Survey on pension indexation

At the start of every year, De Nederlandsche Bank (DNB), at the request of the Netherlands Bureau for Economic Policy Analysis (*Centraal Planbureau*), holds a survey among the largest 25 pension funds regarding the indexation rate and the level of pension contributions for the new year. The collected information plays an important role in the Central Economic Plan (CEP) and macroeconomic analyses of, for instance, remuneration costs, tax income and purchasing power.

Indexation in an average pay-based system

In the past, most pension schemes linked the pension benefit received on retirement to the retiree's last-earned salary. However, nowadays most schemes are based on average pay. Under such a scheme, the pension fund commits itself to paying a retirement pension that is linked to the average pay a member earned in the course of their career. Each year, the member accrues pension rights equal to the pensionable base multiplied by the accrual rate. Annual markups by pension funds in the course of the accumulation phase are important because they preserve the fair value of these amounts. If we assume an annual markup equal to a 3% overall wage increase and an accrual period of 40 years, then about one third of the accrued entitlement at 65 will be the result of indexation[i]. Even after retirement, the pension may lag behind a price or wage index-linked pension if no indexation takes place.[ii]

For more than 90 per cent of members and pensioners, indexation is conditional. This means that while the pension fund has the stated ambition to apply index linking, the pension scheme does not include an unconditional commitment to do so. The number of schemes with an unconditional commitment is very limited. Most funds decide on a yearly basis whether index-linking or 'indexation' can be applied, and to what extent. The financial position of the fund plays a key role in this respect.

Financial position of pension funds since the credit crisis

The most important measure of a pension fund's financial position is its nominal funding ratio, i.e. the ratio between available assets and (future) nominal liabilities. After the Internet bubble burst in 2001, pension contributions were raised and pension funds profited from the recovery of equity prices. As a result, the average funding ratio peaked in the summer of 2007 at 152 per cent (Chart 1).

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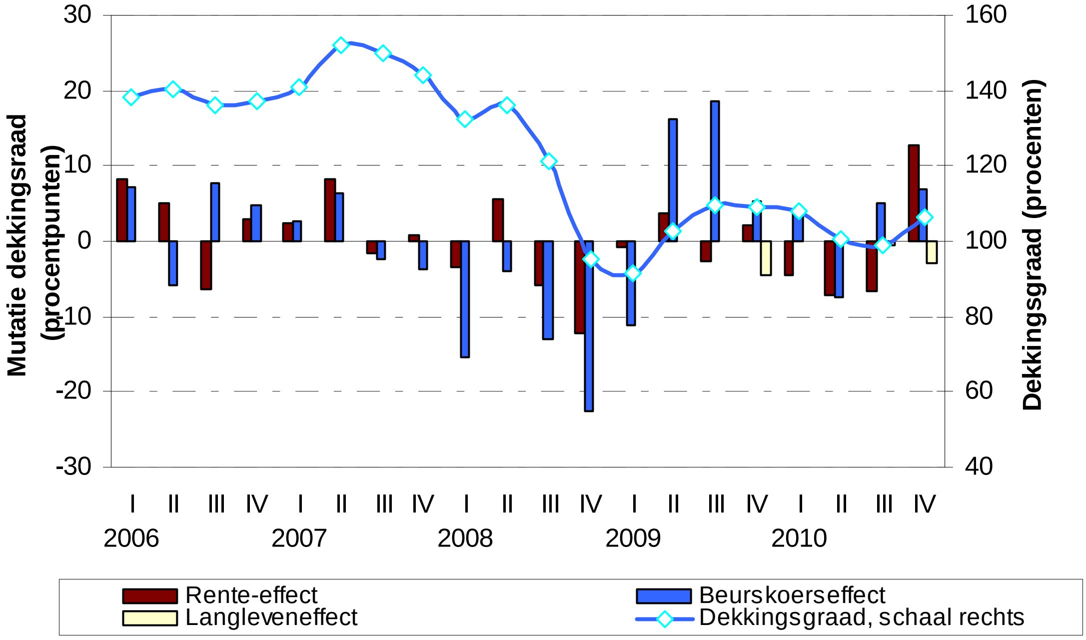
[i] See *'Catch-up indexation of pension entitlements in 2008'* De Nederlandsche Bank, Statistical Bulletin, March 2008.

[ii] Price index-linked: an increase of the nominal value corresponding to the increased cost of living (inflation) over a certain period. Wage index-linked: an increase of the nominal value corresponding to the increase in wages (wage inflation) over a certain period.

Chart 1 Development of the nominal funding ratio

Breakdown by impact of interest rates, share prices and longevity



[Change in funding ratio (percentage points)

Funding ratio (percentages)

Interest rate impact | Share price impact

Longevity impact | Funding ratio impact, right-hand scale]

During the credit crisis, the financial position of pension funds deteriorated. Especially in 2008, funding ratios dropped sharply, from 144 to 95 per cent. In the course of that year, pension funds suffered heavy losses on their investments. At the same time, liabilities increased because the long-term interest rate fell from 5.0 to 4.0 per cent[iii] (See the Box below). Together, these developments weakened funds' financial position. In 2009, the average funding ratio recovered to 109 per cent thanks to favourable investment results. Despite continued favourable investment results in 2010, the funding ratio of pension funds decreased again to 107 per cent in the past year, due to the declining interest rates and the use of higher life expectancy rates for the Dutch, based on updated mortality tables.

At the beginning of 2010, the interest rate was 4.1 per cent. As a result of the European peripheral debt crisis and fear of a double dip scenario, demand from investors for relatively high-quality debt paper increased. Consequently, the price of such paper rose and the effective interest rate

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[iii] Nominal interest rate term structure 15-year rate, which pension funds use to discount their liabilities. DNB Statistics site http://www.statistics.dnb.nl Financial markets◄┘ Interest rates◄┘ Table 1.3

decreased. In August, the interest rate reached a historic low of 2.7 per cent and the funding ratio briefly dropped to 95 per cent. The better economic prospects, partly thanks to good operating results, have since led to a rise in interest rates to 3.8 per cent at the end of December. In the final quarter of 2010, the interest rate impact contributed 12 percentage points to that quarter's increase in the funding ratio.

The rising life expectancy of the Dutch, though in itself good news, is a setback for pension funds, because they will have to reserve more money as a consequence. The increase in life expectancy was higher than previously estimated (2010 model versus the 2005 model; See Table 1). According to the Dutch Actuarial Society, life expectancy for men and women who turn 65 in the year 2050 has increased by 2.4 and 2.5 years respectively.

Table 1 Life expectancy of Dutch men and women in 2050, in years

Remaining life expectancy at the age stated in the first column

	Men			Women		
Age	2005	2010	*difference*	2005	2010	*difference*
0	82,5	85,5	3,0	84,3	87,3	3,0
25	57,8	60,7	2,9	59,5	62,5	3,0
50	33,6	36,1	2,5	35,2	37,9	2,7
65	19,6	22,0	2,4	21,3	23,8	2,5
80	7,8	9,2	1,4	9,3	10,9	1,6

Source: Dutch Actuarial Society, 2010

The impact of a drop in interest rates on the funding ratio

The impact of a drop in interest rates on the funding ratio may be illustrated as follows. Take a standard pension fund with a funding ratio of 130% and an investment portfolio consisting of 50% shares and 50% fixed-income securities. The liabilities are 100. The average maturity of the fixed-income securities is set at 5 and that of the liabilities at 15 years. Say that the interest rate for all maturities is 4% and that this rate subsequently drops to 3%. The value of the shares remains 65 (it is assumed that there is no link between shares and interest rates). As a consequence of the interest rate decline, the value of the fixed-income securities rises and becomes $65*(1.04/1.03)^5 \approx 68$. The drop in interest rates causes the value of assets to rise to 133 (65 shares and 68 fixed-income securities). The value of the liabilities likewise changes and after the interest rate decline becomes $100*(1.04/1.03)^{15} \approx 116$.

The ensuing funding ratio after the interest rate drop is: $\frac{65+68}{116}*100\% \approx 115\%$.

Indexation of pension entitlements and development of pension contributions

Indexation of pension entitlements

The survey referred to above shows that, on the whole, members' accrued pension entitlements and pensioners' benefits in 2011 will not be raised. In 2010, pension entitlements still rose by 0.4 per cent. This means that in 2011, as in 2010, pensions will fall short of pension funds' stated indexation ambition. Over 2011, this would be 1.1 per cent for members and 1.2 per cent for pensioners. In 2010 the pension funds' ambition was 2.3 per cent for members and 1.7 per cent for pensioners. The lower 2011 indexation rates reflect the fact that wage and price rises in the Netherlands have been falling off in recent years. Usually, the indexation is granted with a year's delay. The level of indexation for 2011 is therefore based on the negotiated wage rise and price developments of 2010. The price development figure is usually based on, or derived from, the consumer price index compiled by Statistics Netherlands (CBS) – net of price-increasing government taxes. While none of the respondent industry-wide pension funds will raise pension entitlements, the company pension funds show a more varied picture. Some do provide indexation, others do not, depending on their financial position. And the indexation provided is, of course, lower than it used to be, as it follows the equally lower wage and price rises.

Between 2003 and 2007, the value of pension assets and benefits lagged behind pension funds' indexation ambitions. In 2008, many funds provided catch-up indexation to make up for earlier lags. In the years that followed the gap widened again during the credit crisis. However, there still are differences between individual pension funds, depending on the quality of the pension scheme and on the fund's financial position.

Table 2 Indexation for members and pensioners

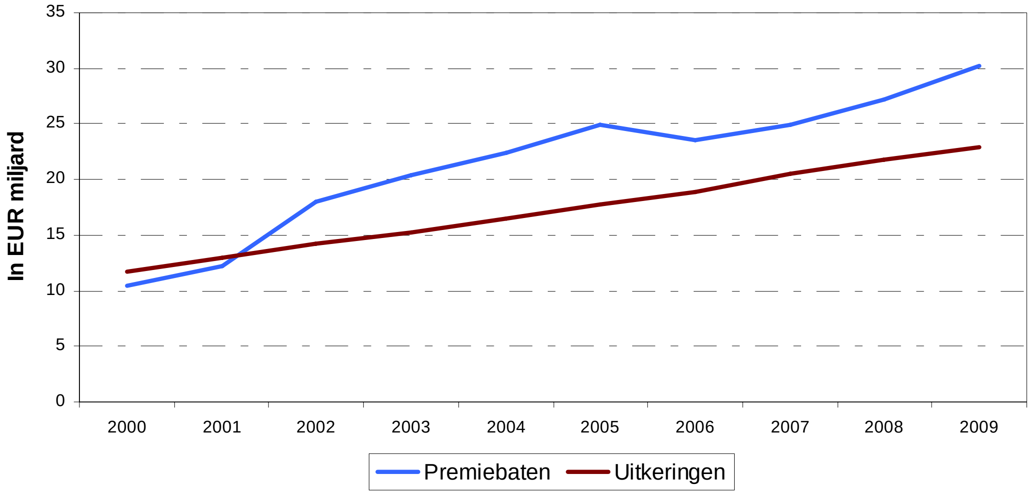
	Number		Indexation provided		Indexation ambition	
	2010	2011	2010	2011	2010	2011
Members	3,704,049	3,721,110	0.4	0.0	2.3	1.1
Pensioners	1,871,769	1,923,248	0.4	0.0	1.7	1.2

Contributions

Pension contributions have gone up strongly over the past ten years (Chart 2). Until 2001, pension funds received less in contributions than they paid out in benefits. From then on, however, contributions rose considerably. In four years, contributions paid into pension schemes by employers and employees doubled from EUR 12 billion to EUR 25 billion in 2005[iv]. Benefits increased steadily over the past ten years, in line with the number of pensioners and average individual benefit amounts.

Chart 2 Contribution income and benefits paid

[iv] DNB Statistics site http://www.statistics.dnb.nl Financial institutions ◄┘ Pension funds◄┘ Table 8.4.



[Contribution income Benefits paid
In EUR billion]

In the end results of the survey, pension contributions are presented as a *percentage* of employee remuneration rather than in euros. This has the advantage of making the effect on remuneration costs visible, while it also allows comparisons between different funds and schemes. In 2011 the contribution burden continues to rise from 16.3% to 16.9% of employee remuneration (Table 3). The employer share of contributions (usually about two-thirds) increases by 0.5 percentage point to 10.9%, whereas the employee share will rise 0.2 percentage point to 6.0%. In the case of industry-wide pension funds, contribution increases are shared equally by employers and employees. Contributions go up in the public service, construction and health care sectors. Company pension funds are also raising contributions, with employees shouldering a relatively high share of the burden. Several firms abandoned their zero contribution pension policies, causing contributions for (new) employees to go up. Some funds decided to replace final-pay schemes by average-pay schemes, while others reduced the pension accumulation rate for active members. Contribution figures as presented concern regular contribution rates; one-off contributions made by sponsors (employers) to support pension funds' financial positions are not considered here, as they cannot be presented as a percentage of remuneration. In 2009, relatively many funds received one-off support contributions. Last year, however, one-off payments declined in number as well as in size.

Table 3 Pension contributions as a share of total remuneration

	Members		Employer		Employee		Total	
	2010	2011	2010	2011	2010	2011	2010	2011
Industry-wide funds	3,646,641	3,659,737	9.4	9.7	6.1	6.3	15.5	16.0
Company funds	212,527	208,900	21.5	23.0	2.8	3.2	24.4	26.2
Total	3,859,168	3,868,637	10.4	10.9	5.8	6.0	16.3	16.9

A striking difference emerges between company and industry-wide pension funds when it comes to contributions as a share of total remuneration: 26.2% and 16.0%, respectively. This is explained by the fact that contributions are expressed as a percentage of salaries rather than as a percentage of the pension base (i.e. salary net of the state pension offset (franchise)). Due to the intercept, the share of salaries taken as the base for pension contributions is higher for higher-paid workers. So contributions for higher-paid employees are the same taken as a share of their pension base, but higher when expressed as a percentage of their salary[v]. Members of company pension funds generally earn higher salaries than members in industry-wide pension funds. Thus contributions expressed as a share of salary are higher in the case of company funds.

Other differences are those between the pension schemes of company and industry-wide funds. For one thing, unconditional indexation is more common among company pension funds than among industry-wide funds[vi]. Unconditional promises must be funded entirely out of contributions, whereas conditional promises are usually funded out of a combination of contributions and surplus investment returns. Schemes may also differ in other respects. A risk-based partner pension is less expensive, for instance, than one on an accumulation basis where scheme members accumulate rights that continue to exist after their active membership, and company pension funds, on average, offer higher accumulation rates on average pay schemes.

Conclusion

The financial position of pension funds fluctuated strongly last year. In late August, the average funding ratio fell momentarily to 95%. On balance, it declined from 109% to 107% across the year. Therefore, pension entitlements are not increased in 2011, so that index-based supplementation lags behind funds' stated ambitions. The ambition is roughly one per cent, in line with subdued wage and price rises in the Netherlands during recent years. Since the credit crisis, the value of pension rights and benefits has lagged behind indexation ambitions.

Finally, the survey shows that contribution rates continue to rise in 2011, from 16.3% to 16.9% of total remuneration. The employer share of contributions increases by 0.5 percentage point to 10.9%, whereas the employee share rises 0.2 percentage point to 6.0%.

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[v] Take as an example a scheme including a contribution rate of 24% of the pension base and a EUR 12,000 state pension offset. For an employee earning EUR 24,000, the contribution as a share of salary equals 12%, whereas for someone earning EUR 48,000, it is 18%.

[vi] DNB Statistics site http://www.statistics.dnb.nl Financial institutions ◄┘ Pension funds ◄┘ Table 8.15.