2,374	693	364	3,431	5,450
General pension contribution	104,546	0	0	104,546	101,244
Central government old-age pension contribution	21,330	3,501	0	24,831	23,077
Final settlements etc.	210	333	-302	241	1,497
Final settlements in 2014 for 2012	355	-53	-302	0	0
Collection loss, settlement	-273	0	0	-273	-140
Adjustment to accounting of National Pension Funds and premium pension system	128	386	0	514	1,637
Total	**235,526**	**35,713**	**16,467**	**287,706**	**280,328**

* Contributions received by the Swedish Social Insurance Agency/the Swedish Pensions Agency in 2014 and transferred to the National Pension Funds, the premium pension system and the central government budget, respectively.

In the national pension system there are several different kinds of contributions, as can be seen in the table above. Not all contribution revenue goes to the pension system. The portion of the old-age pension contribution allocated to the central government budget is for the portion of income above the ceiling on pension-qualifying income. This ceiling is 8.07 income-related base amounts before deduction of the general pension contribution and 7.5 after this deduction. Since these contributions do not represent pension credit, they are in fact taxes. The old-age pension contribution is paid by employers and self-employed persons; the general pension contribution is paid by all gainfully employed 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 so-called pension-qualifying amounts, for years with small children and for study, for example.

Figure 8.1 Pension Contributions



Contribution revenue increased between 2013 and 2014. The reason is that total earnings increased between these years. The contribution revenue of the inkomstpension system was 3.6 percent higher, whereas total earnings rose by roughly 3.7 according to the National Institute of Economic Research. The main reason why the the National Pension Funds' contribution revenue did not increase as much as total earnings is that the amount for reported self-employment contributions declined significantly between these these years. For contributions to the premium pension system, the reporting has been changed. Allocated management fees previously included in total charges for the premium pension system have now been transferred to return on funded capital.

To ensure that the premium pension system has received contributions corresponding to the 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. A settlement is then made among the central government budget, the premium pension system and the National Pension Funds.

The discrepancy between the accounting for contribution revenue of the Swedish Social Insurance Agency/the Swedish Pensions Agency and that of the National Pension Funds (SEK 128 million) is explainable largely by differences in regard to periodization. The difference between the accounting for contribution revenue of the Swedish Social Insurance Agency/the Swedish Pensions Agency and the reported contribution revenue of the premium pension system (SEK 386 million) is explained partly by the inclusion of certain adjustment amounts in the amount for the premium pension system (see Note 18).

Table A Pension Contributions, Excluding Settlements etc. Allocated by Type of Contribution Base, 2014 *
millions of SEK

	Employer, self-employed, and centr. govt. pension contribution	General pension contribution	Total
Earned income [1]	158,088	98,207	256,295
Transfer payments, see Table B	9,122	6,339	15,461
Pension-qualifying amounts, see Table C	15,709	0	15,709
Total	**182,919**	**104,546**	**287,465**

* The allocation of the general pension contribution between the two types of contribution base is estimated and is not shown in the accounting systems.
1 Including sick pay and self-employment income, excluding transfer payments.

The general pension contribution is 7 percent of the sum of earned income and pension-qualifying transfer payments such as sickness cash benefits, but excluding sickness and activity compensation (disability pension). The general 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 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 general pension contribution, is 18.5 percent.

The allocation in Table A refers to the contributions received by the Swedish Social Insurance Agency or the Swedish Pensions Agency in 2014.

Table B Pension Contributions for Transfer Payments, 2014 *
millions of SEK

	Cent. govt. pension contrib.	General pension contrib.	Total
Sickness cash benefit	2,826	1,959	4,785
Rehabilitation cash benefit	130	90	220
Allowance for care of close relatives	15	10	25
Work injury compensation, etc.	280	194	474
Parental insurance	3,425	2,374	5,799
Care allowance	272	189	461
Unemployment cash benefit etc.	2,172	1,505	3,677
Educational allowance	0	15	15
Artists' Board	1	3	4
Allowance to disease carriers	1	0	1
Total	**9,122**	**6,339**	**15,461**

* The allocation of the general pension contribution among the different types of transfer payments is estimated and is not shown in the accounting systems.

Table C Pension Contributions Paid for Sickness/Activity Compensation and Pension-Qualifying Amounts, 2014
millions of SEK

Sickness and activity compensation [1]	6679
Amounts credited for years with small children	6,732
Amounts credited for study [2]	2,379
Amounts credited for compulsory national service [2]	-81
Total	**15,709**

1 Amount refers to contributions for disbursements of both pension-qualifying benefits and pension-qualifying amounts. In both cases the contribution is 18.5 percent.
2 A minor portion of amounts credited for study and compulsory national service consists of pension-qualifying income.

Notes and Comments Regarding the Inkomstpension

Note 2 Pension Disbursements etc.

ATP and Inkomstpension Disbursements and Amounts Transferred to the European Community
millions of SEK

	2013	2014
Pension disbursements	253,960	255,102
ATP disbursements	184,913	176,914
Inkomstpension disbursements	69,047	78,188
Transfers to European Communities	6	9
Total	**253,966**	**255,111**

In 2014 a total of SEK 255,102 million in pensions was disbursed from the National Pension Funds, thereby reducing the pension liability to retired persons.

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 2014, just over SEK 9 million was thus transferred from the National Pension Funds, reducing the pension liability to the economically active. In total, the National Pension Funds were charged with SEK 255,111 million as a result of pension disbursements or transfer of pension credit.

Note 3 Return on Funded Capital

Return on Funded Capital of the First-Fourth and Sixth National Pension Funds, 2014 *
millions of SEK

	First	Second	Third	Fourth	Sixth	*	Total 2014	Total 2013
Stocks and shares	18,594	18,265	16,593	18,959	1,560	-1	73,970	124,163
Dividends received	3,999	4,747	3,757	4,555	86		17,144	13,370
Gain/-loss, listed and unlisted stocks and shares, net	14,595	13,518	12,836	14,404	1,474	-1	56,826	110,793
Bonds and other interest-bearing securities	6,265	5,534	8,801	7,555	82		28,237	1,431
Net interest	2,377	2,618	2,497	2,577	82		10,151	9,501
Gain/-loss, interest bearing assets, net	3,888	2,916	6,304	4,978	0		18,086	-8,070
Other investments	12,021	10,997	9,924	14,008	-81		46,869	2,984
Gain/-loss, derivatives, net	-2,061	907	1,597	618	0		1,061	10,224
Net foreign-exchange gain/-loss	14,082	10,090	8,327	13,390	-81		45,808	-7,240
Costs of commissions	-279	-286	-162	-101	0		-828	-679
Total	**36,601**	**34,510**	**35,156**	**40,421**	**1,561**	**-1**	**148,248**	**127,899**

* The adjustments column is included to show the adjustments for effects of rounding off when the funds are added up.
Source: Annual reports of the First, Second, Third, Fourth, and Sixth National Pension Funds, 2013 and 2014.

The item of Gain/-loss, derivatives, net now includes all derivatives; there has therefore 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 (see Costs of Administration and Capital Management).

Note 4 Costs of Administration

Costs of Administration
millions of SEK

	2013	2014
Costs of Insurance administration	922	895
Swedish Pensions Agency	542	487
Tax administration and other agencies [1]	380	408
Costs of fund administration	820	865
First National Pension Fund	161	177
Second National Pension Fund	178	195
Third National Pension Fund	173	178
Fourth National Pension Fund	187	195
Sixth National Pension Fund	121	120
Total	**1,742**	**1,760**

1 Includes Enforcement Authority.

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). The costs of administration for the Sixth National Pension Fund also include certain external costs of administration. For all funds, result-based charges, transaction costs etc. have reduced the return shown in Note 3 (see Costs of Administration and Capital Management).

Owing to phase-in provisions applicable until 2020, only a portion of administrative costs (86 percent in 2014, see Note 11) is charged to the pension balances of the insured. Each fund finances its costs of administration by drawing on its own fund.

Note 5 Value of Change in Contribution Revenue

Smoothed Value of Contribution Revenue *
millions of SEK

	2013	2014
Change in smoothed contribution revenue	6,815	8,448
Smoothed contribution revenue 2014		234,729
Smoothed contribution revenue 2013	226,281	-226,281
Smoothed contribution revenue 2012	-219,466	
(Smoothed turnover duration 2014 + smoothed contrib. duration 2013)/2		x 31.45972
(Smoothed turnover duration 2013 + smoothed contrib. duration 2012)/2	x 31.4922	
Value of change in contribution revenue	**214,619**	**265,772**

* Duration in years.

Basis for Calculating Smoothed Value of Contribution Revenue
millions of SEK

	2011	2012	2013	2014
Pension contributions	215,575	221,765	227,370	235,526
Smoothed contribution revenue	215,676	219,466	226,281	234,729
Consumer Price Index, June	311.28	314.45	313.99	314.7

For the method of calculating smoothed contribution revenue, see Appendix B, Balance Ratio.

Note 6 Value of Change in Turnover Duration

Value of Change in Turnover Duration *
millions of SEK

	2013	2014
Change in smoothed contribution duration	-0.02824	-0.03672
Smoothed contribution duration 2014		31.44136
Smoothed contribution duration 2013	31.47808	-31.47808
Smoothed contribution duration 2012	31.50632	
(Smoothed contribution revenue 2014 + smoothed contrib. revenue 2013)/2		x 230,505
(Smoothed contribution revenue 2013 + smoothed contrib. revenue 2012)/2	x 222,874	
Value of change in turnover duration	**-6,294**	**-8,464**

* Duration in years.

Basis for Calculating Smoothed Turnover Duration

	2011	2012	2013	2014
Turnover duration	31.44136	31.47808	31.40097	
Pay-in duration	20.55182	20.55897	20.40760	
Pay-out duration	10.88954	10.91911	10.99337	
Smoothed turnover duration	31.65754	31.50632	31.47808	31.44136

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

Note 7 New Pension Credit and ATP Points

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.

Value of New Pension Credit
millions of SEK

	2013	2014
Estimated inkomstpension credit earned in 2014	223,924	221,002
Non-adjusted Estimated Pension Credit for Inkomstpension		233,275
Adjustment Amount for Estimated Pension Credit for Inkomstpension		-12,273
Estimated value of ATP points earned	1,350	922
Adjustment amount, new pension credit	9,045	7,771
Confirmed inkomstpension credit earned in 2013	218,596	226,748
Estimated inkomstpension credit earned in 2013	-216,804	-223,924
Adjustments affecting pension balances, etc.	-2,822	-3,058
Change in amounts disbursed	10,075	8,005
Adjustment amount, new ATP points	7,708	640
Effect of difference between assumed value for 2014 and estimate for 2013, etc.	3,847	2,664
Value of other paid-in pension contributions for ATP [1]	1,634	1,007
Change in amounts disbursed	2,227	-3,031
Total	**242,027**	**230,335**

1 Excluding value of ATP points.

Since the tax assessment for the year of the financial statements had not been completed when the statements were prepared, the value of pension credit earned during this year can only be estimated. The adjustments affecting the size of pension balances also represent tax-assessment changes etc.; see Note 14, Table A. The change in disbursed amounts refers to changes in the pension liability to retirees as a consequence of other changes in disbursements than those due to indexation; see Note 14, Table C.

Of the ATP points earned during a single year, only a minor portion will have any impact on future pensions. The portion estimated to contribute to higher pensions has been reported in Note 14, Table B, as the estimated value of ATP points earned. However, all pension contributions relating to ATP contribute to an increase in 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 be equal in amount to the pension credit earned until 2018.[1]

[1] Paid-in contributions for ATP exceed the value of ATP pension points earned. 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 in the ATP system for older members of the work force to contribute to the labour supply.

Note 8 Indexation

Indexation, 2014
millions of SEK

	Active	Retired	Toral
Inkomstpension, indexation	118,220	-11,851	106,369
Effect of income index	99,126	5,166	104,292
Effect of balance ratio	19,094	-17,017	2,077
ATP, indexation	5,977	-20,437	-14,460
Effect of income index	5,012	8,909	13,921
Effect of balance ratio	965	-29,346	-28,381
Effect of price index		243	243
Toral	**124,197**	**-32,288**	**91,909**

Indexation, 2013
millions of SEK

	Active	Retired	Toral
Inkomstpension, indexation	-51,828	49,402	-2,426
Effect of income index	22,592	31,762	54,354
Effect of balance ratio	-74,420	17,640	-56,780
ATP, indexation	-3,767	102,334	98,567
Effect of income index	1,642	65,412	67,054
Effect of balance ratio	-5,409	36,330	30,921
Effect of price index		592	592
Toral	**-55,595**	**151,736**	**96,141**

Income Index and Balance Ratio Affecting Pension Liability in 2014
percent

	Active	Retired
Income index	2.1	0.5
Balancing Effect	0.4	-1.6
Total	**2.5**	**-1.1**

The pension liability changes by the change in the income index unless balancing is activated in the system. When balancing is activated, the pension liability changes instead by the balance index (except for the ATP liability for individuals under age 65). The change in the balance index consists of the change in the income index multiplied by the current balance ratio. The value of indexation refers to the indexation that has affected the pension liability as of December 31, 2014. The pension liability to the economically active as of December 31, 2014 has been credited with a return in accordance with the change in the balance index between 2014 and 2015, which was 2.5 percent, with the change in the income index accounting for 2.1 percent and the balance ratio, for 0.4 percent. The pension liability to retirees as of the same date is recalculated by the change in the balance index at year-end 2013 → 2014,

which was -1.1 percent. For those who have drawn ATP before age 65, the pension liability is indexed by the change in the price-related base amount until they reach age 65.

Note 9 Value of the Change in Life Expectancy

Value of the Change in Life Expectancy, 2014
millions of SEK

	Active	Retired	Total
Inkomstpension		6,964	6,964
ATP	834	12,018	12,852
Total	**834**	**18,982**	**19,816**

Value of the Change in Life Expectancy, 2013
millions of SEK

	Active	Retired	Total
Inkomstpension		5,263	5,263
ATP	993	9,808	10,801
Total	**993**	**15,071**	**16,064**

As used here, the term "life expectancy" refers to the assumed length of time for which an average pension amount is disbursed: turnover duration, or so-called economic life expectancy, which is expressed in terms of an economic annuity divisor. In the calculation of these divisors, consideration is given to the advance rate of 1.6 percent. The method of calculating economic annuity divisors is shown in formula B.6.4 in Appendix B.

A higher economic life expectancy will increase the ATP liability, both to the economically active and to retirees. For the inkomstpension system, only the pension liability to retirees increases 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 divisors 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, Inheritance Gains Distributed

Inheritance Gains, Arising and Distributed
millions of SEK

	2013	2014
Inheritance gains arising	12,055	11,711
60 years or older	5,166	5,072
Younger than 60 years [1]	6,889	6,639
Inheritance gains distributed	14,264	13,952
60 years or older	7,286	7,262
Younger than 60 years	6,978	6,690

1 Died last year, distributed current year.

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 according to an inheritance gain factor. Until the year when a birth cohort reaches age 60, the inheritance gains distributed are those actually arising. Because of the taxation procedure, allocation lags by one year. 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 before their 60th year in 2013 (born in 1954 or later) were distributed to the respective birth cohorts in 2014. 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 for an earlier period. Partly because this mortality will not be exactly the same as actual mortality in the year concerned, there is a discrepancy between inheritance gains arising and inheritance gains distributed. For those dying in their 60th year or at a higher age in 2014 (born in 1954 or earlier), the inheritance gains are distributed in the same year.

Note 11 Deduction for Costs of Administration

Deduction for Costs of Administration
millions of SEK

	2013	2014
Deduction for Costs of Administration	1,414	1,548

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 2014, 86 percent of administrative costs were financed by a deduction from pension balances. This deduction will increase by 2 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, costs 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 confirmed is considered in the in the calculation of the administrative cost factor for the following year. The deduction for administrative costs is made by multiplying pension balances by the administrative cost factor. The deduction in 2014 was 0.0326 percent and totalled SEK 1,548 million. In 2013 the deduction was 0.0307 percent.

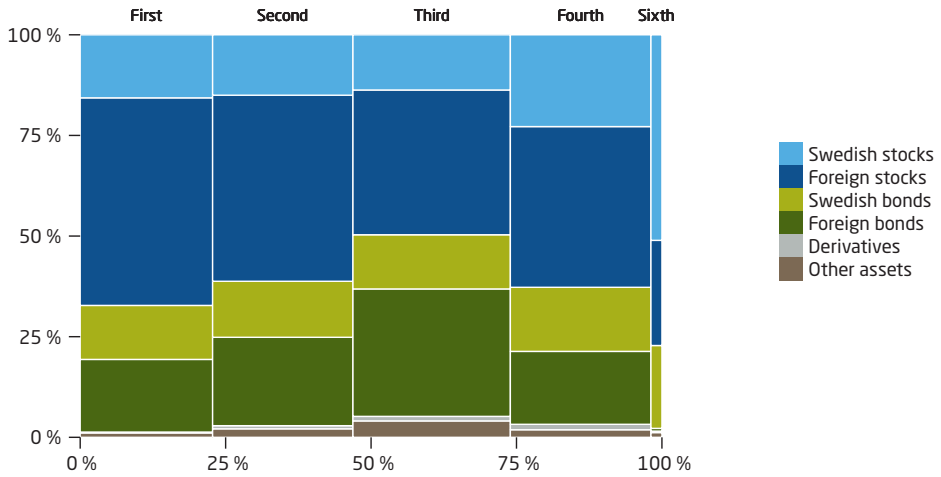
Note 12 Fund Assets

Assets and Liabilities of the Buffer Fund, 2014

millions of SEK

	First	Second	Third	Fourth	Sixth	Total 2014	Total 2013
Assets							
Stocks and shares	193,524	186,822	169,944	191,761	18,400	760,451	662,793
Swedish	45,070	45,792	46,897	69,704	12,172	219,635	207,207
Foreign	148,454	141,030	123,047	122,057	6,228	540,816	455,586
Bonds and other interest-bearing securities	90,567	109,451	154,362	104,030	5,069	463,479	373,426
Swedish issuers	38,612	42,460	46,044	48,661	4,908	180,685	201,416
Foreign issuers	51,955	66,991	108,318	55,369	161	282,794	172,010
Derivatives	622	2,360	3,862	4,135	86	11,065	20,774
Other assets	3,140	6,455	13,950	5,749	282	29,576	28,806
Total Assets	**287,853**	**305,088**	**342,118**	**305,675**	**23,837**	**1,264,571**	**1,085,799**
Liabilities							
Derivatives	-3,908	-9,728	-10,398	-10,166	-248	-34,448	-4,792
Others	-134	-1,453	-43,388	-655	-39	-45,669	-23,456
Total Liabilities	**-4,042**	**-11,181**	**-53,786**	**-10,821**	**-287**	**-80,117**	**-28,248**
Total	**283,811**	**293,907**	**288,332**	**294,854**	**23,550**	**1,184,454**	**1,057,551**

Figure 8.2 Fund Assets



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

Smoothed Contribution Asset*
millions of SEK

	2013	2014
Smoothed contribution revenue	226,281	234,729
Smoothed turnover duration	x 31.47808	x 31.44136
Smoothed Contribution Asset	**7,122,892**	**7,380,199**

* Duration in years.

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

Note 14 Pension Liability

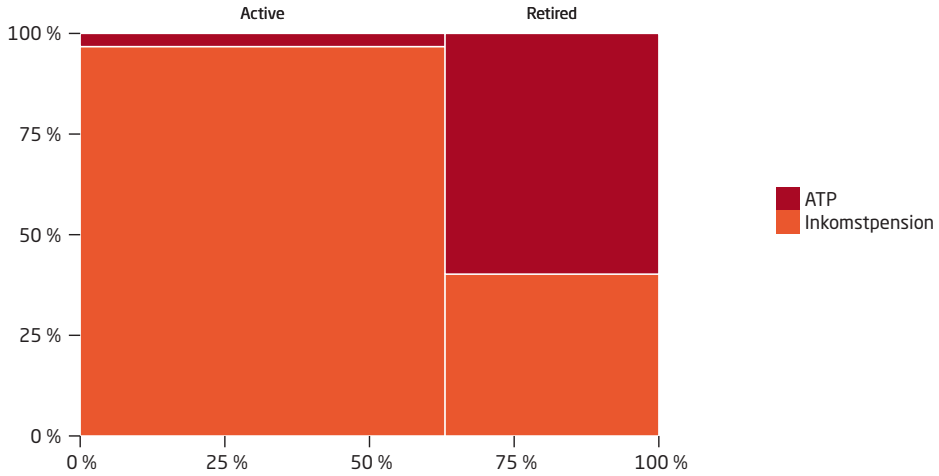
Pension Liability, 2014
millions of SEK

	Active	Retired	Total
Inkomstpension	4,966,453	1,209,354	6,175,807
ATP	167,763	1,797,707	1,965,470
Total	**5,134,216**	**3,007,061**	**8,141,277**

Pension Liability, 2013
millions of SEK

	Active	Retired	Total
Inkomstpension	4,828,158	1,083,038	5,911,196
ATP	233,643	1,908,544	2,142,187
Total	**5,061,801**	**2,991,582**	**8,053,383**

Figure 8.3 Pension Liability, 2014



The pension liability to retirees for the ATP and the inkomstpension is calculated in the same manner for both. The liability of a cohort is calculated as the product of the cohort's pension disbursements in the month of December multiplied by 12 and the average economic lifetime of the cohort. The total liability to retirees is the sum of the cohorts' pension liabilities. Average economic lifetime is expressed in the form of economic annuity divisors. The inkomstpension liability to the economically active consists of the total pension balances of all insured persons in this category as of December 31, 2014, with the addition of the estimated pension credit earned in 2014. 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, formula B.6.1–B.6.4.

The ATP liability to the economically active cannot be calculated directly from the data in the records of pension credit earned. In order to determine the ATP liability, an estimate is made of the ATP of every individual (born between 1938 and 1953) in the year when they reach 65. The estimated annual amount is multiplied by the economic annuity divisor for 65-year-olds in the year of the accounts. Persons older than 65 who have not yet begun to draw their entire pension at the time of calculation are assumed to do so in the following year. To obtain the present value of the estimated pension liability, the liability is reduced by the individual's expected future contributions and discounted by an assumed future increase in the income index. In the calculation it is assumed that the average income will increase by 2 percent annually. The ATP liability to the economically active will gradually diminish with the phase-out and will in principle be gone entirely by 2018.

Table A Analysis of the Change in Inkomstpension Liability to the Economically Active *
millions of SEK

	2013	2014
Inkomstpension liability to the economically active, December 31, 2013	4,851,107	4,828,158
Of which estimated inkomstpension credit earned in 2013	-216,804	-223,924
Pension balances as of December 31, 2013	**4,634,303**	**4,604,234**
Inheritance gains arising from persons dying before age 60 [1]	-6,889	-6,639
Adjustments affecting pension balances [2]	-290	-364
Opening pension balance, 2014	**4,627,124**	**4,597,231**
Inheritance gains arising, persons dying at or after age 60	-5,166	-5,072
Changes in tax assessments etc. affecting pension balances	-2,532	-2,694
Confirmed inkomstpension credit earned in 2013	218,596	226,748
Distributed inheritance gains from persons dying at or after age 60	7,286	7,262
Distributed inheritance gains from persons dying before age 60	6,978	6,690
Indexation	-51,828	118,220
Deduction for administrative costs	-1,414	-1,548
Pensions drawn	-196,048	-202,854
Pensions revoked	1,238	1,468
Pension balances as of December 31, 2014	**4,604,234**	**4,746,047**
Estimated inkomstpension credit earned in 2014	223,924	221,002
Non-adjusted Estimated Pension Credit for Inkomstpension		233,275
Adjustment Amount for Estimated Pension Credit for Inkomstpension		-12,273
Inkomstpension liability to the economically active	**4,828,158**	**4,966,453**

* The figures for 2013 are shown only for comparison.
1 Distributed in 2014.
2 Transfers to the European Communities (see Note 2), adjustments for deceased persons, sealed cases, etc.

Table B Analysis of the Change in ATP Liability to the Economically Active *
millions of SEK

	2013	2014
ATP liability to the economically active, December 31, 2013	326,314	233,643
Effect of difference between assumption for 2014 and estimate in 2013 etc.	3,847	2,664
Opening ATP liability, 2014	**330,161**	**236,307**
Indexation	-3,767	5,977
Estimated value of paid-in contributions for the ATP, 2014	1,350	922
Pensions drawn	-96,728	-77,284
Value of other paid-in pension contributions for the ATP, 2013	1,634	1,007
Value of change in life expectancy	993	834
ATP liability to the economically active	**233,643**	**167,763**

* The figures for 2013 are shown only for comparison.

Table C Analysis of the Change in Pension Liability to Retirees, ATP and Inkomstpension, 2014
millions of SEK

	Inkomstpen-sion	ATP	Total
Pension liability to retirees, December 31, 2013	1,083,038	1,908,544	2,991,582
Additional liability to the economically active [1]	201,386	77,284	278,670
Change in amounts disbursed	8,005	-3,031	4,974
Pensions disbursed [2]	-78,188	-176,914	-255,102
Indexation	-11,851	-20,194	-32,045
Value of change in life expectancy	6,964	12,018	18,982
Total	**1,209,354**	**1,797,707**	**3,007,061**

1 Inkomstpension: Net of Pensions drawn and Pensions revoked, see Table A. ATP: See Table B.
2 See Note 2.

The liability to retirees is changed by indexation, increased by higher life expectancy and decreased by disbursements made during the year. Pension amounts can change for reasons such as new pension credit earned, changes in marital status (applies to the ATP), changes in taxation etc. Such changes in liability are reported as changes in disbursements (changes in amounts). 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

Pension Disbursements Premium Pension
millions of SEK

	2013	2014
Pension disbursements	3,196	4,456
Fund insurance	2,732	3,894
Traditional insurance	464	561
Transfers to European Communities	1	1
Total	**3,197**	**4,456**

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 rate of return of the funds chosen by the saver. The other option is to switch to traditional insurance with profit annuity, either on retirement or later. With traditional insurance with profit annuity, the pension is disbursed as a nominal guaranteed monthly amount. If the management of the traditional insurance with profit annuity 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. In 2014, SEK 283 million was disbursed in supplementary amounts, as shown in Note 23. In 2013 the supplementary amount was SEK 209 million.

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 2014 the sum of SEK 1 million was transferred from the premium pension system.

Note 16 Return on Funded Capital

Return on Funded Capital, 2014
millions of SEK

	Fund Insurance	Traditional insurance	2014	Total 2013
Return				
Stocks and shares	121,903	1,435	123,338	100,503
Direct return	61	13	74	69
Realized and unrealized capital gains	121,842	1,422	123,264	100,434
Bonds and other interest-bearing securities	1,386	1,698	3,084	304
Direct return (net interest)	6	-3	3	9
Realized and unrealized capital gains	1,380	1,701	3,081	295
Net foreign-exchange gain/-loss	2,713		2,713	-714
Total Return	**126,002**	**3,133**	**129,135**	**100,093**
Allocated Management Fees	3,291	10	3,301	2,611
Change, Traditional insurance		**2,342**	**1,573**	**1,573**
Total	**129,293**	**5,485**	**134,777**	**104,278**

The return earned includes realized and unrealized foreign-exchange gains and losses after deduction of fund management costs and distributed rebates of fund management fees. The average fund management cost after deduction of rebates is 0.28 percent of average capital.

The pension liability was changed by the return on the premium pension funds, which totals SEK 129,134 (100,093) million.

Note 17 Costs of Administration

Costs of Administration
millions of SEK

	2013	2014
Operating expenses	342	377
Financial items, net	21	16
Total	**363**	**393**

The item of Financial items, net, refers primarily to borrowing expenses, gain/-loss on trade inventories and interest revenue (net). Costs of fund management are paid directly from insurance assets and are not included in the premium pension system's operating expenses. Total costs of administration in 2014 were SEK 386 million, of which SEK 9 million refers to change in traditional insurance with profit annuity. The corresponding amount for costs of administration in 2013 was SEK 350 million, of which SEK 8 million are refer to traditional insurance with profit annuity. A presentation of the

respective gross and net reported costs is provided in the chapter Costs of Administration and Capital Management.

Note 18 New Pension Credit

New Pension Credit
millions of SEK

	2013	2014
Preliminary contribution revenue, including interest on the premium pension earned in 2014/2013	34,272	35,278
Adjustment amount, confirmed pension credit	1,683	430
Confirmed pension credit, including interest, for the premium pension earned in 2011/12 and 2012/13	34,791	34,702
Preliminary contribution for the premium pension earned in 2011/12 and 2012/13	-33,108	-34,272
Change in pension credit	14	5
Total	**35,969**	**35,713**

In the operations of the premium pension system, the equivalent of contribution revenue is new pension credit including interest for the period during which the contribution moneys are managed before being invested in the funds chosen by the insured. During the year, changes in pension credit have come from previous income years.

Note 19 Inheritance Gains Arising and Distributed

Inheritance Gains, Arising and Distributed
millions of SEK

	2013	2014
Inheritance gains arising	1,152	1,447
Inheritance gains distributed	1,152	1,447

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 traditional insurance with profit annuity. In 2014 inheritance gains distributed were SEK 1,447 million; this amount was determined by the sum of the capital released by deaths in calendar year 2013. The corresponding amount distributed in 2013 was SEK 1,152 million. Inheritance gains distributed in 2014 (2013) include SEK 28 (27) million related to changeovers from fund insurance to traditional insurance with profit annuity. This item also includes reductions in premium pension credit when premium pensions are transferred between spouses. In calendar year 2014 a total of 9,171 persons transferred an aggregate amount of SEK 78 million between spouses or registered partners. (The corresponding numbers for 2013 were 8,392 people and SEK 68 million).

Note 20 Deduction for Costs of Administration

Costs of Administration
millions of SEK

	2013	2014
Deduction for costs of administration	474	542

The amount of SEK 542 (474) million is for the fees deducted by the Swedish Pensions Agency to finance the costs of administration for the premium pension system in 2014 (2013). The average fee for 2014 (2013) was equivalent to 0.09 (0.10) percent of pension savers' account balances with a ceiling of SEK 120 (110). During the build-up phase and until 2018, the premium pension system will be financed by a combination of fees deducted, interest-bearing overdrafts for working capital needs and borrowing within authorized limits from the National Debt Office. The amount of the fee deducted is based on the cost level forecast for 2014.

Note 21 Insurance Assets

Insurance Assets, 2014
millions of SEK

	Fund insurance	Traditional insurance	Temporary management	Total 2014	Total 2013
Stocks and shares	713,876	7,093		720,969	566,820
Bonds and other interest-bearing securities	45,136	10,989	32,899	89,024	79,960
Trade in progress and inheritance gains arising	2,144	9		2,153	1,701
Total	**761,156**	**18,091**	**32,899**	**812,146**	**648,481**

Inheritance gains arising for 2014 (2013) total SEK 1,802 (1,321) million. Fund insurance accounts for SEK 1,717 (1,321) million, traditional insurance with profit annuity for SEK 86 (70) million. The gains will be distributed to pension savers in 2015 (distributed in 2014).

Temporary management of preliminary contributions refers to income year 2014. As of December 31, 2014, there were 5,661,199 premium pension savers, all of them in fund insurance, and 1,216,633 pensioners, of whom 975,022 were in fund insurance and 241,611 in traditional insurance with profit annuity.

Note 22 Other Assets

Other Assets
millions of SEK

	2013	2014
The Swedish Pensions Agency's administrative inventory of fund shares (trading inventory)	89	64
Other assets	3,627	3,434
Total	**3,716**	**3,498**

The Swedish Pensions Agency's administrative inventory of fund shares facilitates trade in fund shares by reducing the number of trading transactions with fund managers.

Other assets consist of cash and bank balances, fund trading in progress, other receivables and accrued interest revenue.

Note 23 Change in Owner Equity

Change in Owner Equity, 2014
millions of SEK

	Fund insurance	Traditional insurance	Total 2014	Total 2013
Opening owner equity:				
Consolidation fund	-880	4,589	3,709	2,234
Rebate paid from consolidation fund		-283	-283	-209
Net income for the period	149	2,342	2,491	1,684
Total owner equity	**-731**	**6,648**	**5,917**	**3,709**

The Swedish Pensions Agency reports a negative owner equity overall for fund insurance operations. The solvency provisions in the Insurance Businesses Act do not apply to the Swedish Pensions Agency; through 2018 negative results brought forward (accumulated deficits) will be financed by overdrafts with the National Debt Office. It is expected that a balance between assets and liabilities will be reached by 2018. Traditional insurance with profit annuity reports a positive result that will be added to the consolidation fund as owner equity. The amounts in the consolidation fund are distributed to pensioners as refunds in connection with pension disbursements.

Note 24 Pension Liability

Pension Liability
millions of SEK

	2013	2014
Fund insurance	603,540	761,156
Traditional insurance	8,310	11,443
Liabilities in regard to preliminary contributions	32,039	32,944
Total	**643,889**	**805,543**

The pension liability is a liability to pension savers and to pensioners. Pension liability in 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 the value of insurance assets in Note 21.

Traditional insurance with profit annuity, is calculated for each insurance as the capital value of remaining guaranteed disbursements. The value is calculated on assumptions about future return, life expectancy and operating expenses. The value of the asset is shown in Note 21.

Information on how the economic annuity divisors for fund insurance and traditional insurance with profit annuity are calculated is found in Appendix A.

Liabilities in regard to preliminary contributions correspond to the assets invested under temporary management; the value of these assets can be found in Note 21.

Table A Pension Liability, 2014
millions of SEK

	Fund insurance	Traditional insurance	Liabilities in regard to preliminary contributions
Premium pension capital, December 31, 2014	761,156	11,443	32,944
Pension liability, December 31, 2013	603,540	8,310	32,039
Change in value	126,002	3,133	227
Confirmed premium pension credit earned in 2013	35,366	285	-34,702
Preliminary contributions, premium pension, earned in 2014			35,329
Management fees allocated, etc.	3,291	10	
Inheritance gains arising	1,349	98	
Settlement, preliminary contributions, previous years			51
Change in pension credit for the premium pension	5	-1	
Decrease in liability because of pensions drawn in 2014	-3,894	-561	
Switch to Traditional insurance / from fund insurance	-2,617	2,617	
Inheritance gains distributed [1]	-1,349	-98	
Deduction for costs of administration	-542		
Change in pension liability [2]		-2,342	
Other	6	-8	
Adjustment affecting premium pension capital [3]	-1		
Total	**761,156**	**11,443**	**32,944**

1 Inheritance gains, capital released in 2013, to be allocated in 2014.
2 Costs of administration, SEK -9 million, are included in the change of the pension liability; see Note 17.
3 Amounts transferred to the European Communities, etc.

The pension liability is changed by new pension credit earned, preliminary contributions, changes in the extent of pension withdrawal, changes in pension credit due to changes in taxation, changes in value of assets, costs of administration, pension disbursements and estimates of future mortality for the insured.

Note 25 Other Liabilities

Other Liabilities
millions of SEK

	2013	2014
Other liabilities	4,565	4,903
Share of consolidated Swedish Pensions Agency assets, liabilities and result, net	34	37
Total	**4,599**	**4,940**

Other liabilities consist chiefly of fund trading in progress, borrowings from the National Debt Office, accrued management fees and accrued interest fees.

The accounting for the premium pension's share of the Swedish Pensions Agency's joint assets, liabilities and results has been simplified so that a net amount is reported. It is included so that the balance sheet will balance.

Appendix A Calculation Factors

The Social Insurance Code 58 Ch. 10 § (SFB) (2010:110) requires that the income index be calculated for each year. By Government decision, the Swedish Pensions Agency is to calculate and prepare proposals for an income index, which the Government then confirms. In addition, the Agency is required 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 64 Ch. 3 § SFB, premium pension operations are to be conducted according to sound insurance principles. These principles, as interpreted by the Swedish Pensions Agency, govern the calculation of the bonus rate, inheritance gains and annuity divisors for the premium pension. Further, the Swedish Pensions Agency is to calculate the fee that will finance premium pension operations.

Income Index

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

$$I_t = \left(\frac{u_{t-1}}{u_{t-4}} \cdot \frac{KPI_{t-4}}{KPI_{t-1}}\right)^{\frac{1}{3}} \cdot \frac{KPI_{t-1}}{KPI_{t-2}} \cdot k \cdot I_{t-1} \qquad \text{(A.1.1)}$$

$$u_t = \frac{Y_t}{N_t} \qquad \text{(A.1.2)}$$

t	calendar year
I_t	income index year t
KPI_t	consumer price index for June of year t
k	adjustment factor for error in estimation in u_{t-2} and u_{t-3}
Y_t	total pension-qualifying income without limitation by the ceiling, person 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.

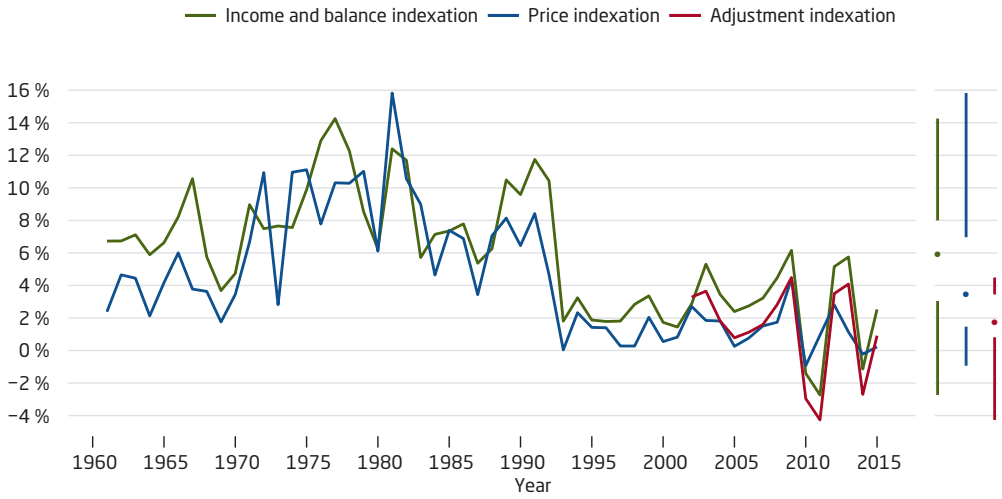
$$B_t = I_t \cdot BT_t \tag{A.2.1}$$

$$B_{t+1} = B_t \cdot \left(\frac{I_{t+1}}{I_t}\right) \cdot BT_{t+1} = I_{t+1} \cdot BT_t \cdot BT_{t+1} \tag{A.2.2}$$

B_t balance index year t
I_t income index year t
BT_t balance ratio year t

At the turn of the year $(t-1) \rightarrow t$, 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.

Figure A.1 Indexation

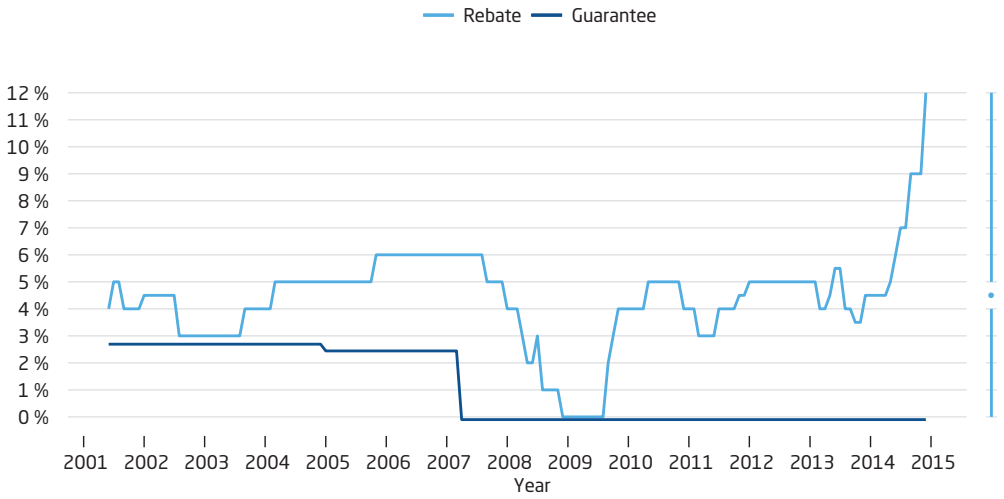


The point between the vertical lines is the median value. The starting point for the upper vertical line is the 75th percentile; the ending point is the maximum value. The starting point for the lower vertical line is the 25th percentile; the ending point is the minimum value.

Rate of return

In the premium pension system the amount to pay out is recalculated each year based on the value of the premium pension account. For those with fund insurance the yield from the account will depend on the fund returns, while for those with traditional insurance with profit annuity the value of the account will depend on the rate of return. The guaranteed amount in traditional insurance with profit annuity is only recalculated when more money comes in. The rate of return does not affect the amount of the life-insurance provisions since the pension liability is calculated on the basis of expected future payments of guaranteed amounts.

Figure A.2 Rate of Rebate and Guarantee



The point between the vertical lines is the median value. The starting point for the upper vertical line is the 75th percentile; the ending point is the maximum value. The starting point for the lower vertical line is the 25th percentile; the ending point is the minimum value.

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 annually calculated inheritance gain factor for the inkomstpension.

$$AF_{i,t} = \begin{cases} 1 + \dfrac{\sum_{j=2}^{17} PBd_{j-1,t-1}}{\sum_{j=2}^{17} PB_{j-1,t-1}}, & i = 2, 3, \ldots, 17 \\ 1 + \dfrac{PBd_{i-1,t-1}}{PB_{i-1,t-1}}, & i = 18, 19, \ldots, 60 \\ \dfrac{L_{i-1,t} + L_{i,t}}{L_{i,t} + L_{i+1,t}}, & i = 60, 61, \ldots \end{cases} \tag{A.4.1}$$

i age at end of year t

$AF_{i,t}$ inheritance gain factor, year t for age group i

$PBd_{i,t}$ pension balances of persons dying in year t in age group i

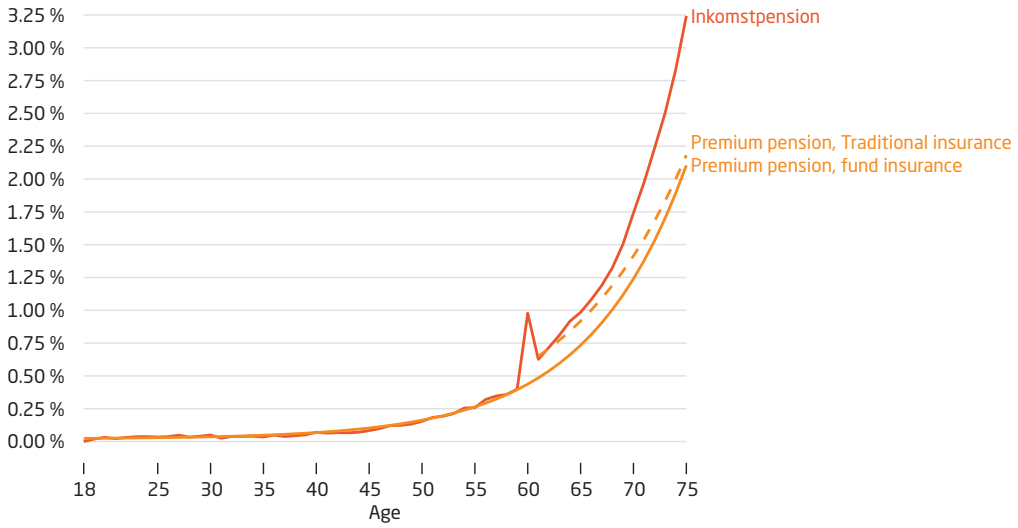
$PB_{i,t}$ total pension balances of survivors in year t in age group i

$L_{i,t}$ number of survivors in year t in age group i out of 100,000 born, 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 of age 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. As 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 the life-expectancy statistics from Statistics Sweden.

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.

Figure A.3 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.

The impact of inheritance gains on the pension liability is limited, for 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 shown in Note 10. For the group dying before their 60th year, the difference is explained by tax assessment changes between the time when inheritance gain factors are calculated and the time when the gains are distributed, and by 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. Inheritance gains are distributed once a year for both the economically active and retirees. As with the inkomstpension, future expected inheritance gains are included in the annuity divisor. 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 Annuity Divisors for the premium pension). 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 average balance of the premium pension account as of the last day of every month of year $t - 1$. The amounts of the inheritance gains are adjusted by a factor (close to 1) that will equalize with the greatest possible accuracy 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 fund insurance do not affect the pension liability over time, as death capital is offset by inheritance gains distributed.

Values in determination of inheritance gain for 2013, distributed during 2014

	a	b	c	factor
Fund insurance	0.0002	0.000007	0.1071	0.9671
Traditional insurance	0.0001	0.000031	0.0872	1.0118

Administrative Cost Factor, Inkomstpension

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

$$FF_t = 1 - \left(\frac{B_t \cdot A_t + J_{t-1}}{PB_{t-1}} \right) \qquad \text{(A.6.1)}$$

FF_t administrative cost factor, year t

B_t budgeted costs of administration, year t

A_t proportion charged to pension balances, year t

J_t adjustment amount, equals the difference between the amount that would have been deducted from pension balances in year t, based on actual cost in year t and the adjustment amount in year $t - 1$, as well as the actual deduction taken from pension balances in year t.

PB_t total pension balances, year t

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 adjustment amount is equal to the difference between the amount that would have been deducted from pension balances, based on actual cost and the adjustment amount for the previous year, and the actual deduction made 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 premium pension, including interest and other financial expenses.

Administrative costs affect the capital of the premium pension system and at the same time, through the deduction from pension balances, they affect the premium pension liability by the same amount (see Notes 17 and 20). For traditional insurance with profit annuity, life-insurance provisions are affected by assumptions of future expected operating costs.

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 consideration given to the interest of 1.6 percent (advance interest) credited to pensions in advance.

$$D_i = \frac{1}{12L_i}\sum_{k=i}^{r}\sum_{X=0}^{11}\left(L_k + (L_{k+1} - L_k)\frac{X}{12}\right)(1,016)^{-(k-i)}(1,016)^{\frac{-X}{12}}, \quad i = 61, 62, \ldots, r \qquad \text{(A.8.1)}$$

D_i annuity divisor for age group i

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

X number of 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, because of the recalculated annuity divisors, at the outset 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.

Drawing 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, Pay-in Duration. The economic annuity divisors are used to calculate the pension liability to retirees.

Annuity divisors are determined for each age with no upper age limit.

Confirmed Annuity Divisors for the Inkomstpension *

	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
1944	18.44	17.86	17.28	16.70	16.11	15.54	14.96	14.38	13.80	13.23
1945	18.55	17.96	17.38	16.80	16.22	15.64	15.07	14.48	13.91	13.33
1946	18.64	18.05	17.47	16.89	16.31	15.73	15.16	14.57	13.99	13.41
1947	18.73	18.15	17.56	16.98	16.40	15.83	15.24	14.66	14.07	13.49
1948	18.83	18.24	17.66	17.07	16.49	15.91	15.33	14.74	14.16	13.58
1949	18.89	18.31	17.72	17.13	16.55	15.97	15.38	14.79	14.21	13.63
1950	18.98	18.39	17.80	17.21	16.63	16.05	15.46	14.87	14.28	13.70

* Annuity divisors are confirmed 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.

$$D_x = \int_0^{\infty} e^{-\delta t} \frac{l(x+t)}{l(x)} dt \tag{A.9.1}$$

$$\delta = ln(1+r) - \epsilon \tag{A.9.2}$$

$$l(x) = e^{-\int_0^x \mu(t)dt} \tag{A.9.3}$$

$$\mu(x) = \begin{cases} a + be^{cx} & \text{for } x \leq 97 \\ \mu(97) + (x-97) \cdot 0.001 & \text{for } x > 97 \end{cases} \tag{A.9.4}$$

D_x	annuity devisors
x	exact age at time of calculation
r	interest rate
ϵ	interest intensity of operating costs

The annuity divisors are calculated in continuous time and according to exact age at retirement, but in principle they are consistent with the formula for the annuity divisor for the inkomstpension.[1] 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 2012–2060 for individuals born in 1938, 1945 or 1952.

So-called cohort mortality is used, which means that the year cohort 1938 is used for individuals born in the 1930s or earlier, year cohort 1945 is used for individuals born in the 1940s, and year cohort

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

1952 is used for individuals born in the 1950s or later. For $x > 97$ $\mu(x)$ merges with a straight line with a slope of 0.001.

Current Values for Disbursement Amounts in Fund Insurance and Traditional Insurance

Cohort	a	b	c	δ
1930s	0.0068	0.00000054	0.1378	0.028559
1940s	0.0065	0.00000026	0.1454	0.028559
1950s	0.0058	0.00000014	0.1518	0.028559

When calculating the guaranteed amount in traditional insurance with profit annuity, the Statistics Sweden alternative with low mortality is used, reduced by a further 10 percent. However, the Statistics Sweden main alternative for mortality is used in calculating the amount of pension payable. This is because the assumed payment profiles are to be as realistic as possible and not unnecessarily cautious.

Between April 1, 2007 and March 1, 2014, the interest intensity credited, δ, is based on the rate of interest 4.0 percent before expense deduction in fund insurance, and 2.3 per cent in traditional insurance with profit annuity, when the amount payable is calculated.

As of March 1, 2014, the interest intensity credited, δ, is based on the rate of interest 3.0 percent before expense deduction in both fund insurance and traditional insurance with profit annuity when the amount payable is calculated. This equates to $\delta = 0.028559$. The interest rate used in calculating the guaranteed amount in traditional insurance with profit annuity is 0.0 percent.

Since April 1, 2008, the actuarial provisions (FTA) are valued on the basis of the market rates of interest on liquid treasury bills and government bonds at the time of valuation. As of December 31, 2013, a new discounting curve is used based on the interpolation of swaps and a final part that converges to a given forward rate. A cost deduction of 0.1 percent is made from these interest rates.

For traditional insurance with profit annuity, the pension liability is equal to the actuarial provisions (FTA). It is calculated by multiplying every guaranteed amount by an annuity divisor. The annuity divisor is determined in the same way as pension amounts. See the formulas above. In the calculation of FTA, however, separate mortality assumptions are used for women and men as well as the above-mention interest curve. The FTA increase if a lower mortality rate or interest rate is assumed. For 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.

Annuity divisors are determined for each age with no upper age limit. Annual amounts are calculated using a rate of interest 3.0 percent.

Annuity Divisors for Annual Amount (Fund Insurance and Traditional insurance)

	61	62	63	64	65	66	67	68	69	70
Without survivor benefit										
	17.19	16.80	16.40	15.99	15.18	14.76	14.33	13.89	13.45	12.99
With survivor benefit										
Co-insured 55	21.22	21.09	20.97	20.85	20.67	20.57	20.48	20.39	20.31	20.23
Co-insured 60	20.15	19.97	19.80	19.64	19.38	19.24	19.10	18.98	18.86	18.75
Co-insured 65	19.13	18.88	18.64	18.40	18.01	17.80	17.60	17.41	17.22	17.05
Co-insured 70	18.45	18.15	17.85	17.55	17.05	16.77	16.50	16.24	15.99	15.74

Annuity Divisors for Guaranteed Annual Amount (Traditional insurance)

	61	62	63	64	65	66	67	68	69	70
Without survivor benefit										
	27.55	26.71	25.86	25.02	23.09	22.29	21.48	20.68	19.87	19.07
With survivor benefit										
Co-insured 55	36.35	36.04	35.75	35.48	35.04	34.83	34.64	34.46	34.29	34.14
Co-insured 60	33.48	33.04	32.63	32.25	31.63	31.34	31.06	30.81	30.58	30.37
Co-insured 65	31.01	30.40	29.83	29.28	28.32	27.87	27.44	27.04	26.67	26.33
Co-insured 70	29.65	28.94	28.25	27.58	26.33	25.75	25.20	24.67	24.17	23.70

Change in Value, Premium Pension

In the chapter Changes in Value of the Pension System, two different measures are used for calculating the change in value in the premium pension system. These measures are time-weighted return and capital-weighted return. They are briefly described below.

Note 26 Capital-Weighted Rate of Return

The capital-weighted rate of return takes into consideration the capital flow of the account by weighing together the return and the capital in the account during the corresponding period. This means that during periods when the sum under capital management has been large, the return is given greater weight in the calculation than the return during periods when there has been little capital managed. The cash flows chiefly included in the calculations consist of paid-in pension credit and pension disbursements. The interest on the preliminary pension credit, the return on the funds in the portfolio, the administration fee to the Swedish Pensions Agency, the management fee to fund companies, the bonus on the management fee and inheritance gains are not included in the cash flows, but affect the return directly.

When the capital-weighted return is calculated, the so-called internal rate of return is sought. This rate is a discount rate at which the present value of all cash flows, including the value of the closing balance but with the opposite sign, will equal zero.

The capital-weighted return (also referred to as the Internal Rate of Return, or IRR) is calculated by solving the equation

$$\sum_{t=0}^{T} \frac{C_t}{(1+r)^{\frac{t}{365}}} = 0 \qquad \text{(A.10.1)}$$

r internal rate of return during the period, expressed as an annual rate
t number of days since the starting point
T closing point
C_t transaction (cash flow) at time t
C_T final value, that is, the value of the account as of the day when the valuation is made

The equation requires that the final value be negative so that a value of SEK X results in a transaction of SEK $-X$. C_T is thus always ≤ 0.

To calculate the internal rate of return, it is therefore necessary to know the closing value of the portfolio (market value), all cash flows to and from the portfolio, and the time when these cash flows take place. The internal rate of return can be said to yield the "interest rate on bank accounts" which, given the deposits and withdrawals, have resulted in the current closing value.

The formula above for the internal rate of return is the one normally used in financial matters.

It can also be expressed in the following way, which is consistent with how interest is actually credited to bank accounts:

$$\sum_{t=0}^{T-1} C_t \cdot (1+r)^{\frac{T-t}{365}} = C_T \qquad \text{(A.10.2)}$$

Interest is earned on each deposit C_t from the time of deposit t until the closing date T.

C_t is greater than or equal to zero, and is the balance at the time of calculation.

Note 27 Time-Weighted Rate of Return

With the time-weighted return, adjustment is made for the effects of capital inflows and outflows, that is, to prevent new pension credit recorded or pensions paid from affecting the calculated rate of return. The time-weighted return thus measures the return for a certain deposited amount for a certain period of time. If time-weighted, the return is measured for a period, the returns for the partial periods are weighed together with equal weights. A partial period consists of the time between two cash flows. The equation below describes the time-weighted return.

$$R_t = \left(\prod_{t=0}^{T} \frac{MV_{t+1}}{MV_t + C_t} \right) - 1 \qquad \text{(A.10.3)}$$

R_t	return during the period
t	number of days since the starting point
T	closing point
MV_t	market value at time t
C_t	transaction (cash flow) at time t

The time-weighted return can be used to obtain accurate comparisons of the return between funds, where fund managers cannot set aside more capital under favourable return conditions or vice versa. The measure can also be used for comparisons with relevant market indices or with the return achieved by other managers. In the premium pension system, the pension saver cannot freely determine the in- or outflow of capital for the premium pension account. On the other hand, the saver decides whether and when the moneys invested are to be transferred to another fund. The fund companies have no influence over the flow of capital in the fund.

Measures of the development of value for the system

How well are the funds doing?
- Time-Weighted Return (Premium Pension Index)

How well are the pension savers doing?
- Capital-Weighted Return

Measures of the development of value for fund savers

How well are *my* funds doing?
- Time-Weighted Rate of Return per Fund
- Time-Weighted Return for the Fund Portfolio

How well is *my* account/*my* pension doing?
- Capital-Weighted Return

Appendix B Mathematical Description of the Balance Ratio

Excerpt from Regulation (2002:780) on the Calculation of the Balance Ratio[1]

In accordance with Ch. 58 § 14 of the Social Insurance Code (SFB, 2010:110), on the Earnings Related Old Age Pension, a balance index is to be calculated annually. The regulations (2002:780) require the Swedish Pensions Agency to prepare a calculation of the balance index, to be confirmed subsequently by the Government. The balance ratio is calculated as follows:

Balance Ratio, *BT*

$$BT_{t+2} = \frac{AT_t + \overline{BF}_t}{S_t} \tag{B.1.1}$$

$$AT_t = \overline{A}_t \cdot \overline{OT}_t \tag{B.1.2}$$

$$\overline{BF}_t = \frac{BF_t + BF_{t-1} + BF_{t-2}}{3} \tag{B.1.3}$$

$$\overline{A}_t = \frac{A_t + A_{t-1} + A_{t-2}}{3} \cdot \left(\frac{A_t}{A_{t-3}} \cdot \frac{KPI_{t-3}}{KPI_t}\right)^{\frac{1}{3}} \cdot \left(\frac{KPI_t}{KPI_{t-1}}\right) \tag{B.1.4}$$

$$\overline{OT}_t = median[OT_{t-1}, OT_{t-2}, OT_{t-3}] \tag{B.1.5}$$

t	calendar year if the variable refers to flows, end of calendar year if the variable refers to stocks
AT_t	contribution asset, year t
BF_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 according to Ch. 6 § 3 of the National Pension Funds Act (2000:192) and Ch. 4 § 2 Sixth National Pension Fund Act (2000:193), is to be shown in the annual reports of these funds.
$\overline{BF}_t$	smoothed value of buffer fund, year t
S_t	pension liability, year t
$\overline{A}_t$	smoothed contribution revenue of the pay-as-you-go system, year t
$\overline{OT}_t$	smoothed turnover duration, year t
A_t	contribution revenue of the pay-as-you-go system, year t
OT_t	turnover duration, year t
KPI_t	consumer-price index for June, year t

[1] Some editing has been done to simplify the presentation.

Average Retirement Age, $\overline{R}$

$$\overline{R}_t = \frac{\sum_{i=61}^{R_t^*} U_{i,t}^* \cdot D_{i,t} \cdot i}{\sum_{i=61}^{R_t^*} U_{i,t}^* \cdot D_{i,t}}, \quad \overline{R} \text{ rounded off to nearest whole number} \tag{B.2.1}$$

i age at year-end
R_t^* oldest age group granted a new pension, year t
$U_{i,t}^*$ total monthly pensions granted to persons in age group i year t
$D_{i,t}$ annuity divisor, year$t$ age group i

Turnover Duration, OT

$$OT_t = IT_t + UT_t \tag{B.3.1}$$

Pay-in Duration, IT

$$IT_t = \frac{\sum_{i=16}^{\overline{R}_t-1} \overline{PR}_{i,t} \cdot L_{i,t} \cdot (\overline{R}_t - i - 0,5)}{\sum_{i=16}^{\overline{R}_t-1} \overline{PR}_{i,t} \cdot L_{i,t}} \tag{B.4.1}$$

$$\overline{PR}_{i,t} = \frac{\frac{PR_{i,t}}{N_{i,t}} + \frac{PR_{i+1,t}}{N_{i+1,t}}}{2}, \quad i = 16, 17, ..., \overline{R}_t - 2 \tag{B.4.2}$$

$$\overline{PR}_{\overline{R}_t-1,t} = \frac{PR_{\overline{R}_t-1,t}}{N_{\overline{R}_t-1,t}} \tag{B.4.3}$$

$$L_{i,t} = L_{i-1,t} \cdot h_{i,t}, \quad i = 17, 18, ..., \overline{R}_t - 1 \text{ where } L_{16,t} = 1 \tag{B.4.4}$$

$$h_{i,t} = \frac{N_{i,t}}{N_{i-1,t-1}}, \quad i = 17, 18, ..., \overline{R}_t - 1 \tag{B.4.5}$$

$PR_{i,t}$ the sum of 16 percent of pension qualifying-income calculated according to Ch. 59 of the Social Insurance Code and 16 percent of the pension-qualifying amounts calculated according to Ch. 60 of said code, income year t, age group i, for individuals who have not been registered as deceased in year t
$N_{i,t}$ number of individuals in age group i who at any time through income 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 year t
$h_{i,t}$ change in proportion of persons in age group i year t

Pay-out Duration, *UT*

$$UT_t = \frac{\sum_{i=\overline{R}_t}^{R_t} 1,016^{-(i-\overline{R}_t+0,5)} \cdot L^*_{i,t} \cdot (i - \overline{R}_t + 0,5)}{\sum_{i=\overline{R}_t}^{R_t} 1,016^{-(i-\overline{R}_t+0,5)} \cdot L^*_{i,t}} \tag{B.5.1}$$

$$L^*_{i,t} = L^*_{i-1,t} \cdot he_{i,t} \quad \text{where } L^*_{60,t} = 1 \tag{B.5.2}$$

$$he_{i,t} = \frac{U_{i,t}}{U_{i,t} + Ud_{i,t} + 2 \cdot Ud^*_{i,t}}, \quad i = 61, 62, ..., R_t \tag{B.5.3}$$

R_t oldest age group receiving a pension, year t
$U_{i,t}$ total pension disbursements in December of year t to age group i
$Ud_{i,t}$ total of 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
$Ud^*_{i,t}$ total of 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 year t
$he_{i,t}$ change in pension disbursements due to deaths, year t, age group i

Pension Liability, *S*

$$S_t = SA_t + SP_t \tag{B.6.1}$$

$$SA_t = PB_t + \frac{BIX_t}{IX_t} \cdot IPR_t + TP_t \tag{B.6.2}$$

$$SP_t = \sum_{i=61}^{R_t} U_{i,t} \cdot 12 \cdot \left(\frac{De_{i,t} + De_{i,t-1} + De_{i,t-2}}{3} \right) \tag{B.6.3}$$

$$De_{i,t} = \frac{\sum_{j=i}^{R_t} \frac{1}{2} \cdot (L^*_{j,t} + L^*_{j+1,t}) \cdot 1,016^{i-j-1}}{L^*_{i,t}}, \quad i = 61, 62, ..., R_t \text{ where } L^*_{R_t+1} = 0 \tag{B.6.4}$$

SA_t pension liability in year t in regard to pension commitment for which disbursement has not commenced (pension liability to the economically active)
SP_t pension liability in year t in regard to pensions being disbursed to retired persons in the pay-as-you-go system
PB_t total pension balances, year t, according to Ch. 62 §§ 2, 5 and 7, Social Insurance Code
BIX_t balance index year t
IX_t income index year t
IPR_t estimated pension credit earned for inkomstpension, year t according to Ch. 61 §§ 5–10 of said code
TP_t estimated value of ATP, year t for persons who have not begun to draw this pension
$De_{i,t}$ economic annuity divisor for age group i year t

Appendix C List of Terms

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

adjustment indexation* (följsamhetsindexering)
annual recalculation of inkomstpension and supplementary pension based on the change in the income index. The change in the index is reduced by the 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:

$$\text{Adjustment indexation (at the turn of the year } (t-1) \rightarrow t) = \frac{I_t/I_{t-1}}{1.016}$$

During a balancing period, the income index is replaced by balance index.

administrative costs* (administrationsavgift)
fee to cover costs of administration and operations, (see Appendix A).

annuity divisor* (delningstal)
a number used to calculate pension amounts in premium-based pension insurance and national public pension. The annuity divisor reflects remaining life expectancy at retirement, taking into account the imputed interest credited to the pension (see Appendix A). Economic annuity divisors are used for calculating the pension liability (see Appendix B).

ATP (tilläggspension)
part of the national public pension calculated according to the ATP system. Supplementary pension refers to the former ATP plus 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 plus folkpension is equal 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)
ratio that replaces the income index during a balancing period. 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.

*For amounts and values, see Statistik och publikationer at www.pensionsmyndigheten.se.

balance ratio (balanstal)
a number that expresses the relationship between assets and pension liability in the inkomstpension and supplementary pension system (see Appendix B).

balancing (balansering)
a method for restoring financial balance in the inkomstpension and supplementary pension systems of the national pension. Balancing is activated if the balance ratio drops below 1.0000, that is, if the pension liability exceeds the assets of the system, and ends when the balance index reaches the same level as the income index. When balancing is activated, pension balances and pensions are indexed by the change in a balance index instead of the income index (see Appendix A).

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.

capital-weighted return (kapitalviktad avkastning)
another term for the capital-weighted return is internal rate of return. In the premium pension system, the measure is used in evaluating individual accounts, but also for the system as a whole. Consideration is given to the point in time and amount of all paid-in pension credit and pensions disbursed as well as pension account balances at the end of the period. The capital-weighted return corresponds to the average annual return during the period and may be compared, for example, with the interest on a bank account. The Pensions Agency's calculation of the capital-weighted return for the premium pension includes in the return not only the change in value of the funds concerned, but also inheritance gains, bonuses and management fees. For more detailed information, see Appendix A.

ceiling on contributions* (avgiftstak)
the highest income on which the national pension contribution and the central-government pension contribution can be based, equivalent to 8.07 income base amounts.

ceiling on pension-qualifying income* (intjänandetak)
the highest income, after deduction of the individual pension contribution, for which pension credit is earned. It corresponds to 7.5 income base amounts.

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 (disability pension). For sickness and activity compensation and so-called pension qualifying amounts, the contribution is 18.5 percent.

compounding (förräntning)
in this report, synonymous with indexation.

contribution asset (avgiftstillgång)
the value of the flow of contributions to the inkomstpension. Calculated by multiplying smoothed contribution revenue by turnover duration.

*For amounts and values, see Statistik och publikationer at www.pensionsmyndigheten.se.

contribution base (avgiftsunderlag)
the incomes and amounts on which a pension contribution is to be paid. Consists primarily of earnings, 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.

defined-benefit pension system (förmånsbestämt pensionssystem)
a pension system where pensions are set in advance to a fixed amount or a certain percentage of, for example, final salary or average earnings during a specified number of years. In a defined-benefit pension system the financial risk - due to variations over time in return on the system's assets and in mortality rates - is borne by the insurer. In a public pension system, the insurer is the taxpayers, which means that contributions/taxes to the system may vary.

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 where capital is invested in funds that may be selected via an insurance company. 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 contributions or premiums paid in are placed in funds and saved separately for each individual and collective. The premium pension system is an example of a funded system.

guarantee rule/guaranteed supplement (garantiregel/garantitillägg)
an amount by which supplementary pension is raised for those born 1938-1953 to ensure they will not receive lower pensions than what they earned up to and including 1994.

guaranteed pension (garantipension)
portion of the national public pension paid to those with little or no inkomstpension and/or supplementary 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, (see Appendix A).

income-based old-age pension (inkomstgrundad ålderspension)
the inkomstpension and ATP plus the premium pension, sometimes referred to as the earnings-related old-age pension.

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

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)
pension contribution paid by each person individually via income tax. It corresponds to 7 percent of income up to the ceiling for contributions.

inheritance gain* (arvsvinst)
pension balances or insurance capital of deceased insured persons credited to other similar insurances. In the national public pension, this refers to inkomstpension assets and premium pension capital inherited by the surviving insured (see Appendix A).

inkomstpension (inkomstpension)
the portion of the national public pension where the contribution, 16 percent of the pension base, is paid to a pay-as-you-go system.

internal rate of return (internränta)
see capital-weighted return.

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 (allmän pension)
pension provided for by law. The national public pension is governed by the Social Insurance Code and consists primarily of the inkomstpension, the supplementary pension (ATP), the premium pension and the guaranteed pension.

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. It is paid on the

*For amounts and values, see Statistik och publikationer at www.pensionsmyndigheten.se.

individual's entire income, but the contribution levied on the portion of income above the ceiling is not credited to the pension system, but to the central government.

pay-as-you-go pension systems (fördelningssystem)
pension system in which pension contributions or premiums paid in during a given year are used to finance disbursements the same year. In a PAYG system with a buffer fund, any surpluses are used to finance deficits in other years.

pay-in duration (intjänandetid)
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)
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 value of earned pension credit within the national public pension at any given time. The pension balance for inkomstpension, after deduction of administration costs, is the sum of pension credit each year, adjusted to reflect inheritance gains distributed and recalculated by changes in the income index or the balance index.

pension base (pensionsunderlag)
the total of an individual's pension-qualifying income and pension-qualifying amounts, but no higher than 7.5 income base amounts per year.

pension contribution (pensionsavgift)
contribution to the national public pension. See individual pension contribution, old-age pension contribution and central-government old-age pension contribution.

pension credit (pensionsrätt)
amount set aside each year for inkomstpension and premium pension. 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 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 traditional insurance, the pension liability is calculated as each guaranteed amount multiplied by an annuity divisor.

pension points (pensionspoäng)

points in the national public pension for persons born 1938-1953 which are calculated annually on the basis of pension-qualifying income and are used to calculate supplementary pension. Pension points are calculated as follows:

$$Pension\ points = \frac{PGI - HPBB}{HPBB}$$

PGI pension-qualifying income
HPBB the higher price-related base amount

pension-qualifying amounts (pensionsgrundande belopp)

basis for pension credit in the national public pension for a fictive income for: years with small children, studies, national service, sickness or activity compensation.

pension-qualifying income (pensionsgrundande inkomst)

income used as a basis for calculating pension credit in the national public pension. 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.

premium pension (premiepension)

part of the national public pension in which the contribution, consisting of 2.5 percent of the pension base, is invested in funds.

price-related base amount* (prisbasbelopp)

an amount used in the national pension system for purposes including calculation of the guaranteed pension. The price-related base amount is recalculated each year according to the change in the Consumer Price Index (for June). In addition there is a higher price-related base amount, which 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.

time-weighted return (tidsviktad avkastning)

the time-weighted return is used to describe the change in value of a fund or index. The measure shows the return on a deposit made at the outset of the period, without consideration of whether additional deposits or withdrawals have been made during the period. For more detailed information, see Appendix A.

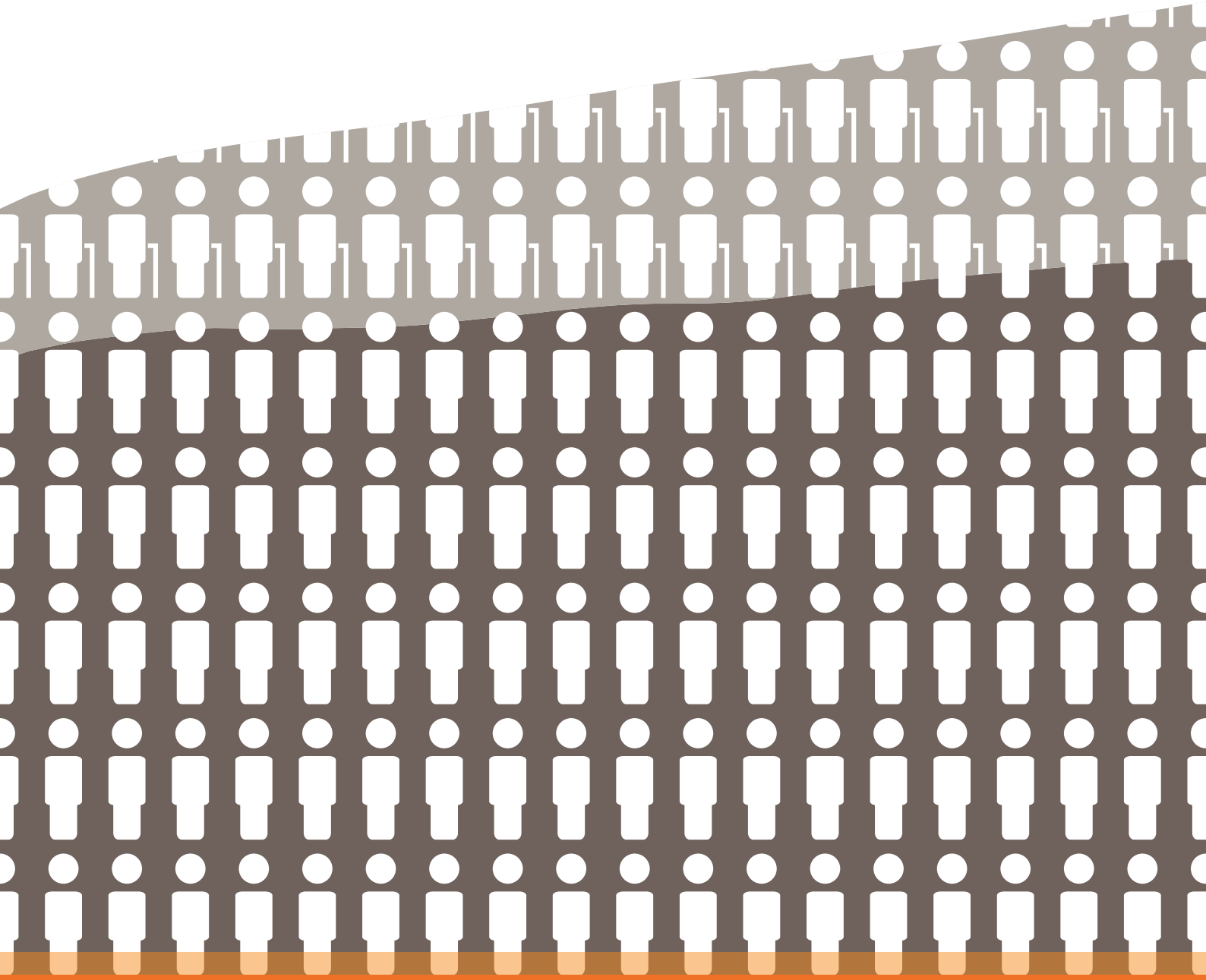
traditional insurance (traditionell försäkring)

pension insurance where the insurance company decides how the insurance capital is to be invested and provides some form of guaranteed payments together with the chance to receive a share of any surplus.

*For amounts and values, see Statistik och publikationer at www.pensionsmyndigheten.se.

turnover duration (omsättningstid)

reflects the expected time from the earning of pension credit until the disbursement of the 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.



www.pensionsmyndigheten.se