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HAVE PENSION PLANS CHANGED AFTER THE INTRODUCTION OF IFRS?

Recently, several Dutch companies have changed their pension schemes from traditional defined-benefit towards defined-contribution schemes. Companies state that the introduction of IFRS is the main reason for transforming the pension scheme. We examine the pension schemes of the largest companies listed in The Netherlands. Our results suggest that most Dutch companies have recently changed their defined-benefit scheme from traditional final-pay to an average-pay scheme. Although many companies seem to be considering switching to defined-contribution, only a handful have done so. In contrast to the US or UK, Dutch companies seem to prefer collective instead of individual defined-contribution schemes. Our results further indicate that companies with a relatively large pension fund as measured by asset value relative to company market value are the first ones to reduce pension risk by changing their pension scheme from defined-benefit to defined-contribution.

Keywords: Defined benefit, Defined contribution, IFRS, Pension funds

JEL Classification: G23, M41

HAVE PENSION PLANS CHANGED AFTER THE INTRODUCTION OF IFRS?

1. Introduction

With Regulation EC 1606/2002, the European Union has decided that all listed companies should apply the International Financial Reporting Standards (IFRS) for annual accounts starting on or after 1 January 2005. In this paper, we would like to investigate whether the introduction of these new financial reporting standards influences the choice of pension schemes that Dutch companies offer their employees. In order to do so, we investigate several companies that changed their pension scheme recently from defined-benefit (db) to defined-contribution (dc). Moreover, we empirically analyse which characteristics determine the change in pension scheme by investigating the 24 most liquid Dutch companies.

Traditionally, most Dutch companies have pension schemes with db-characteristics. The company has promised to make additional contributions (one-off or smoothed through increased contributions over a number of years) to the pension fund if it becomes insolvent. With an aging employee population and a growing number of pensioners, the mechanism of increasing contributions has become less effective these days and the company should decide whether it can and wants to guarantee pension scheme solvency in the future. In The Netherlands, the steering mechanism of conditional inflation compensation has been strengthened over the past years by moving from final-pay to average-pay pension schemes. In final-pay schemes only the retired lose out on inflation compensation, but in average-pay schemes both active and inactive participants share this negative outcome. The number of pension funds that offer average-pay instead of final pay has almost doubled from 16% to 29% over the period 1998 to 2005. The number of active participants in average-pay schemes has increased in the same period from 1.2 million (25%) to 4.6 million (74%). The number of active participants in full dc-schemes has increased from 22,000 (0.5%) to 191,000 (3,1%) in the same period.² In this paper we analyse whether the introduction of IFRS leads companies to shift more pension risks to their employees.

The setup of this paper is as follows. In Section 2 we describe the IFRS pension accounting and the changes with the previous Dutch accounting principles on pensions. In Section 3 we discuss several Dutch companies that have already switched from db schemes to collective dc schemes. In Section 4 we analyse the changes in pension schemes of the 24 most liquid Dutch companies that are in the AEX stock market index. We conclude with our main findings and projections for the future in Section 5.

2. IFRS and Dutch pension accounting

The pension accounting standard for IFRS is a leftover from the time that the standards were known as International Accounting Standards (IAS). According to IAS 19 "*Employee benefits*", the company has to classify its pension scheme as dc or db. A dc pension plan is a scheme in which the company only pays a fixed pension premium and is not required to make any other pension contributions. Since companies with dc-schemes face no liabilities except for the fixed pension contribution, it suffices to account for these contributions as the pension expense. All other schemes are considered to be db

² Source: Pensioenmonitor 2005, a publication of De Nederlandsche Bank; www.dnb.nl.

schemes.³ Funding shortages of a db scheme will be visible on the company's balance sheet and earnings statement. The reason for this is that the company (partially) guarantees the benefits and hence funding shortages have to be paid for.

An overview of the relation between the company and the pension fund is given in Figure 1. It shows the three main participants: the company, the pension fund, and the employee or pensioner. The company and employee both contribute to the pension fund. The pension fund in turn supplies the pensioners with nominal pensions and, if the financial situation allows, inflation compensation. One of the two regulators, DNB, is involved with the financial solvency of the pension fund and the other (AFM) supervises the way the pension fund communicates with its participants about the pension scheme. In principle IAS 19 only affects listed companies sponsoring a pension scheme and not the pension funds themselves. Pension funds would have to report according to IAS 26 "*Accounting and Reporting by Retirement Benefit Plans*", but since pension funds are not listed companies they are required to use Dutch pension fund accounting standard RJ 610 "*Pension funds*".⁴ Note that the requirements of Dutch pension fund accounting are typically higher than the standards set out in IAS 26.

Non-listed Dutch companies should in principle apply the Dutch accounting standards as published by the Raad voor de Jaarverslaggeving (RJ). The pension standard is known as RJ 271 and is in many cases a translation of IAS 19. A notable exception is the way Dutch multi-employer pension schemes are treated. These multi-employer schemes are used for all employers and employees in a certain industry, such as builders and electricians. The Dutch standard RJ 271 is less strict than IAS 19 and allows companies to treat their multi-employer db scheme as a dc scheme for accounting purposes. This is based on the finance agreement that these employers have with the pension fund, which usually states that individual companies are not responsible to cover funding shortages (although premiums can be increased when solvency is low). The exception for these multi-employer db schemes might be a temporary phenomenon resulting from a strong lobby of pressure groups. Such lobbying phenomena have been described before in the pension accounting literature. For example, Francis (1987) finds that companies that experience negative consequences from changes in the U.S. pension accounting standards are the ones which exert the largest pressure against these changes (and not without success).

Previous changes in accounting principles in the U.S. and U.K. indicate that companies prefer to have a stable income statement and therefore tend to favour a fixed contribution. This means that many db schemes have been closed and are replaced by dc schemes. Klumpes, Li, and Wittington (2005) find that U.K. companies that run larger pension risks are more likely to close their db-scheme for new entrants. Ali and Kumar (1994) find that the impact of the new standards on the magnitude of the pension expense is important for an early adoption of new accounting principles in the U.S. Klumpes and Wittington (2003) find that the use of a high discount rate is the most important characteristic for early adoption of new accounting rules in the U.K. Mittelstaedt (1989) indicates that weakening corporate earnings figures may result in less pension contributions made by the company, reversion of previously paid contributions, or in extreme cases closure of the pension scheme. Munnell et al. (2006) mention costs reductions caused by intensive global competition as a possible cause of the termination of defined benefit schemes of healthy companies. Munnell et al. (2006) also put forward that accounting gains may cause healthy firms to terminate their pension scheme in a low interest rate environment. In the U.S. the so-called cash balance schemes have become very popular to limit the risk for the employer. Cash balance schemes are in principle db-schemes, but with several dc characteristics; see Cahill and Soto (2003) for a detailed description of cash balance schemes. D'Souza, Jacob, and Lougee (2004) find that companies with high pension expenses and a higher

³ Under U.S. GAAP, only *individual* dc pension plans qualify as dc, whereas *collective* dc pension plans are still treated as if they are db pension plans. Multi-employer plans are considered dc under U.S. GAAP, as in the Dutch RJ 271.

⁴ The Dutch Minister of Justice has informed the Dutch parliament that pension funds should follow the Dutch accounting regulations instead of IFRS (reference letter: 5274274/04/06, March 2004).

average workforce age are more likely to switch their traditional db scheme to a cash balance scheme. This suggests that cost and/or risk reduction are driving factors effecting the decision to switch from traditional to cash-balance schemes.

In the Netherlands a new concept that tries to keep many of the existing pension elements without interfering with the sponsoring company's balance sheet has gained popularity: collective defined contribution (cdc).⁵ This concept means that the company still offers a db scheme to its employees, in most cases an inflation-indexed average-pay scheme. The financing agreement between the company and the pension fund state that the pension premium is fixed (for at least five years) and there will be no other contributions from or to the company. The pension premium has to cover the costs of the pension scheme and usually contains an additional component to compensate employees because they now bear the investment risk. In an event of insolvency, a funding ratio below 105%, the company makes no additional contributions but the board of the pension fund decides whether the shortage will be reduced by leaving out compensation or cutting pension rights.⁶ A crucial element of this pension scheme is that companies no longer take responsibility for the pensions of their (past) employees when the solvency of the pension fund is weak. This lack of solidarity between employer and employee is a radical change in the Dutch labour markets. In this study we try to link the introduction of new financial reporting standards with risk sharing contracts within the Netherlands.

3. COMPANIES WITH COLLECTIVE DEFINED CONTRIBUTION SCHEMES

Several companies have been in the news because of the explicit breach of the solidarity between employer and employee in the pension contract. These companies have tried to change their db scheme into a cdc scheme that has been discussed in the previous section. In this Section we would like to discuss Akzo Nobel, DSM, SNS Reaal, and ARCADIS, companies that recently have switched from db schemes to cdc-schemes, in more detail. It seems that (managers of) these companies dislike the influence that db schemes might have on the balance sheet and income statement, and that they are even willing to pay a higher average contribution rate to pay for the reduction of this volatility.

Akzo Nobel is a Dutch chemical company represented in the AEX stock market index. In addition to its stock market listing at Euronext it is also listed in the U.S. on NASDAQ. This means that Akzo Nobel is also required to use U.S. pension accounting standards for the forms it is required to hand in to the Securities and Exchange Commission. In a press release on 1 July 2005 the chief financial officer (CFO) of Akzo Nobel states: "*Fluctuations in the pension fund due to market circumstances have had too much influence on the Company's balance sheet and results. By moving to a defined contribution scheme—which starts on July 1, 2005—we will pay a fixed annual premium.*" With this statement the CFO points to the possible pension accounting effects of the current pension scheme and the need to change the scheme. When we examine the new finance arrangement we observe that selling the pension guarantee comes at a price for the company. The fixed contribution amounts to 20% of the pensionable wage.⁷ The company further contributes a one-off payment of €150 mln and a subordinated loan of €100 mln. These payments should prevent wealth (i.e. the value of the guarantee) transfers from the employees to the company, which, according to Reiter and Omer (1992), was the case when many U.S. companies closed their db-schemes in the late '80-s.

⁵ In a publication of KPMG ("*De pensioenwereld in 2006*", October 2005) about 36% of respondents mention to consider moving from a defined benefit to a collective defined contribution scheme within the next five years.

⁶ Pension funds that make more prudent actuarial assumptions are allowed to use a lower solvency rate, but never below 100%. Note that this solvency level is comparable to an accrued benefit obligation that the pension fund reports to the Dutch pension regulator and not the projected benefit obligation that is used in pension accounting for the sponsoring company. This 105% is a minimum funding level and the Dutch regulator requires a risk-based target funding ratio that depends on the probability of underfunding within one year.

⁷ The pensionable wage is defined as the actual wage minus a threshold that proxies for the level of state benefits. This threshold is bound by fiscal policy. As an example, consider a person earning €30,000 per year with a €15,000 proxy threshold; a contribution rate of 20% would be €3,000 or 10% of the person's wage.

DSM is like Akzo Nobel a Dutch company from the chemical sector represented in the AEX stock market index. DSM does not have any listings abroad and hence has not been forced to use foreign pension accounting standards in the past. A press release states: *“The collective labour agreement states that DSM does not need to back the pension fund in case of shortages. [...] The shift of investment risks has to do with the new accounting system, IFRS.”*⁸ Here also explicitly the introduction of the new accounting standards is used to motivate the switch in pension scheme. The price for conversion of the plan is a contribution rate increasing from 12 percent to 21 percent of the pensionable wage. In April 2006 it became clear that DSM still has to account for the new pension scheme as a db scheme, since in advantageous future scenarios the company is still entitled to receive part of the surplus. According to IFRS such pension scheme does not qualify as a dc scheme, although the accountant has approved that the company bears no downside risk anymore.

SNS Reaal Group is a bank and insurance company that was only recently listed on Euronext. Nevertheless, it reported according to IFRS before its listing. From the 2005 semi-annual report of SNS Reaal Group it seems that the pension scheme has been changed retrospectively from db to dc: *“The valuation principles for pensions have been changed according to IFRS. IAS 19 is used in IFRS, whereas SNS Reaal Group GAAP applied RJ 271. Also, the pension scheme has been changed on 1 January 2004 from a defined benefit scheme to a defined contribution scheme.”*⁹ The company does not mention IFRS explicitly as the culprit for the change in pension scheme, but mentions it in the same paragraph as implementing IAS 19. A union report states that IFRS is the most important reason: *“The most important reason for this is the introduction of a fixed contribution pension scheme under IFRS regulation. [...] SNS Reaal Group pays this fix contribution and cannot be held responsible for any possible shortages and does not have a right to claim possible surpluses.”*¹⁰ The price for switching to this scheme follows from the same union report, stating a fixed contribution of 21.5% of the pensionable wage and a one-off contribution of €105 mln.

ARCADIS is a Dutch engineering and consulting firm with a listing on Euronext. The company has been listed on NASDAQ since the merger with Geraghty & Miller in 1993. Thus, ARCADIS has ample experience with accounting for its db scheme according to the U.S. accounting standards. The 2003 annual report mentions a discussion in the audit committee about the Dutch pension scheme: *“This discussion focused on the influence of the Dutch Pension Plan on the result as reported under U.S. Generally Accepted Accounting Principles and the consequences thereof given the new regulations in The Netherlands”*. A little further in the report the company mentions that it will start investigating possibilities to move from a db-scheme to a dc-scheme: *“The current pension scheme in The Netherlands is based on the defined benefit system; therefore, financial developments in the pension fund can, depending on the accounting rules that apply, have a great effect on the Company’s results. ARCADIS’ policy is, therefore, aimed at converting the pension scheme into the defined contribution system.”* This could imply that some Dutch companies that are currently still following a db-scheme might need more time to switch from a db to a dc scheme. The 2004 annual report indicates that the switch to a dc scheme has been accomplished. *“In 2004, the pension plan for the majority of employees in the Netherlands was modified. This was necessary to keep the plan affordable and to warrant ARCADIS against the considerable consequences resulting from the 2005 introduction of the International Financial Reporting Standards. In the new pension plan, ARCADIS has changed from a defined benefit to a defined contribution plan.”* Once more, the introduction of IFRS is used to motivate the pension change. Lately, there have been numerous companies (both listed and non-listed) that announced an intended change in the type of pension scheme because of new accounting rules. For many companies this is merely an accounting issue, since they already had a financing agreement with the pension fund that contains explicit limits on the liability of the sponsoring company. Under Dutch accounting standards, they were not required to disclose information about the pension liabilities and were always assumed to have db-schemes.

⁸ Author’s translation of a press release in Dutch by the ANP on 27 June 2005.

⁹ Author’s translation from the semi-annual report (only available in Dutch).

¹⁰ Author’s translation of a concept in Dutch for a collective labour agreement by labour union FNV Bondgenoten.

It seems remarkable that Dutch companies listed on a U.S. or U.K. stock exchange are using IFRS as a motivation for transforming their pension scheme. These companies have been required to estimate the consequences of db scheme accounting and the influence this has had on their earnings following foreign standards for many years, but only now they are reconsidering their promised pension liabilities in more detail. One explanation is that companies with foreign listings are aware of the possible impact on accounting figures, but had no incentive to change the schemes because of the dominant importance of local accounting standards. Since they have already done the calculations, one could hypothesize that companies with a foreign listing are quicker in changing their pension schemes.

Thomas (1989) suggests that U.S. companies that need cash for their operating business had the possibility to terminate their overfunded pension plan to get hold of the excess assets present in the scheme. Such asset reversions are virtually impossible in the Netherlands as employees make up at least 50% of the boards of pension funds. Many Dutch pension funds had large solvency surpluses at the end of the '90-s, so the option-value of the guarantee was worth only a little and possible money flows from the pension fund to the sponsor company were reality in some case (possibly to circumvent planned taxation for pension fund surpluses). In such case of high funding ratios it is relatively easy for a company to switch from db to dc. However, after the stock market downturn in 2000-2003 the solvency was substantially less and hence the guarantee of the company worth more and switches were much more difficult.

Disclosures in the press about the nature of the financing agreements between the pension fund and the sponsoring company in collective dc-schemes indicate that the fixed premium level is fixed for a period of five years. It is likely that after this period the contribution rate can be changed depending on the return on plan assets. When pension rights must be reduced there will be a high pressure from the employees on the sponsor to increase contributions. On the other hand, when solvency is sufficient the company will put pressure on the employees to accept lower contribution rates as part of the labour agreement. The accountant perhaps should judge whether these residual risks are acceptable under dc-scheme pension accounting. At this stage, it seems that accountants are willing to qualify such pension agreement as dc. Communication with the participants is of utmost importance – if the participants are not aware of the risks due to a lack of communication the db plan becomes a so-called constructive obligation and hence qualifies as db instead of dc.

4. PENSION SCHEMES OF AEX-COMPANIES

The previous section contained evidence on IFRS being the motivation of companies to switch their pension scheme from db to dc. In this section we analyse pension schemes of the 24 companies that form the major Dutch stock market index with the goal to discover whether we can observe a trend or company characteristics from switching firms. Our data comes from different sources. First of all, we collect data about the pension scheme offered from each of the annual reports published by the companies. We primarily target for information about pension accounting for the Dutch employees. We also collect data from the annual reports published by the corporate pension funds executing the pension schemes.¹¹

In Table 1 we present the results for the companies from the main Dutch stock market index. We observe that over half of these companies have a foreign listing that requires them to give insights in the funding status or risks of accounting for db-schemes similar to IAS 19. For the U.S. this is the Statement of Financial Accounting Standard 87 (SFAS 87) “*Accounting for pension costs*” and for the U.K. this is the Financial Reporting Standard 17 (FRS 17) “*Retirement benefits*”, which supersedes

¹¹ We access annual reports from companies and pension funds through an internet-based application: <http://annualreports.info>.

Statement of Standard Accounting Practice 24 (SSAP24) “*Accounting for pension costs*”.¹² Hence, the effects of interest rate movements and investment returns on the volatility of balance sheet positions and income figures should not be surprising to CFO-s of these companies. This makes it less plausible that the adoption of IFRS should cause pension surprises at all. Perhaps the performance of the management team is measured against local earnings measures, which would justify their sudden interest in reducing the company’s pension risk.

Table 1 shows that the majority of large companies offered db-schemes to their employees until 2004. We see that Numico and TomTom already offered individual dc pension plans to their employees. It also shows that DSM and Akzo Nobel, which were mentioned in the previous Section, are the only company’s switching to dc-schemes in 2005. We observe that in accordance with aggregate statistics for the Netherlands mentioned in the first section, many pension funds have changed their final-pay scheme to an average-pay scheme over the past years. In theory, the pension outcome of both schemes at the firm level in an “average” economic scenario would be equal under average-pay or final-pay schemes. However, the discretionary decision by the pension fund board to increase accrued average-pay pension rights with inflation shifts part of the investment risk from the employer to the employee. Note that we separately indicate db schemes executed by multi-employer plans (usually industry-wide pension schemes), because it is less clear-cut whether these db schemes can be classified as dc-schemes under IAS 19.

We also display information about the pension funds execute the pension scheme in Table 1. It can be seen that, as is required by law, all funds have an actual funding ratio above the minimum level of 105%. Note that this actual solvency level is usually higher than that reported by companies, which can be explained by different ways for companies and pension funds to value their liabilities.¹³ For pension funds with conditional inflation compensation, which is almost always the case, the actual liabilities are purely nominal and do not take into account future inflation adjustments. The company on the other hand, through IFRS, has to take into account wage increases and the ambition of pension funds to adjust for inflation. The pension fund of Reed Elsevier has the lowest funding ratio, with 108% being just above the minimum. The pension fund of Akzo Nobel reports a relatively low funding ratio of 116%. On the other hand, the pension fund DSM had one of the highest funding ratios (136%) when it announced its move to a collective dc-scheme. At this stage, we can only speculate about the relative advantages of both hypotheses: contracting costs are lower when funding ratios are high, and corporate liquidity risks are higher closer to the minimum solvency requirement.

In Table 1 we also present the maturity ratio, which is the number of current active employees contributing to the pension scheme divided by the total scheme members (the sum of active employees, employees that left the firm but did not convert their pension claim to their new employer, and retired employees).¹⁴ The pension fund with the lowest maturity ratio is TNT, indicating that an increase in contribution might have the largest impact on the solvency of the pension fund. Together with ING this are the only companies with a maturity ratio below 50%. The pension funds of Buhrmann and Hagemeyer have maturity ratios above 85%, suggesting that investment returns are the main driver for the pension result each year. We observe that both Akzo Nobel and DSM have

¹² It can be argued that FRS 17 is closer to full fair value accounting, since it has limited possibilities to smooth pension profits and losses over time. Therefore, IFRS allows the option to keep using FRS 17 instead of applying the methodology from IAS 19.

¹³ An important difference between the two is that companies are allowed to use a market interest rate to discount liabilities, but pension funds cannot use a discount rate above 4% for liabilities that might be increased with inflation in the future. Het Financieele Dagblad (5 January 2005) mentions that db-schemes of companies in the AEX show a combined shortage of € 15bn following IFRS, according to research from Mercer Human Resource Consulting.

¹⁴ The maturity ratio is measured by the number of participants and not the size of their pension claim. It is hard to say how the ratio would be influenced if we would take the size of the pension claim into account. Retired employees usually have substantial pension claims, but employees that left the company and did not convert their pension to their new employer might have only a small pension claim with the company.

maturity ratios of 74 and 77%. While these are not the highest in our sample, it might indicate that contribution rates have to increase substantially to cover possible violations of the minimum funding requirement.

The final column, labelled pension size, displays the ratio of total pension assets divided by the market value of equities of the company. This column suggests that Akzo Nobel and DSM are companies with the largest pension funds compared to their own market value. The pension sizes are 43% and 89%, respectively. Thus, for these companies a change in the funding level of the pension scheme would have potentially gigantic impact on the company's equity. It seems that companies that might potentially be impacted most by future adverse scenarios are the ones that would like to reduce pension scheme risks. Klumpes, Li, and Whittington (2005) indicate that the choice to curtail pension schemes is mainly driven by the potential impact on the balance sheet and income statement. Although our sample is small, our results suggest that the potential impact of IAS 19 is a reason for companies to switch from db to dc schemes.

The importance of potential risk sources such as maturity ratio and pension size is illustrated by Figure 2, in which the maturity ratio and pension size of AEX-companies are plotted against each other. We observe that DSM and Akzo Nobel are in the upper right corner, which points at the highest possible impact. We also plot ARCADIS, the non-AEX-company that switched to dc. Based on this analysis, Philips, Buhrmann, and Hagemeyer are the most likely candidates to transform their scheme from db to (c)dc. We note that Philips also tried to change to a dc scheme in spring 2005, but they could not reach an agreement with the labour unions. This led the Philips Pension Fund to reduce corporate risks by changing the pension fund investment policy to closely match assets and pension liabilities. We also would like to mention that Hagemeyer already closed its UK pension fund in 2002 for new entrants when local pension accounting standards were changing.

Francis and Reiter (1987) point out that poor company earnings might give incentives to managers to hide pension deficits or change the pension funding policy. In Table 2, we analyze company characteristics that could influence the choice of pension scheme. Also the earnings figures (measured by EBITDA) do not seem to follow an abnormal path for Akzo Nobel and DSM, although in 2003 the earnings were somewhat under pressure with declines of 18% and 15%, respectively. There are also companies with lower profits like Wolters Kluwer or losses like Hagemeyer that did not change their pension scheme. The debt-to-equity, a proxy for leverage, is also displayed in Table 2. The debt-equity ratio for Akzo Nobel is 0.97 and for DSM is 0.33 in 2004. These numbers do not seem to indicate extreme values relative to other companies in the AEX index. It seems hard to explain the switching behaviour by the company characteristics investigated here.

5. CONCLUSION

The Dutch pension system that traditionally has been dominated by schemes with db characteristics is under heavy pressure. New minimum funding requirements proposed by the regulator, which start on 1 January 2007 are important. Nevertheless, many of the movements in the offered pension schemes that we have observed lately seem to be triggered by new accounting standards IFRS, which take pension funds assets and liabilities with the company balance sheet and earnings statements.

In this paper we investigate four Dutch companies that explicitly mention the introduction of IFRS as the main cause for their switch from db schemes to dc schemes. In contrast to the U.S. or U.K., the recent movements in the Netherlands seem to point towards collective instead of individual dc schemes. For the participant in the fund a conditional indexed average-pay scheme remains the basis, but the company has no responsibility to make additional contributions in bad times (or receive contribution discounts in good times). These developments officially eliminate the pension solidarity between employer and employee that traditionally could be seen in the Netherlands. This also means

that the pension fund gets more responsibilities towards participants and pension fund governance becomes more important in the future.

Given the developments in de U.S. and U.K. in the past, we expect that companies in the Netherlands also would like to reduce pension risks. This means that we expect that more movements from db schemes to dc schemes will be observed in the future in the Netherlands as well. It seems that pension schemes with many assets compared to the sponsor company equity and high maturity ratios are the first to switch. Further research in this area is needed before stronger conclusions can be drawn.

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Table 1: Pension accounting for AEX-companies

For the 24 companies that make up the Dutch AEX-index we display whether they are listed on stock markets outside Euronext. We also list what type of pension scheme they report in bookyear 2004 and the type of defined benefit scheme that they are offering, with the dates these schemes were introduced. The type of pension scheme for 2005 is in the next column. The three last columns are taken from the pension funds that execute the pension schemes of the companies and are registered in The Netherlands. The maturity level is the number of active plan participants divided by the total number of plan participants. The funding ratio is the value of pension fund assets (last column) divided by pension fund liabilities. The financial regulation in 2004 (actuarial principles pension funds) does not allow a discount rate of more than 4%.

Company name	Listing outside EU	Bookyear 2004	DB type	Bookyear 2005	Maturity ratio	Funding ratio '04	Pension size
ABN AMRO HOLDING	Yes	DB	AP ('00)	DB	62%	118%	20%
AEGON	Yes	DB	AP	DB	-	-	-
AHOLD	Yes	DB	AP ('04)	DB	59%	122%	17%
AKZO NOBEL	Yes	DB	AP ('01)	CDC	74%	116%	43%
ASML	Yes	DB*	-	DB*	-	-	-
BUHRMANN	Yes	DB	-	DB	85%	128%	60%
DSM	No	DB	FP	CDC/DB	77%	136%	89%
FORTIS	No	DB	FP	DB	55%	117%	7%
GETRONICS	No	DB	-	DB	66%	109%	23%
HAGEMEYER	No	DB	AP	DB	90%	123%	30%
HEINEKEN HOLDING	No	DB	AP ('05)	DB	54%	112%	13%
ING GROEP	Yes	DB	FP	DB	46%	121%	17%
KPN	Yes	DB	AP ('00)	DB	51%	117%	23%
NUMICO	No	IDC ('94)	-	IDC	-	-	-
PHILIPS	Yes	DB	AP ('01)	DB	74%	123%	56%
REED ELSEVIER	Yes	DB	AP ('04)	DB	53%	108%	5%
RODAMCO	No	DB	FP	DB	-	-	-
ROYAL DUTCH SHELL	Yes	DB	FP	DB	71%	135%	14%
SBM OFFSHORE	No	DB*	-	DB*	-	-	-
TNT	Yes	DB	AP ('01)	DB	44%	118%	41%
TOMTOM	No	IDC	-	IDC	-	-	-
UNILEVER	Yes	DB	FP	DB	79%	137%	7%
VEDIOR	No	DB	-	DB	-	-	-
WOLTERS KLUWER	No	DB	AP ('04)	DB	69%	127%	13%

DB: Defined Benefit (* indicates that the scheme is carried out by industry-wide scheme)

IDC: Individual Defined Contribution

CDC: Collective Defined Contribution

AP: Average Pay scheme

FP: Final Pay scheme

Table 2: Company characteristics

For the years 2002-2005 the earning before interest, tax, depreciation and amortisation (EBITDA, in mln euro) and total debt divided by equity are shown. These numbers are obtained from datasource Factset (www.factset.com). For Royal Dutch Shell and Fortis the U.K. and Belgium figures are respectively used because the Dutch figures are not available.

Company Name	Earnings = EBITDA				Debt/equity -ratio			
	2005	2004	2003	2002	2005	2004	2003	2002
ABN AMRO Holding N.V.	11 584	7 064	6 709	5 663	-	-	-	-
Aegon N.V.	3 988	2 829	2 792	2 579	85%	63%	64%	72%
Koninklijke Ahold N.V.	1 224	1 897	2 249	3 376	133%	202%	216%	495%
Akzo Nobel N.V.	2 048	1 912	1 734	2 058	90%	97%	126%	180%
ASML Holding N.V.	578	497	30	103	51%	59%	75%	82%
Buhrmann N.V.	207	252	228	-112	62%	61%	68%	100%
Koninklijke DSM N.V.	1 235	1 024	783	959	31%	33%	38%	38%
Fortis B N.V.	13 437	9 867	7 527	7 965	-	-	-	-
Getronics N.V.	161	104	11	-220	83%	38%	145%	504%
Hagemeyer N.V.	63	5	-124	335	107%	76%	207%	117%
Heineken N.V.	2 052	1 912	1 972	1 853	82%	106%	113%	78%
ING Groep N.V.	37 012	16 187	14 428	17 378	-	-	-	-
Koninklijke KPN N.V.	4 654	4 913	5 579	4 887	182%	138%	142%	333%
Koninklijke Numico N.V.	430	370	-486	-1 084	290%	-355%	-315%	1529%
Koninklijke Philips Electrc	3 632	4 422	2 620	501	27%	30%	46%	51%
Reed Elsevier N.V.	400	1 153	1 077	945	-	-	-	-
Rodamco Europe N.V.	1 508	534	417	409	63%	62%	58%	46%
Royal Dutch Shell PLC (C	46 007	31 082	26 189	25 360	14%	17%	28%	33%
SBM Offshore N.V.	397	258	198	178	107%	177%	175%	160%
TNT N.V.	1 583	1 714	1 488	1 558	39%	54%	52%	62%
TomTom B.V.	214	44	10	2	-	-	-	-
Unilever N.V.	6 254	5 472	7 611	7 585	147%	222%	269%	348%
Vedior N.V.	271	286	-47	-34	69%	100%	95%	82%
Wolters Kluwer N.V.	634	671	682	770	196%	316%	293%	249%

Figure 1: Overview of Dutch pension fund landscape

The figure shows the three main participants: the company, the pension fund, and the employee or retiree. The two pension fund regulators are also depicted. This picture also shows that companies have a financing agreement with the pension fund, in which they state the pension contributions (premiums). When there is a big surplus, funds could run from the pension fund to the company. Employees may have to pay part of the total premium themselves. The benefit for the employee and retiree is the nominal pension claim and annual inflation compensation (indexation).

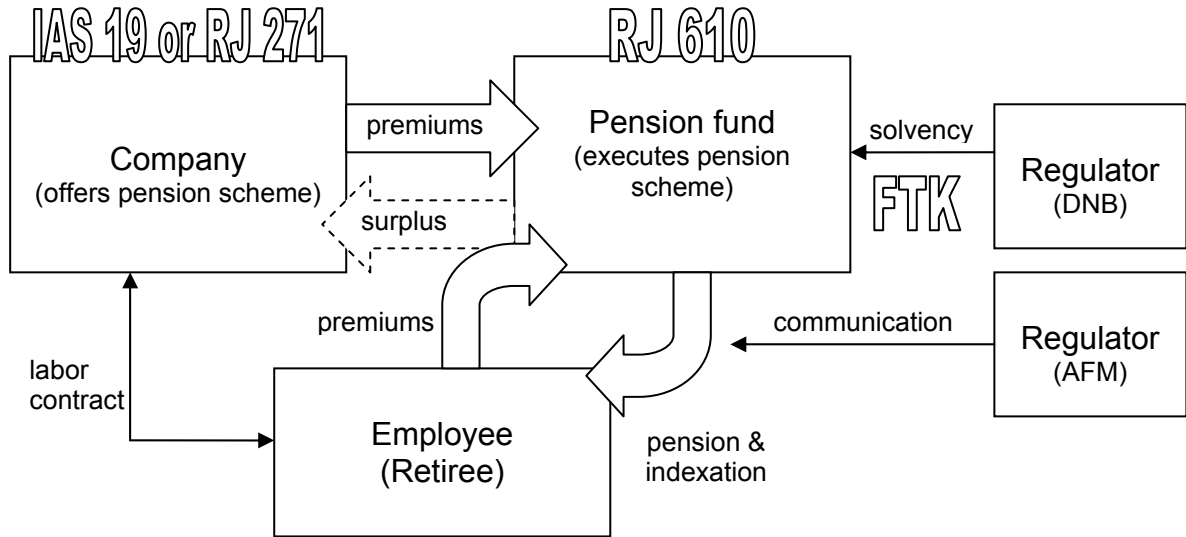


Figure 2: Pension size and maturity ratio for AEX-companies

The pension size is the market value of the Dutch pension assets divided by the market value of the company (as of the end of 2004). A pension size larger than unity indicates that the market value of the pension assets exceeds the market value of the company sponsoring the plan. The maturity ratio is the ratio of inactive participants divided by the total number of participants in the scheme. A ratio of unity indicates that there are no active participants anymore. For comparison, also non-AEX-company ARCADIS is also added in this figure.

