

Advice concerning pension fund parameters

Parameters Committee

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Summary

Taking into account the financial and economic developments in the past, the Committee stresses the importance of defining new parameters for pension funds based on realistic expectations for the future. Based on these parameters, pension funds can decide themselves upon the degree of prudence they wish to observe in their financial structure. The Committee is of the opinion that pension funds, when developing their policy (i.e. in advance), must take into account the possibility of what at times may be significant deviations in actual results compared with initial expectations. With regard to the minimum expected values for wage and price inflation, the Committee sees no reason to change the current parameters of 3% and 2%, respectively. This also applies to the maximum expected value for the return on fixed-income securities, which is currently 4.5%. The Committee proposes, furthermore, that the current classes of shares from developed markets and shares from emerging markets be merged to form a single class of listed equities, and additionally that the class of unlisted equities be replaced with a class of miscellaneous variable-yield securities. There is no difference of opinion within the Committee on the importance of realistic return parameters. The Committee is divided, however, on the question of how well-founded and realistic estimates can be made for the future return on shares. This has resulted in a divided advice regarding the level of a number of parameters.

Based on a study of available literature, **part of the Committee**, consisting of the representatives of De Nederlandsche Bank (DNB, Dutch Central Bank) and the Netherlands Bureau for Economic Policy Analysis (CPB) and the Chairman, is of the opinion that with regard to expected future returns on equity a clear distinction must be made between (actual) past performance and (expected) future performance. Past returns are partly due to windfalls that are not representative for the future, such as the integration of financial markets, technological developments and an unprecedented rise in productivity. Therefore, there must be no assumption in the modelling of future earnings yields that there will be a recurrence of the relatively high returns that investments in shares yielded in the second half of the previous century. In line with the literature on this subject, this part of the Committee expects a global real rate of return on shares that is roughly 1% lower than the historical average between 1900 and 2008. This leads them to advise a maximum expected value of 7.5% for the nominal arithmetic return on listed equities and 6% for the nominal geometric return on listed equities, and an arithmetic return of 8% and a geometric return of 6.5% on miscellaneous variable-yield securities. Table 1 shows that these recommended maximums are approximately 1.5% points lower than (the average of) the current parameter values.¹ This part of the Committee advises that lower

¹ Because, in the present arrangement, the class of listed equities does not exist as a single class, but as two separate classes of shares from developed markets (including indirect real estate) and shares from emerging markets, an estimate has been made based on the parameters for the current underlying classes and the observed

maximum expected returns than the current values be assumed in respect of direct real estate and commodity investments also.

Table 1. Return parameters DNB, CPB and Chairman

Class	Advice		Current values		Change
	arithmetic	geometric	arithmetic	geometric	
Maximum expected values¹⁾					
Listed equities	7.5%	6%	(9.1%) (estimated)	(7.6%) (estimated)	-1.6%
Misc. variable-yield securities	8%	6.5%	9.5%	8%	-1.5%
Direct real estate	6.5%	5%	8%	6.5%	-1.5%
Commodities	6.5%	5%	8%	6.5%	-1.5%

¹⁾ The arithmetic mean corresponds to the ‘statistical mean’ or the ‘mean’. The geometric mean corresponds, under certain assumptions, to the median value of the distribution.

With a view to ensuring a balanced treatment of investment portfolios with an above-average or less than average risk profile, this part of the Committee advises binding the pension funds to the arithmetic as well as the geometric maximum expected values. The limitation in arithmetical terms is very important for supervisory purposes. Without this limitation, the parameters effectively fail to put an upper limit on the expected (portfolio) return².

The other part of the Committee, made up of the representatives of the Stichting van de Arbeid (StvdA - Labour Foundation), takes as its basis the average risk premium on equity over a long period (1900-2008), the average of ‘good and bad times’. Furthermore, many empirical surveys show that the actual risk premium on equity can vary significantly from this historical average for long periods. Pension funds must therefore – and complementary to selecting an historical risk premium as a basis – take more account than previously in particular of this possibility of deviations, which may at times be significant. Pension funds must exercise prudence in relation to realistic parameter values.

The average risk premium on equity (the return exceeding risk-free government bonds) was 4% in the period 1900-2005. The depressed years immediately following brought this average for the period 1900-2008 down to 3.4%. This part of the Committee finds arguments in literature supporting a (upward or downward) deviation from this latter long-term average to be unconvincing. This part of the Committee therefore proposes that for the coming fifteen years the average risk premium on equity be assumed to be 3.4%. The total return on equity is then 7¼% (4% return on government bonds plus

ratio between investments in both classes. At year-end 2008, the ratio between listed and unlisted was 9 to 1. Source: DNB Supervisory data on pension funds, Table 8.9 Invested pension assets at pension funds' risk, excluding derivatives.

² In its assessment of the recovery plans, DNB appraised the geometric portfolio return as stated in those plans by making additional assumptions about volatility and correlations.

3.4% risk premium on equity)³. There is ample support in literature for a risk premium on equity at this level.

This part of the Committee proposes on balance the following parameters.

Table 2. Return parameters StvdA (geometric⁴)

Class	Advice	Current values	Change
Maximum expected values			
Listed equities	7.25%	(7.6%) (estimated)	-0.35%
Misc. variable-yield securities	7.75%	8%	-0.25%
Direct real estate	6.5%	6.5%	0
Commodities	6.25%	6.5%	-0.25%

As this summary makes clear, this part of the Committee advises leaving the current parameter unchanged for direct real estate and revising the current parameter for commodities slightly downward.

These members also advise that only geometric parameters be used. These parameters correspond well to the actual accrual on investments and the central key indicators of the stochastic analyses made by pension funds. Using assumptions on volatilities and correlations, the geometric average clearly and unambiguously determines the expected portfolio return. When arithmetic averages are the starting point, the same assumptions are also required to translate the arithmetic expectation at portfolio level to the geometric return.

Consequences and application in governance

Based on the current parameter values, a maximum expected arithmetic annual portfolio return of 6.9% may be assumed on average across the sector. This percentage decreases by roughly one percentage point if the parameter values are applied of the part of the Committee first referred to, and by 30 base points under the parameter values of the other part. The new parameters imply other limiting conditions for the pension funds' scope for policy making, in particular for new continuity analyses and recovery plans that will be drawn up as well as for new cushioned cost-effective contributions. This can lead to adjustments in the level of contributions and/or in the ambition of the pension scheme. In order to give an indication of the scope of these effects, it has been calculated what the consequences of the new parameters would be if the full cost of adjustment were to be absorbed in the contributions. Based on the cushioned cost-effective contribution, the new parameter values would result in an increase in contributions that may be as high as 1.9 billion and 0.6 billion euros, respectively. Future continuity analyses (with a 15-year horizon) will also show a lower path for the coverage ratio, to which pension funds will have to formulate a policy response. The impact on

³ The real rate of return on equity between 1900 and 1949 was 3.5% on average, and 9% on average between 1950 and 1999. The real return on equity proposed by this part of the Committee is 5¼% for the coming years.

⁴ In arithmetic terms, the values in the table would be approximately 1.5% points higher.

possible new recovery plans is very fund-specific and cannot be calculated at the aggregate sector level. The Committee would like to suggest that, in view of the present time schedule for evaluating the FTK (Financieel Toetsingskader - Financial Assessment Framework), a postponement to permit a revision of the recovery plans should be granted to pension funds which due to the actual development of the funding ratio, as determined on 31 December 2009, are faced with setbacks in implementing the current recovery plans thereby making additional measures unavoidable. It must be noted in this regard that the (cushioned) cost-effective contribution for 2011 will have to be determined for the first time based on the new parameters. Moreover, the Committee is unanimously of the opinion that the relation between the rules relating to risk and return merits further, closer attention in the evaluation of the FTK. This applies also to the coherence of the maximised return for fixed-income securities and the term structure of interest rates that is used to discount the commitments of pension funds.