

Pensions when the guarantees disappear

What are the implications for product characteristics and consumer protection?

Discussion paper

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FINANSTILSYNET

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Summary

Pension savings are savings made by a person while economically active, with a view to being self-supporting in retirement. In Denmark, as well as in a number of other countries, private pension schemes are an important source of income for pensioners.

At the end of 2015, total pension savings in Denmark in ATP (Arbejdsmarkedets Tillægspension), LD Pensions, life-assurance companies, multi-employer occupational pension funds and banks amounted to DKK 3,271 billion, which corresponds to approx. 161% of GDP. Of this amount, Danish life-assurance companies and multi-employer occupational pension funds (in the following referred to as pension companies) managed more than DKK 2,073 billion at the end of 2015. Pension companies are therefore subject to special regulation compared with other types of savings, and the boards of directors at Danish pension companies have a great responsibility for ensuring that Danish pensioners can provide for themselves.

The Danish pension system differs from other pension systems in Europe in several ways. In Denmark, we have responded early to a number of crucial issues related to labour-market pensions. For example, since the Joint Declaration in 1987, the social partners have played a central role in building up private pension savings. Furthermore, requirements on full funding and separation of pension fund assets from other assets of the sponsoring undertaking have been fundamental principles ever since the first Act on Company Pension Funds in 1935. In addition to this, since 1981, multi-employer occupational pension funds have been subject to the regulations governing life-assurance companies, on the ground that the same products require the same protection. This has contributed to a robust and sustainable Danish pension system.

In Denmark, there has also been early focus on the importance of valuing assets and liabilities at market value. This contributes to ensuring that companies have sufficient funds to pay out pension commitments. However, low interest rates and longer life expectancies have put pressure on life-assurance products with guarantees, because of the higher technical provisions required in order to ensure that companies are able to meet their guarantees. This means that the investment opportunities of pension companies are limited to investment products with lower risk and thereby also lower expected returns. Lower risk eases the pressure on solvency, but eventually, lower expected returns can make it difficult for pension companies to generate returns on savings that are sufficient to meet their guarantees.

To deal with these challenges, in recent years, the pension companies have developed pension products with lower or even no guarantees. This has allowed more freedom of investment, which increases the chance of achieving better returns on savings, and thereby larger pension payments to customers. In the summer of 2012, the Minister for Business and Growth made an agreement with the pension sector to support this development. According to this agreement, pension companies must work for a continuous reduction of their range of products with nominal interest-rate guarantees. One way of achieving this is to make it easier for customers to reselect and move their savings to non-guaranteed products, including market return products. Unlike other European countries, Denmark has thereby taken action to deal with the market conditions affecting the life-assurance and pension sector.

On this background, there has been a significant change in the product portfolio in recent years. Guaranteed products, in which pension companies guarantee an annual benefit, for instance, and thereby bear the risk of adverse financial markets or the risk of customers living longer, are giving way to non-guaranteed products, in which customers bear the risk themselves. This is referred to as a 'privatisation' of the risk. One of the consequences of privatising the risk is that customers may experience a decline in the pension benefits they receive. For instance, if a customer has a non-guaranteed market return product with an investment profile comprising a high proportion of shares, a major drop in the stock market may lead to a reduction in the customer's future pension benefits, or it may be necessary for the customer to postpone retirement in order to maintain the level of pension benefits.

Furthermore, the investment risk represented by the proportion of shares relative to total investment assets is generally greater for market return products, which are usually non-guaranteed, than for average return products, which are usually guaranteed. Similarly, the proportion of alternative investments, e.g. in infrastructure, forestry and alternative credit, is generally larger in market return product than in average return products.

Current regulation, along with the current supervision, are more targeted at traditional products comprising guarantees than at products with no guarantees. It may therefore be necessary to consider whether the current setup for regulation and supervision ensures sufficient consumer protection to generate justified confidence in existing pension products.

The purpose of this discussion paper is:

- to initiate debate about the characteristics of pension products and about risk management of products with privatised risk, and
- to gather different viewpoints on how consumers holding these products are protected.

The Danish FSA wants to gather observations for politicians to consider in their future decision-making about financial regulation of pensions.

1. Products types and product characteristics

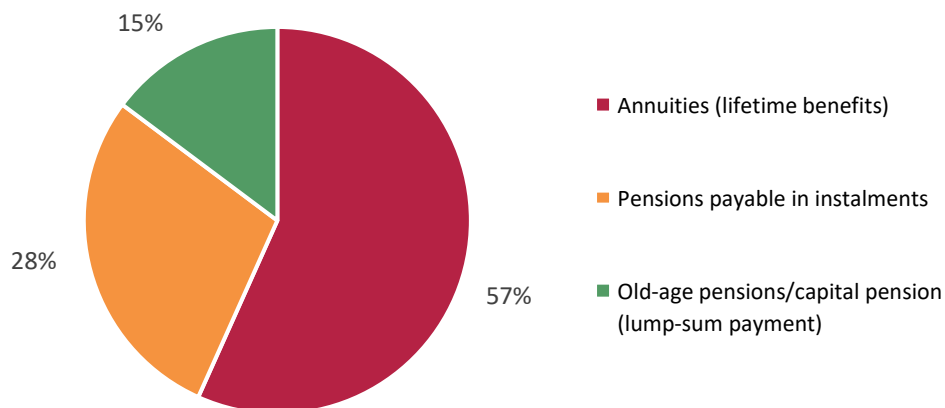
Types of payment

Products on the market for pension savings may overall be divided into three types, with different payment profiles:

- Annuities are generally paid out as lifetime benefits.
- Pensions payable in instalments are paid out as monthly instalments for no less than ten and no more than 25 years. The payments cease when the agreed period expires.
- Old-age pensions are paid out as a lump sum or in several instalments, no later than 15 years after the customer reaches retirement.

A significant percentage of the savings in Danish pension companies are annuity products, see Figure 1. In 2014, savings in annuity schemes amounted to approx. 57% of total savings.

FIGURE 1: PENSION SAVINGS IN LIFE-ASSURANCE COMPANIES AND MULTI-EMPLOYER OCCUPATIONAL PENSION FUNDS, BROKEN DOWN BY TYPE OF PAYMENT, 2014



Source: Statistics Denmark

Unlike old-age pensions and pensions payable in instalments, lifetime annuities are based on the insurance principle that, if a customer lives longer than average, the risk and financial burden are shared between the customers. The savings of the individual customer in the case of death will be included in the payments to the survivors. Annuities entail that customers will

not run out of money after they have retired, even if the customer lives longer than average. In other words, annuities are designed to ensure an income throughout retirement.

Guaranteed and non-guaranteed products

Pension benefits in lifetime annuity schemes may be linked to guarantees or they may be non-guaranteed. Various types of schemes are available, but traditionally, average return schemes¹, with fluctuations in investment returns smoothed out over the years, have been linked to guarantees. The guarantees primarily concern returns and life expectancies, which are the most significant risks of lifetime pension products. In these schemes, the company carries the risk associated with the returns on financial markets and with customers living longer than expected².

The pension guarantee ensures a certain minimum benefit to customers. This provides predictability in the savings phase with respect to future pension benefits, as well as a good degree of certainty and stability in pension benefits paid out after retirement, cf. Table 1 below. Guarantees by Danish pension companies are usually nominal guaranteed benefits. This means that the companies guarantee customers a fixed amount as ongoing payments. In other words, there is no guarantee that the purchasing power of the benefits will be maintained.

TABLE 1: CHARACTERISTICS OF TYPICAL GUARANTEED AND NON-GUARANTEED PRODUCTS

Product	Degree of investment freedom	Predictability in savings phase	Stability in payments phase
Guaranteed average return products	Low	High	High
Non-guaranteed market return prod.	High	Low	Low

Market return products³, where actual returns are added to savings, are usually non-guaranteed. Accordingly, the customers bear the market risk and the risk of longer than expected lifetimes. Most often, the degrees of freedom are greater when investing in non-guaranteed products than in guaranteed products. As a general rule, higher investment risk provides higher expected returns and a higher expected pension payment

From the customer's perspective, non-guaranteed market return schemes involve less predictability about future pension benefits during the savings phase. The greater the investment risk associated with the product, the greater the unpredictability. Many market return schemes allow customers to select the level of investment risk. At the same time, in

¹ In an average return product, the customers' investment returns are distributed according to the average interest-rate principle, which means that fluctuations in investment returns are smoothed out across the years. This makes it possible to ensure a certain stability in deposit rates over time. Deposit rates are smoothed out through a collective buffer, which absorbs investment losses in bad years and is bolstered in favourable years. The collective buffer belongs to a group of customers with the same investment profile. The size of the buffer is adapted to the risk associated with the investment profile. The stable deposit rates mean that pension payments can be kept at a relatively constant level over time

² In companies with a structure where members are also owners, the members also indirectly bear the risk because of their right related to the own funds.

³ For market interest-rate products, a rate reflecting the actual investment return is added to deposits on an ongoing basis. The expected range of fluctuations in investment returns, and thereby in the deposit rates, depends on the degree of investment risk associated with the product. The expected fluctuations in deposit rates mean that pension payments may rise and fall from year to year.

non-guaranteed market return schemes, the pension benefits received after retirement are generally associated with greater uncertainty and less stability.

Many market return products follow a lifecycle strategy in terms of investments. This means that the company gradually reduces the investment risk for the individual customer as the customer grows older. Consequently, the risk is higher early in the savings phase, when retirement is far in the future. However, the chances of achieving a high return, eventually leading to higher pension payments, are greater. As retirement is far in the future, the pension company expects that fluctuations in returns will even out over time. As the time of retirement draws closer, the company will gradually reduce the risk in order to create higher predictability for future pension benefits.

Several companies combine market return products with smoothing mechanisms in the payment phase - either as an alternative or as a supplement to reduce the risk.

The smoothing mechanisms can be designed in many different ways, but the overall principle is that, when a customer reaches retirement, the company retains part of the customer's own savings. These funds constitute an individual buffer against fluctuations in returns. In practice, the pension payments will therefore be at a lower level than without the smoothing mechanism. On the other hand, the probability of pension benefits being reduced is low.

A smoothing mechanism does not provide absolute certainty that the pension payments will not be reduced. If the company achieves very poor investment returns over a long period of time, the buffer will not be sufficient to smoothen out the return. In such cases, the company will have to reduce the pension benefits.

Products on the Danish pension market often comprise both guaranteed and non-guaranteed elements:

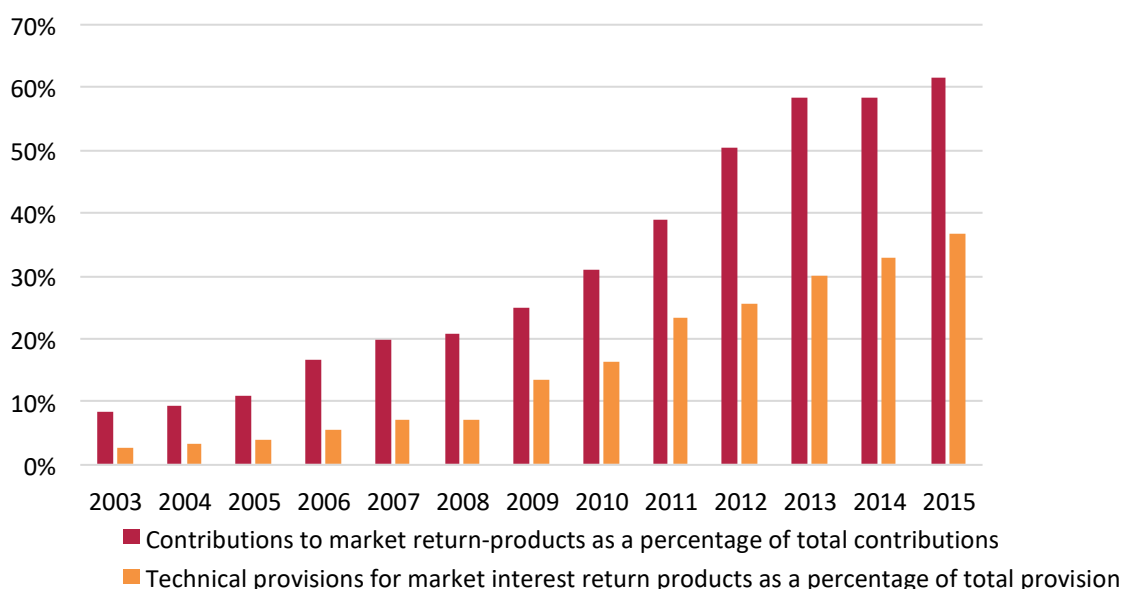
- A number of companies with non-guaranteed market return products offer the option to purchase minimum benefit guarantees when customers approach retirement.
- Many average return products comprise guaranteed benefits based on a very low assumption on minimum returns, or even an assumption on 0-returns. Since these guarantees are determined on a conservative basis, it is expected that a surplus will be generated over the term of the contract. This surplus, or part thereof, will be paid to the customer as a bonus. Given the conservative assumptions on returns, the surplus may constitute a considerable part of the scheme, whereas the guarantee constitutes a relatively small part. To make sure that the customer has realistic expectations regarding the benefits in the scheme, companies use a non-guaranteed technical basis to determine actual benefits. Consequently, from the customer's perspective, the type of risk associated with the expected pension benefits will be largely identical to the risk of non-guaranteed pension products.
- In a number of pension funds, the guarantees in average return products are conditional guarantees, which means that the pension funds may reduce the guaranteed benefits if certain conditions are met. Such conditions may concern market interest-rate levels or life-expectancy assumptions. With respect to these specific circumstances, the customer, and not the company, carries the risk.

It is not possible to draw a general conclusion as to whether guaranteed products are more or less favourable for the individual customer than non-guaranteed products. This depends, among other things, on the design of the product, the risk management and the actual developments on the financial markets.

Product changes

Over the past decade, there has been a movement in products on the Danish pension market from average return products to market return products. The percentage of technical provisions for market return products relative to total technical provisions has increased from approx. 4% in 2003 to approx. 37% in 2015, see Figure 2.

FIGURE 2: DEVELOPMENT IN MARKET RETURN PRODUCTS, 2003-2015

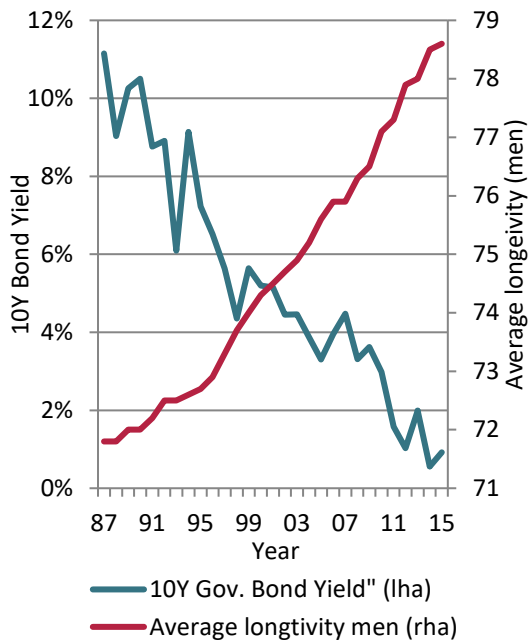


Note: The figures relate to life-assurance products in insurance class III (market interest rate). The percentage increases if figures for savings in average return products with 0-guarantee are included.

Source: Reportings to the Danish FSA

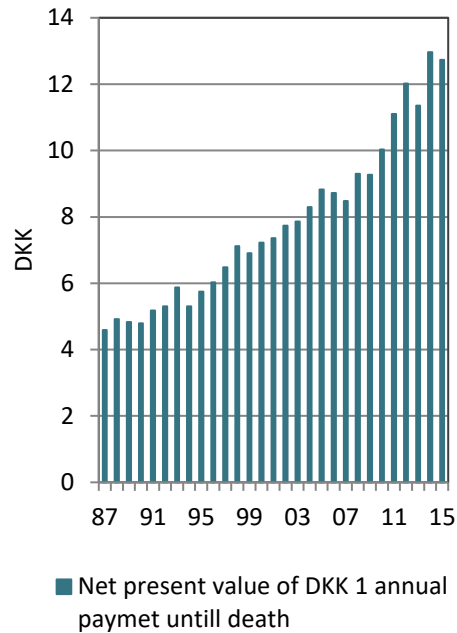
Low interest rates and longer life expectancies have put pressure on life-assurance products with guarantees, because of the higher technical provisions required in order to ensure that companies are able to meet their guarantees. From 2003 to 2015, the present value of paying benefits of DKK 1 annually from age 65 to the expected time of death increased from just under DKK 8 to nearly DKK 13, see Figure 4.

FIGURE 3: DEVELOPMENT LONGEVITY AND BOND YIELD



Source: Statistics Denmark

FIGURE 4 : NET PRESENT VALUE OF DKK 1 PAID FROM AGE 65 TO TIME OF DEATH



Source: Calculations by the Danish FSA based on data from Statistics Denmark

Because of the guarantees, the investment opportunities of the pension companies are limited to investment products with lower risk and thereby lower expected returns. Lower risk eases the pressure on solvency, but eventually, lower expected returns can make it difficult for companies to generate returns on savings that are sufficient to meet their guarantees.

Consequently, developments in recent years have resulted in even more non-guaranteed pension products, and this gives more freedom of investment, and thereby better chances of achieving higher returns on savings. For customers, this leads to higher benefits payments.

In the summer of 2012, the Minister for Business and Growth and the pension sector made an agreement to support this development. According to this agreement, pension companies must work for a continuous reduction of their range of products with nominal interest-rate guarantees. One way of achieving this is to make it easier for customers to reselect and move to non-guaranteed products, including market return products.

An increasing percentage of new pension contributions are being paid into market return schemes, and in 2015 this exceeded 60%. In addition to this, a large percentage of existing savings in guaranteed average return products has been moved to market return products, either as a result of individual customers reselecting, or, in some pension funds, based on a joint decision.

SUMMARY

- Average return products often comprise guarantees or conditional guarantees. Market return products are usually non-guaranteed products. In non-guaranteed products, the customers bear the risk of financial market fluctuations, and the risk of longer life expectancy.
- Compared with pension products without guarantees, pension products with guarantees ensure a higher degree of predictability about future pension benefits in the savings phase and more stable pension benefits in the payment phase. How great the differences are depends on the design of the individual pension product.
- Contributions to market return products have increased considerably in the past years and currently amount to more than 60% of total contributions to pension companies. Savings in market return products amount to approx. 37% of total pension savings.

2. Observations from the Danish FSA's Christmas letters

In its Christmas letters from 2014 and 2015, the Danish FSA focused on the investment strategy and how it interacts with product design and product characteristics.

What the customers have been told to expect

In their 2015 Christmas letter, the Danish FSA asked companies to account for what they had told customers about expectations, as a minimum with regard to the three products judged by company boards of directors to be the most essential, representative and critical in relation to the robustness of their investment strategy.

A summary of the responses from the companies can be found below. Some companies only have one product, and therefore, responses are only included for this one product for the company in question. Other companies offer several products, and consequently, several responses, concerning average return products as well as market return products, are included. Furthermore, for several products it has not been possible to link a specific guaranteed interest rate to the product on the basis of the responses. In this case, the response has been excluded from the count. Therefore, the number of products in the different categories is not an accurate reflection of the total range of products on the market.

Seven out of nine companies offering average return products with guaranteed benefits based on technical basis with high assumed interest rates state that the customers are told to expect the guaranteed pension benefit. The companies inform their customers in different ways that the probability that the pension benefits will be larger than the guaranteed pensions benefits is limited.

Companies offering average return products with guaranteed benefits based on technical basis with low assumed interest rates primarily state that, as a general rule, they have told their customers to expect the guaranteed pension benefit. However, at the same time, 13 out of 17 companies also communicate more realistic pension benefits expectations to their customers in the form of projections. These are based on the common projection assumptions laid down by the pension sector, and/or on a technical basis determined by the company itself.

All companies with non-guaranteed market return products state that they have strong focus on informing their customers that the products are not guaranteed, and that returns, and consequently pension benefits, can vary from year to year. 11 out of 16 companies offering market return products have coupled their product with the option to select a risk profile or a risk level. In this connection, the companies emphasise that they have told their customers to expect a specific investment risk. Companies with lifecycle strategies also state that they have told their customers to expect a gradual reduction in risk. A few companies report that they consider it very important to inform their customers that they can give no assurances with respect to the product.

SUMMARY

- In response to the Christmas letter from the Danish FSA, the companies state that, in average return schemes based on high assumptions on interest rates, they tell customers to expect a guaranteed pension with limited probability that pension benefits will increase.
- In average return schemes based on low assumptions on interest rates, the companies also tell their customers to expect a guaranteed pension, but in addition to this, the companies prepare projections for higher, more realistic pensions.
- Most market return schemes include the option to select a risk level. The companies emphasise that, in these schemes, they tell their customers to expect a specific risk profile.
- Companies with lifecycle strategies state that they tell their customers to expect a gradual reduction in risk in line with the customer's age.

Considerations on predictability and stability

In its 2015 Christmas letter, the Danish FSA asked companies to describe any considerations their boards of directors may have had, either in relation to ensuring predictability of pensions in the years prior to retirement, or in relation to stability of pensions during the payment phase.

Responses from companies show that they take different views and use different tools to ensure predictability and stability for average return products and market return products.

The companies assess that average return products are associated with great predictability and stability because of the guaranteed benefits. Several companies state that, in their work to achieve predictability and stability, they apply their investment strategies and risk levels in the context of bonus potentials.

Other companies instead focus more on the stability that the products temporarily achieve through the smoothing mechanisms inherent in the average return products. Despite considerable fluctuations in underlying returns, customers will due to smoothing experience smaller fluctuations in the return on savings, as collective funds generated by the company in favourable years are applied to compensate for unfavourable years.

Finally, a few companies with low-paid members mention offsetting of public benefits as a stabilising factor for pensions. The idea is that poor returns result in lower pensions, but this then leads to increases in public supplements to pensions, housing allowances, etc.

With respect to market return products, most companies state that they offer their customers different products with smaller or larger degrees of predictability and stability. For example, companies offer their customers the option to choose between different risk classes and to

purchase guarantees. In other words, the companies state that the choice of risk, and ultimately predictability and stability, is up to the individual customer.

The companies have also linked their products to various other factors providing predictability and stability. For example, some companies state that they have linked a smoothing mechanism to their market return products in the benefits payment period in order to ensure stable payments of pensions. Some of the companies offering a variety of risk profiles mention that a gradual reduction of risk automatically occurs in the individual risk profiles. Consequently, the risk is reduced as retirement approaches. A few other companies state that the customer is responsible for ensuring the gradual reduction of risk over the years. This is achieved by regularly asking the customer to assess whether the selected risk is still appropriate, given the customer's situation.

SUMMARY

- In their responses to the Christmas letter from the Danish FSA, the companies assess that average return products are associated with high predictability and stability because of the guaranteed benefits.
- The companies emphasise the temporary stability resulting from the design of average return products with their inherent collective smoothing buffers.
- The companies state that market return products give customers great scope to influence predictability and stability through their choice of risk level and by purchasing benefit guarantees.

Risk profiles in non-guaranteed market return products

In its 2014 Christmas letter, the Danish FSA requested that companies submitted their calculations of risks associated with selected market return products. A common methodological approach stipulated by the Danish FSA was applied in the calculations. This approach was based on the uniform risk shocks used to calculate the individual solvency need applied in Denmark in 2014 (i.e. before Solvency II). The calculated risk is seen in relation to the total investment assets.

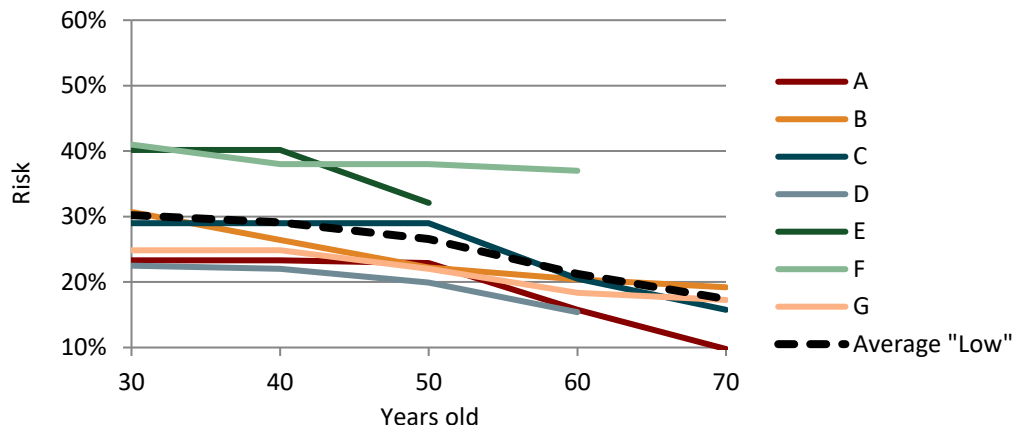
Seven companies (A-B-C-D-E-F-G) with lifecycle strategies in non-guaranteed market return products presented their calculations of risk levels in three categories designated, by the companies themselves, as low, medium and high.

In lifecycle products the risk is reduced gradually over time to a lower level. The calculations show variations in the gradual reduction of risks. In some products, there is almost no reduction in risk, whereas in others, the risk is reduced to less than half the risk as the customer grows older. The age at which the reduction of risk starts also varies from company to company. As a result of the gradual reduction in risk inherent in lifecycle products, there is

only a limited difference in risk for 70-year-olds within all three risk categories, across all companies.

As seen in figure 5, the average risk for the seven companies for a 30-year old in the low-risk category is 30% and falling to slightly below 20% for a 70-year old in the same category.

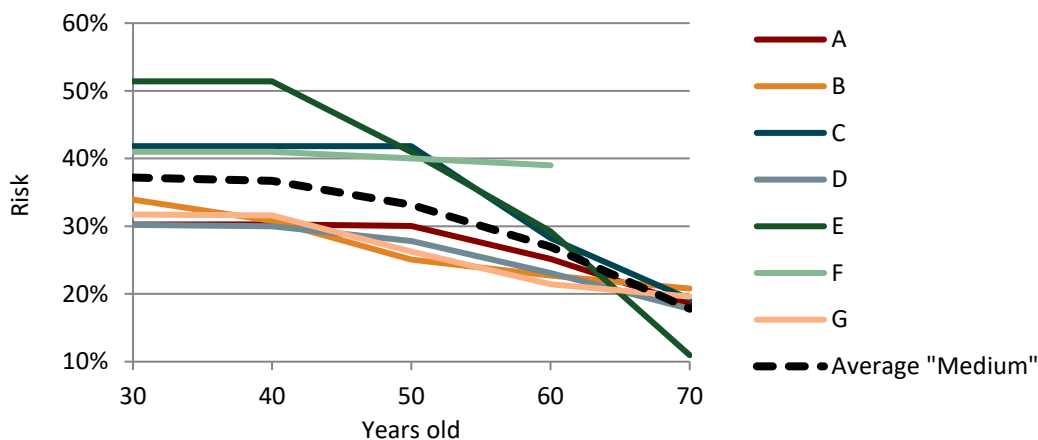
FIGURE 5: RISK OF SELECTED COMPANIES IN PRODUCTS CATEGORISED AS 'LOW RISK'



Note: The risk associated with individual products was calculated on the basis of the companies' own models for calculating individual solvency needs. Calculations are thus based on the shocks described in the Executive Order on Solvency and Operating Plans for Insurance Companies applicable at that time, and are measured with a confidence level of 99.5, corresponding to a 200-year event. Risk is stated as a percentage of total investment assets. The dotted lines in the figures indicate the average.
Source: Reports to the Danish FSA following the 2014 Christmas letter

For medium-risk products, the average risk is 38% for a 30-year-old falling to below 20% for a 70-year-old (see Figure 6). In the medium-risk category, one company has much higher risk than the average for 30-year-old and 40-year old customers. At the same time, the company has the steepest risk reduction over time and is therefore ending up having the lowest risk for a 70-year-old in the medium risk category.

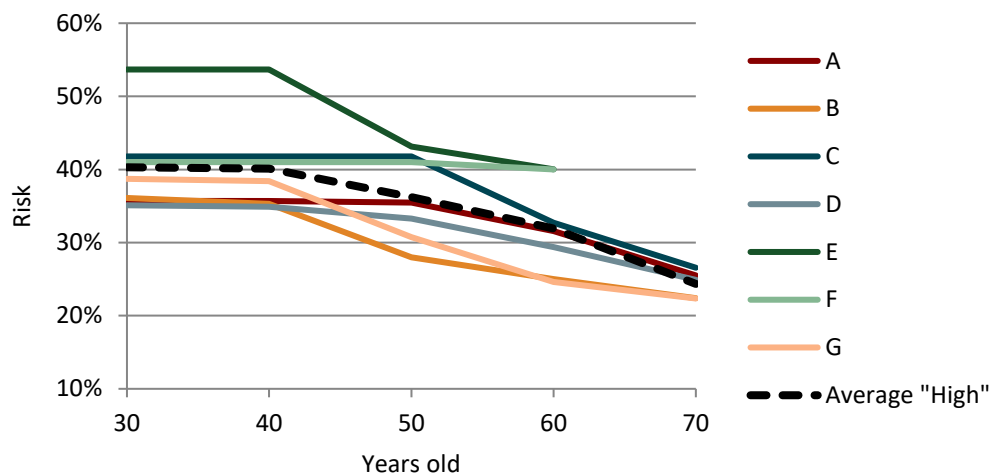
FIGURE 6: RISK OF SELECTED COMPANIES IN PRODUCTS CATEGORISED AS 'MEDIUM RISK'



Note: please see note under Figure 5.
Source: Reports to the Danish FSA following the 2014 Christmas letter

For the high-risk category, the average risk for a 30-year-old is approx. 40% while it is 25% for a 70-year-old (see Figure 7).

FIGURE 7: RISK OF SELECTED COMPANIES IN PRODUCTS CATEGORISED AS 'HIGH RISK'

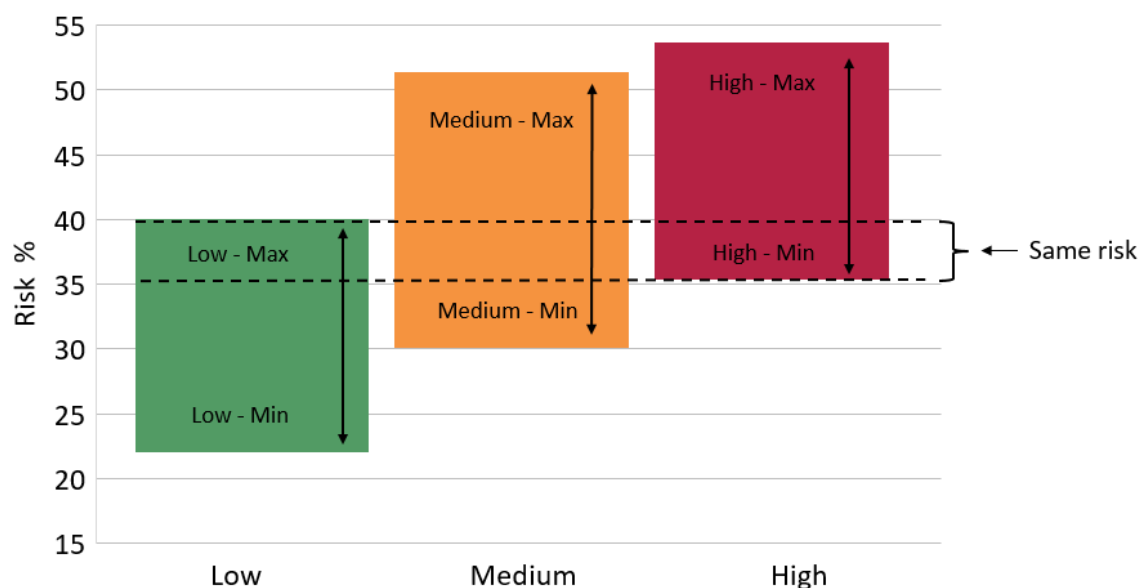


Note: please see note under Figure 5.

Source: Reports to the Danish FSA following the 2014 Christmas letter

The calculations reveal also large differences in risk levels across the three risk categories, see Figure 8. For example, the risk measured as a percentage of investment assets for a 40-year-old varies from 22% to 40% in the category of low-risk products. Similarly, the risk for a 40-year-old varies from 30% to 52% for medium-risk products, and from 35% to 54% for high-risk products. Firstly, this indicates that variation exists within individual risk categories in how much risk the customer is facing. Secondly, it shows that products characterised by one company as low-risk may involve greater risk for a 40-year-old than products categorised as high-risk by another company.

FIGURE 8: DIFFERENCE IN RISK FOR A 40-YEARS-OLD ACROSS THE COMPANIES



Note: please see note under Figure 5.

Source: Reports to the Danish FSA following the 2014 Christmas letter

SUMMARY

- Investment risk within the risk categories low, medium and high for non-guaranteed market return products varies considerably across companies.
- Products characterised by one company as low-risk may involve greater risk than products categorised as high-risk by another company.
- The extent and timing of gradual reduction of risk in lifecycle products vary considerably from company to company.

3. Developments in investments

Pension assets make up a significant part of Danes’ total savings. At the end of 2015, total pension assets in pension companies amounted to DKK 2,073 billion. Pension companies are therefore among the most important players in the investment area.

In the first years of the financial crisis, falling interest rates led to increases in technical provisions in companies with guaranteed average return products. At the same time, solvency was further strained by falling share prices, higher credit spreads and higher liquidity premiums. Consequently, risk appetite was falling, and the proportion of bonds in the pension companies’ investment portfolios for average return products increased from 60% in 2007 to 70% in 2012, see Figure 9.

In recent years, credit spread and liquidity premiums have declined, and stock markets have regained the losses suffered during the financial crisis. On this background, pension companies have again taken on more risk in guaranteed average return schemes, and the proportion of shares has increased from just 17% in 2012 to more than 25% in 2015.

FIGURE 9: ASSET ALLOCATION FOR AVERAGE RETURN PRODUCTS, 2006-2015



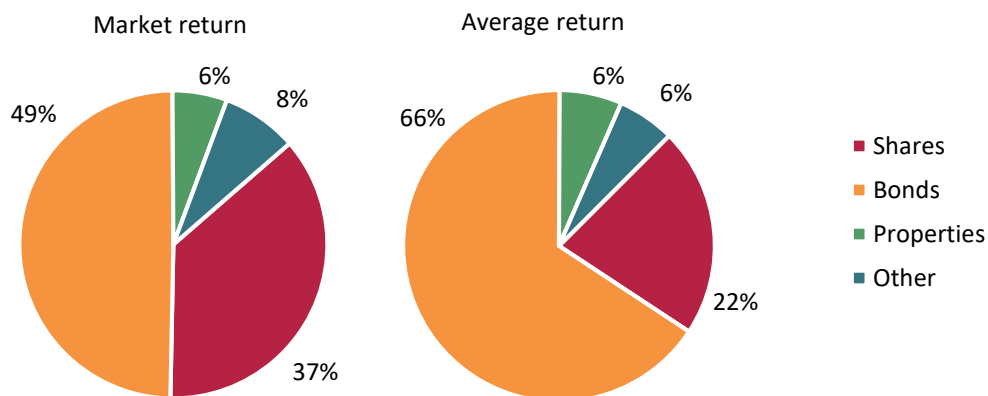
Note: Alternative investments are included in several of the asset
 Source: Accounting reports to the Danish FSA.

Following entry into force of the Solvency II Directive from 1 January 2016, the Danish FSA has received new, more detailed reporting on the companies’ investment assets. The new reporting enable a comparison of the composition of investment assets for average return and market return products.

The new Solvency II reporting show that the proportion of shares in the investment portfolio is larger in market return products than in average return products. At the end of the first half of 2016, shares constituted 37% of the investment assets for market return products compared to 22% for average return products, see Figure 10. This difference may reflect that the

freedom of investment in market return products, which are generally non-guaranteed, is greater than in average return products, which are primarily guaranteed.

FIGURE 10: ASSET ALLOCATION IN MARKET RETURN AND AVERAGE RETURN PRODUCTS, Q2 2016

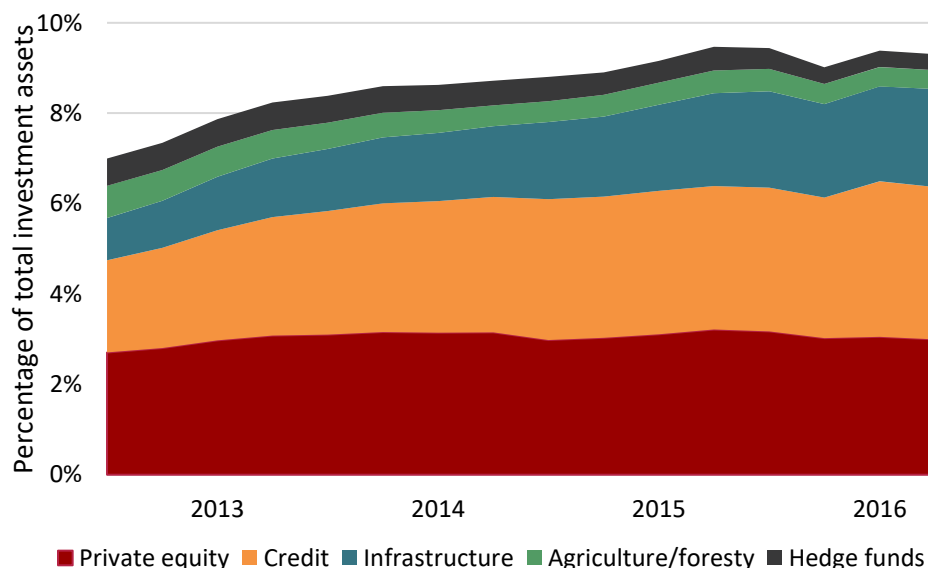


Note: Alternative investments are included in several of the asset categories

Source: Estimated figures from Solvency II - reportings to the FSA. The reporting are undergoing continuous validation and control, therefore, allocations can change. The Danish FSA expects however that the differences in market return products and the average return products will exist regardless of any adjustments.

From the end of 2012, when the Danish FSA collected alternative investments data for the first time, to Q3 2016, the proportion of alternative investments in companies' investment portfolios increased from 7% to 9.3%, see Figure 11.

FIGURE 11: PROPORTION OF ALTERNATIVE INVESTMENTS IN PENSION COMPANIES' INVESTMENT PORTFOLIOS



Note: Alternative investments are included in several of the asset categories

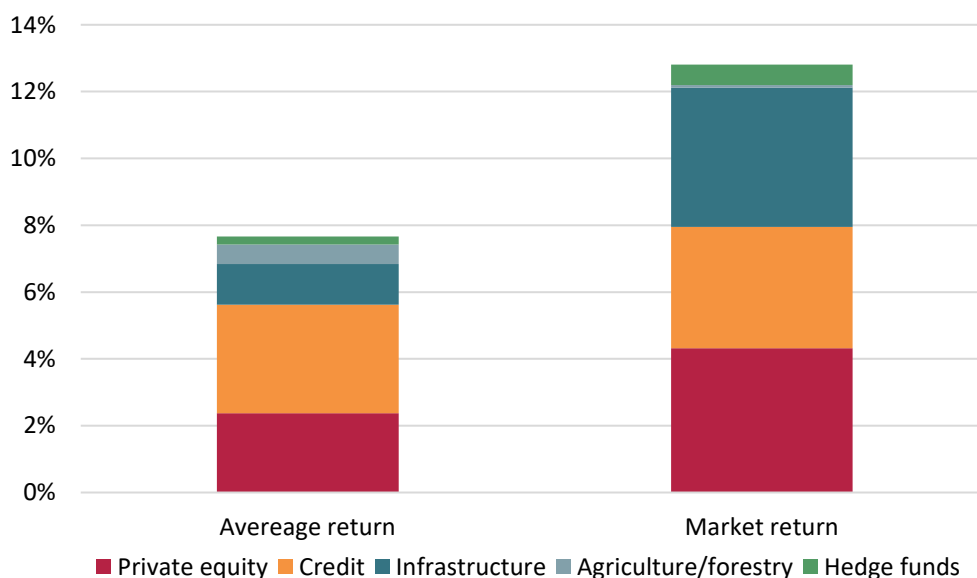
Source: Reports to the Danish FSA

Alternative investments constitute a non-specific category of asset types. The assets in this category are characterised as being traded on a market which is not deep, liquid and transparent, compared with the market for traditional investments. Due to the lower liquidity, investors can often achieve higher expected returns because of an illiquidity premium. Furthermore, some of the alternative investments are characterised by cash flows which run for a higher number of years, and which include an element of inflation-hedging built into the expected cash flows. This applies to investments in infrastructure, for instance. Finally, this type of investment is associated with risks, which are not necessarily found in traditional investments. This calls for other competences than investments in listed shares and bonds, for instance in relation to due diligence, risk management and ongoing management of the investment as well as valuation.

The largest alternative asset categories are alternative credit and private equity, which constitute 3.0% and 3.4%, respectively, of total investment assets in Q3 2016.

The proportion of alternative investments in the investment portfolio is larger in market return products than in average return products. At the end of Q3 2016, alternative investments amounted to 12.8% of investments in market return products, compared with 7.7% in average return products, see Figure 12. In particular, investments in infrastructure and private equity make up a considerably larger share in investments in market return schemes.

FIGURE 12: PERCENTAGE OF ALTERNATIVE INVESTMENTS IN AVERAGE RETURN-RATE AND MARKET RETURN PRODUCTS, Q3 2016



Source: Reports to the Danish FSA

SUMMARY

- The proportion of shares in the investment portfolios has increased over past years.
- The proportion of shares in market return products amounts to 37%, which is 15 percentage points higher than for average return products.
- The pursuit of returns has caused an increase in alternative investments. The proportion of alternative investments, seen in relation to the total investment portfolio, is largest for market return products.

Fact box: Alternative investments

Private equity

Private equity is characterised by unlisted securities/ownership interests. The investment category ranges from direct investments in companies to investments made indirectly through specialised funds, or funds of funds. Investments are made at different stages in a business' lifecycle, from the early stage (start-up) to mature businesses.

Alternative credit

Alternative credit investments cover a broad category of investments, which mainly differ with respect to where in the ownership structure the investment is made. This category includes direct bank loans to businesses, private mortgage deeds and more specialised credit investments, such as CLOs/CDOs made through funds, and funds of funds.

Infrastructure

Investments in infrastructure can be divided into investments in hard infrastructure and investments in soft infrastructure. Hard infrastructure refers to large physical networks required to keep a society going, e.g. motorways, port terminals, sewer systems, telecommunication networks, etc. Soft infrastructure encompasses institutions required to maintain a society's economic, health-related, cultural and social standards, e.g. schools, theatres, hospitals, etc.

Agriculture and forestry

These investments seek to optimise returns from a piece of land through agriculture or forestry.

Hedge funds

Investments in hedge funds are typically made through specialised funds, and cover numerous investment strategies in a variety of asset types. Therefore, it is not easy to provide a simple description of this form of investment. However, certain general characteristics can be identified. Unlike investment associations, hedge funds often use gearing, and they may take short positions as well as long positions.

4. Regulation of guaranteed and non-guaranteed products

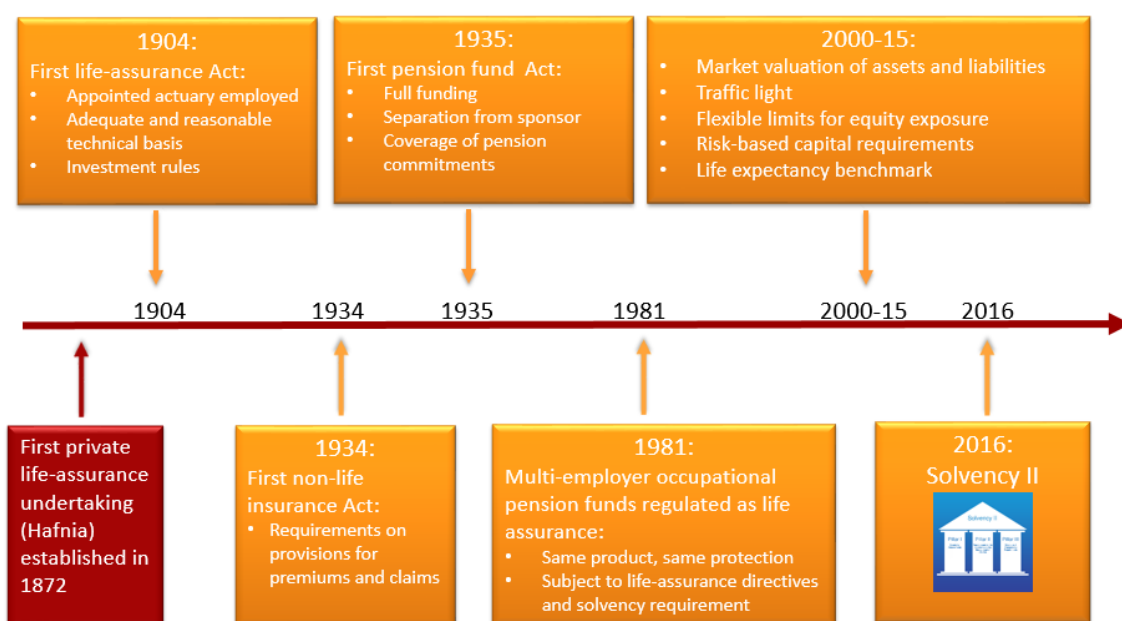
Regulation in a historical perspective

In 2016, the Danish pension system was acknowledged by Mercer as the best in the world for the fifth consecutive year. The reason for this first place is that Denmark has a robust and sustainable pension system. The Danish pension system has been built up over generations. It is founded on a combination of political decisions and assumption of responsibility by the social partners, who, based on the Joint Declaration from 1987, have contributed to the substantial private pension savings. This has made Denmark a frontrunner in the pension area.

As long ago as the Danish Pension Funds Act of 1935, requirements were introduced stipulating that pension commitments were to be covered either by a life-assurance undertaking or a pension fund, see Figure 13. As a result, pension liabilities could no longer simply be included in the balance sheet of the sponsor. At the same time, full funding of pension liabilities was introduced, which means that assets must be set aside to cover all technical provisions. Since 1981, multi-employer occupational pension funds have been subject to the regulations governing life-assurance companies, on the ground that the same products require the same protection.

In 2002, requirements were introduced to value assets as well as liabilities at market value. This has increased companies' risk recognition. Furthermore, with the introduction of the so-called 'traffic light system', the assessment of capital requirements also became risk-based. In recent years, before the implementation of Solvency II, further risk-based capital requirements were introduced, as well as a mortality benchmark, which companies use to determine the level of technical provisions. Consequently, Danish pension companies were well-prepared when Solvency II entered into force in 2016.

FIGURE 13: REGULATION— HISTORICAL OVERVIEW



Ever since the first 1904 Act regulating life-assurance activities, the Danish FSA (originally the Danish Insurance Council) has played a role in safeguarding customers' savings for old age by monitoring that the technical basis of life-assurance undertakings offers security to holders of long-term insurance contracts. The Act included regulations requiring life-assurance undertakings to employ actuaries who could help ensure the correct calculation of provisions.

The Danish FSA monitors that the companies are able to meet their customers' claims for insurance benefits, and that the companies' rules on calculation and distribution of realised profits comply with statutory requirements. The legislation requires that the conditions notified by the companies provide adequate security for individual policy holders, and that profits are distributed reasonable between the company and its customers, and between the individual customers.

With respect to guaranteed products, the legislation stipulates that the determination of the technical basis, and thereby the assumptions on which the insurance benefits are based, must be adequate. In other words, there must be considerable security to ensure that, on maturity of the insurance contract, the life-assurance undertaking has sufficient funds to meet the obligations. Because the assumptions underlying the guaranteed benefits must be determined on an adequate technical basis, the life-assurance company's actual returns will generally be larger than the assumptions applied for returns, i.e. a surplus will be generated. Similarly, there will generally be a surplus because of the prudently determined insurance and cost assumptions.

If the insurance scheme is designed on an adequate technical basis with respect to all its components, there will be sufficient financial flexibility to resist subsequent changes that seemed unlikely or could not be expected at the time the insurance was taken out. Examples of such unexpected changes could be the current low interest rates, or that life expectancies continue to rise - and with even greater improvements in life expectancy than previously assumed.

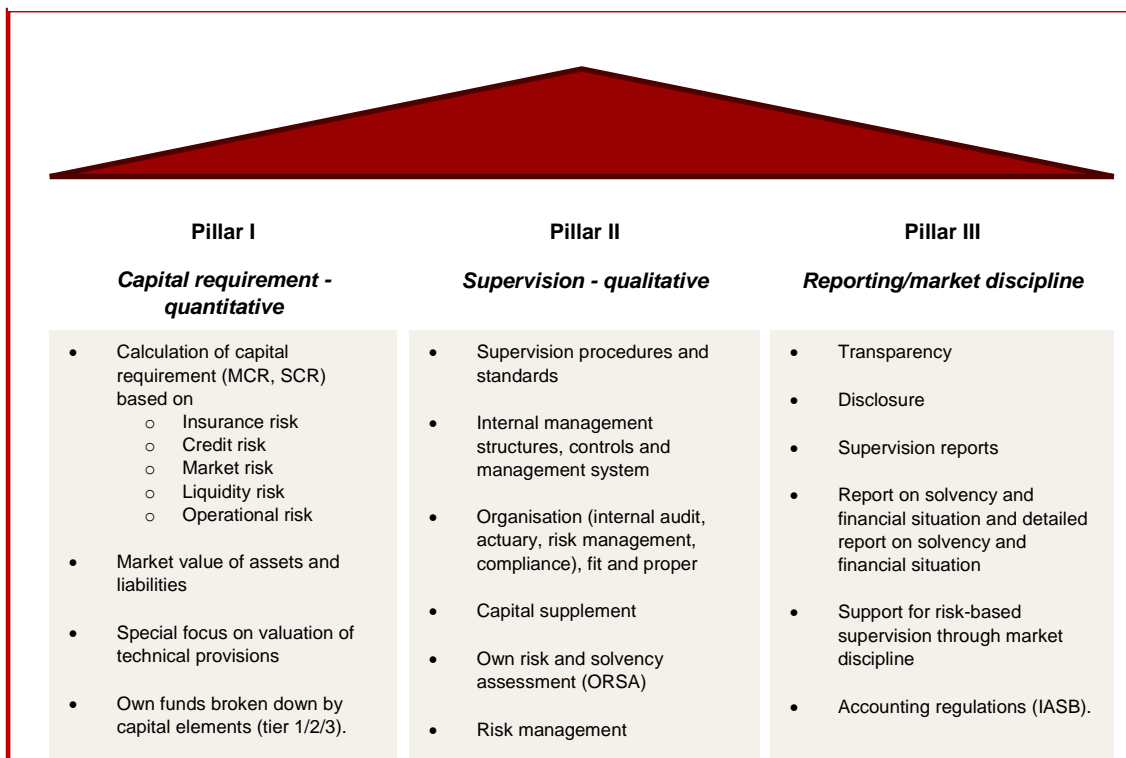
Regulations on adequacy do not set the same requirements on prudence for non-guaranteed market return products. Such products are typically based on more realistic assumptions, and consequently, a financial buffer will not be built up in the same way as for guaranteed average return products.

The Solvency II regulation

Today, regulation of the insurance area is primarily based on the Solvency II Directive. The purpose of the Solvency II regulation is to provide even better protection of policy holders, to ensure uniform rules in the European Single Market, to increase insurance companies' competitiveness internationally, and to support financial stability. In conjunction with supplementary Commission delegated regulation and new and amended executive orders, Solvency II has been implemented in Denmark through the Danish Financial Business Act.

Solvency II is based on three pillars, see Figure 14. Pillar 1 addresses quantitative requirements on insurance companies, e.g. requirements on valuation of assets and liabilities, calculation of solvency capital requirements and calculation of own funds. Pillar 2 addresses qualitative requirements, e.g. requirements on companies' managements structures and organisation, as well as supervision procedures and standards. Pillar 3 addresses disclosure requirements and requirements on market discipline, e.g. reports that the companies are required to publish and reports that must be submitted to the Danish FSA.

FIGURE 14: THE THREE PILLARS OF SOLVENCY II



The solvency capital requirement

Pension companies must comply with a solvency capital requirement. When calculating the solvency capital requirement, companies must use a standard formula prescribed by the European Commission, or an internal model, which must be approved by the Danish FSA.

The solvency capital requirement is calculated as the economic capital that insurance companies must hold in order to ensure that insolvency only occurs in one out of 200 cases. This means that the company must be able to meet its obligations towards policyholders and beneficiaries with a probability of at least 99.5% over the next 12 months. The solvency capital requirement is calculated on the basis of the risk profiles of the insurance companies. The effects of any techniques used to limit risk are taken into account, e.g. reinsurance and diversification effects. For example, the calculation may include assumptions that the risk of longer life expectancy is not correlated with the risk of a fall in share prices. The solvency capital requirements reflect the specific composition of risks that the company has taken on.

In products which guarantee a certain benefit to the customer, and where the company thereby bears the risk, the company's risks are reflected in the solvency capital requirement. The greater the risk accepted by the company, the greater the solvency capital requirement. Consequently, capital requirements have a disciplinary effect.

In non-guaranteed products, where the customer carries the insurance and investment risk, the company's risk-based capital requirements reflect the risks borne by the company. Consequently, the solvency capital requirement does not have the same direct disciplinary effect on the insurance and investment risks borne by the customer.

The prudent person principle

Guaranteed as well as non-guaranteed pension products are subject to a requirement that pension companies invest their assets in their customers' best interests. Companies must invest in assets associated with risks which the pension company can identify, measure, monitor, manage, control and report on. The requirements are a reflection of the prudent person principle, which aims to ensure that companies' investment strategies reflect the benefits companies have told customers they can expect.

In supervising whether companies' investment strategies comply with this requirement, the Danish FSA assesses whether companies have an appropriate investment strategy. Accordingly, the strategy must provide a clear framework for risk assumption for individual products, ensure an appropriate degree of risk diversification, and avoid risks which are contrary to the customers' interests, e.g. concentration risks and liquidity risks. Furthermore, the Danish FSA assesses the robustness of the investment strategy, i.e. whether the composition of investments ensures that the expected value of the investment portfolio is robust to financial market fluctuations, so that customer expectations can be met. The Danish FSA also considers whether the investment strategy and the actual investments support long-term rather than the more short-term goals, and whether it ensures the best possible return. Furthermore, the Danish FSA focuses on management involvement and understanding of the company's investments.

The prudent person principle contributes to ensuring that the investment strategy reflects customer expectations. However, the principle makes no requirements on the degree of precision with which the company must describe to customers what can be expected. Furthermore, when assessing whether the customers' interests are safeguarded in the best way possible, it can be difficult to judge in advance which investment strategy is most appropriate. Moreover, the prudent person principle makes no requirements on what the company should tell customers regarding expectations. Consequently, the framework for the prudent person principle can be considered as flexible, particularly for non-guaranteed pension products. Consequently, the prudent person principle does not necessarily have a direct disciplinary effect on the company in relation to insurance and investment risks borne by the customer.

SUMMARY

- Denmark has a robust and sustainable pension system, which results from a combination of several historical political decisions and assumption of responsibility by the social partners.
- Guaranteed and non-guaranteed products are subject to the same Solvency II regulation, but the regulation works in different ways on the two product types.
- The solvency capital requirement does not have the same direct disciplinary effect on insurance and investment risks for non-guaranteed products as for guaranteed products.
- The prudent person principle makes no requirements on what companies should tell customers with regard to expectations, or on the level of detail of such descriptions. The framework for the prudent person principle can be considered as flexible, particularly for non-guaranteed pension products.

5. Consultation

Product characteristics and customers' expectations re. non-guaranteed products

Previously, customers primarily held guaranteed products providing security for payment of a certain minimum benefit. Guaranteed products involve predictability during the savings phase with respect to future benefits, as well as security and stability with respect to pension benefits paid out after the customer retires. Furthermore, guaranteed products entail that companies must take the guarantee into account in their risk management. Consequently, companies have an incentive to minimise the risk of having to draw on their own funds in order to meet the guarantees when returns on the financial markets are insufficient. Due to the guarantee, investment strategy and risk management in the savings phase and the guaranteed series of benefits in the payment phase are closely intertwined.

Today, ever more customers have non-guaranteed pension schemes, such as market return products. A non-guaranteed product provides less predictability about future pension benefits during the savings phase. Furthermore, in its basic form, a non-guaranteed market return scheme entails that the size of pension benefits paid out is linked with a higher degree of uncertainty and therefore less stability. However, non-guaranteed products are also expected to generate a higher expected pension benefit.

Non-guaranteed products can be designed in many different ways. The specific design has implications on the predictability and the stability of pension benefits. In pure market return products, where companies invest more in risky assets, for instance, the expected return is high, but the uncertainty associated with pension benefits is also proportionally high. Market return products with lifecycle strategies, involving a gradual reduction of investment risk in line with the customer's age, may add more predictability and stability for the customer. This also applies to market return products with individual smoothing of realised returns in the payment phase. Accordingly, product design, including selection of risk level and the specific risk management for market return products, plays an important role for the characteristics of the specific product.

The Danish FSA wants to gather different viewpoints on what customers should reasonably expect of their non-guaranteed pension products.

1. What are the important characteristics of a pension product?
a) To what extent should the expected pension benefits be predictable in the savings phase? What are the advantages and disadvantages of a high degree of predictability?
b) To what extent should the pension benefits paid out be stable during the payment phase? What are the advantages and disadvantages of a high degree and a low degree of stability, respectively?
c) What does a good payment profile look like? Should planning take into consideration that the purchasing power of the pensions paid out must be maintained during the payment period?

2. What is good risk management in non-guaranteed products?

- a) Do non-guaranteed products give rise to a different approach to risk management than guaranteed products? If yes, how?
- b) When offering non-guaranteed products, should companies, as they do with guaranteed products, base the design of their products on a desired level for the benefits, taking the view that the purpose of pensions is to provide flows of income for pensioners to provide for themselves? Should the companies then aim for a certain correlation between the savings phase and the payment phase in their risk management? Or can their focus in risk management for non-guaranteed products be the same as for other types of savings: to maximise savings?

Adequate protection of consumers

Design of products and selection of investment risk are initially the responsibility of the board of directors, within the given regulatory framework. Current regulation in central areas concerns products with guarantees. The regulations on risk-based capital requirements imply that a company's capital requirement increases in step with the investment risk, if the products are guaranteed. Consequently, the regulations create an incentive for companies to also focus on the risk of losses on their investments. For non-guaranteed products, the regulations do not create an incentive to reduce the risk of losses to the same extent. Therefore, companies' interests do not necessarily coincide with those of their customers when it comes to reducing the risk of losses. This enables companies to make riskier investments in order to achieve the highest possible returns, without assuming the solvency risk, which, in principle, gives less regulatory consumer protection to customers with non-guaranteed products.

Possible ways of increasing consumer protection include:

- requirements that the company's board of directors provide more detailed descriptions of the products offered by the company, including product characteristics and (expected) benefits in the payment phase. This applies to all expected payments, including any non-guaranteed benefits. In this connection, the board of directors must decide what they will accept in terms of the risk of reduction of benefits, and they must include the established framework in their risk management for the product. This framework can be used to define the risk profile in the investment portfolio.
- information that can ensure that customers really understand non-guaranteed products and associated risks, thus providing the customer with a good basis for financial planning for old age, e.g.:
 - clearer information about product characteristics and the future benefits that customers can expect based on their pension agreement
 - information about the probability that a given investment strategy will lead to a reduction in pension benefits by x%
 - simple risk-labelling of products using a common method for measuring risk (e.g. low, medium, high)

- an explicit limit on how much risk a customer can be exposed to in a pension product, for instance a requirement that the probability of the current investment strategy leading to a reduction in pension benefits by x% should not be allowed to exceed y% within a given timeframe. The limit can vary depending on whether the customer is in the savings phase or in the payment phase.

The Danish FSA wants to gather different viewpoints on what characterises, and should characterise, good consumer protection in non-guaranteed products, including any differences between voluntary individual schemes and collective labour-market pension schemes.

3. Is consumer protection regarding non-guaranteed products adequate under the current regulation? Why/why not?

- a) Should the regulation contribute to ensuring predictability and stability in expected pension benefits from non-guaranteed products?

4. Is there a need for new and different types of information regarding non-guaranteed products? Why/why not?

- a) Do customers currently receive sufficient information? To what extent are consumers able to understand information about risks associated with products?
 b) Would information in the form of a key risk figure be relevant?
 c) Should any new information about the risk of products be provided to the individual customer or disclosed to the general public?
 d) What are the advantages and disadvantages of simple risk-labelling of non-guaranteed pension products?

5. Is there a need for specific regulatory initiatives which may help establish a framework for companies' risk management and risk assumption? Why/why not?

- a) What are the advantages and disadvantages of requiring the board of directors to provide more accurate definitions of product characteristics and expected benefits, including the board's decision on what they consider to be acceptable in terms of the risk of reduced benefits?
 b) Should explicit limits be defined on how much risk a customer can be exposed to in a non-guaranteed lifetime pension product. What are the advantages and disadvantages of defining explicit limits?

The Danish FSA requests that any responses to these questions be submitted by no later than 19 April 2017 to pensionskonference@ftnet.dk or Finanstilsynet, Århusgade 110, 2100 København Ø. The Danish FSA intend to publish the responses at a later stage.