ABP
Building a good pension together

Annual report 2019

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The original financial statements were drafted in Dutch. This document is an English translation of the original. In the case of any discrepancies between the English and the Dutch text, the latter will prevail.

About ABP

ABP is the pension fund for employers and employees of government and educational institutions in the Netherlands. Building a good pension together - that is our mission. We believe in the power of collaboration: by making use of advantages of scale and sharing risks we can achieve a better result together. Our approximately three million participants are our clients and at the same time our principals. They are at the heart of our existence as a social non-profit organization. Together with them and with the approximately 3,600 affiliated employers, we are building the best pension services. Moreover, we are doing our part for a sustainable world by sustainably investing the pension contributions of our participants. Thanks to our size - ABP is the largest pension fund in the Netherlands and one of the largest funds in the world - this will help make a difference for future generations too.

At the end of 2019, ABP’s actual capital held amounted to €466 billion. The Executive Office, which is based in Heerlen and Amsterdam, has 43 employees (42 FTEs, at year-end 2019). The administration of the pension scheme is outsourced to APG.

Pensions in 2019
For the pension sector 2019 was an exciting year, in which a lot happened. ‘Pensions in 2019’ is therefore the theme of this annual report. In the special pages in the Board of Trustees' Report we ask a number of our stakeholders to say what pensions meant for them in the reporting year.

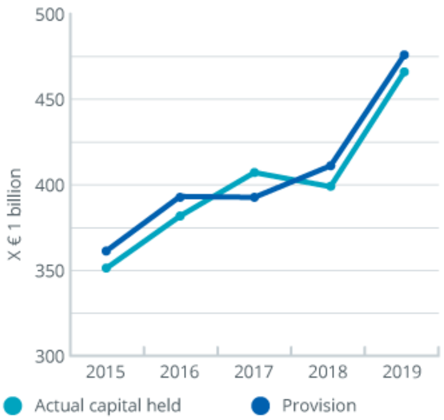
BRIEF SUMMARY

ABP in 2019

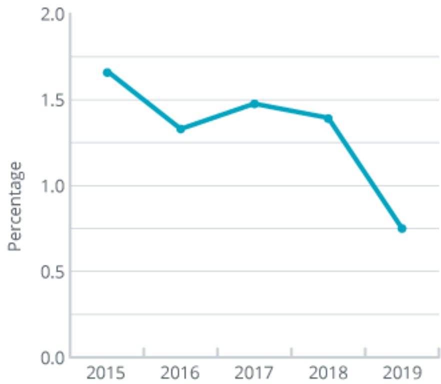
2019 in brief

Significant financial developments

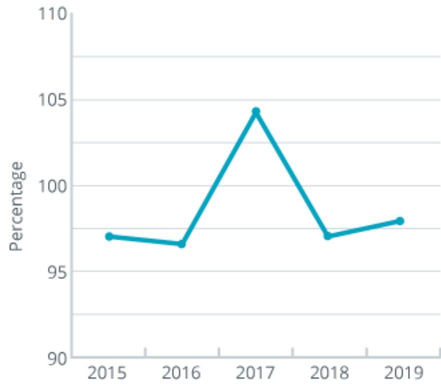
Provision, actual capital held



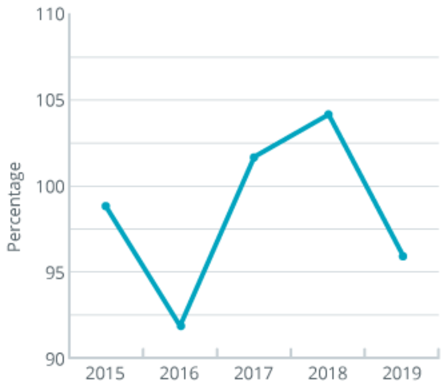
Interest



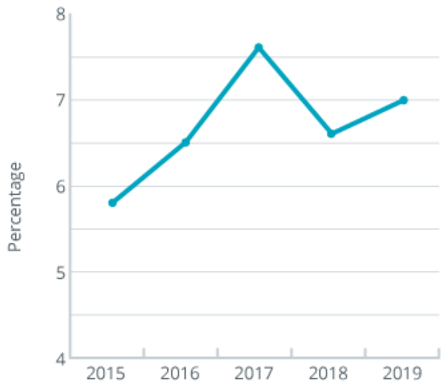
Funding ratio



Policy funding ratio



Average 15-year investment return

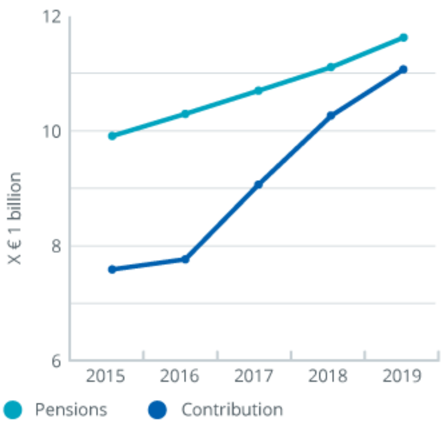


Annual return

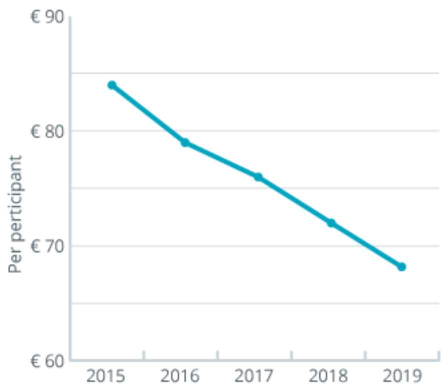
2019

16.8%

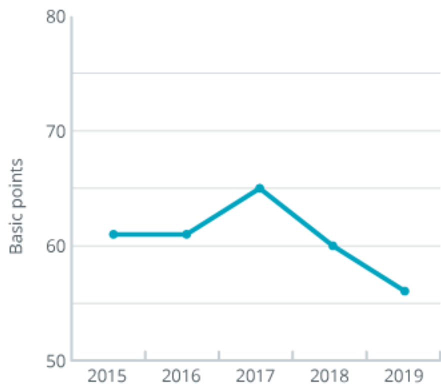
Contributions, pensions



Pension management costs



Asset management costs



Significant developments

Financial position under pressure

For the financial position of ABP 2019 was an intense and exciting year. The development of the funding ratio during the year was volatile, mainly because of the capricious movements in interest rates. The current funding ratio started 2019 at 97.1% and ended the year at 97.8%; the policy funding ratio fell from 103.8% to 95.8%. With the funding ratios at this level at the end of 2019 ABP did not have to reduce pensions in 2020, nor was it necessary to make use of the temporarily relaxed rules. The 16.8% return on investment was not enough to prevent yet more tension in the triangular balance among ambition, costs and certainty, not least because of the all-time record low interest rates. This further removed any prospect of an increase in pensions: missed indexation amounted to a maximum of 19.1% at the end of 2019. Meanwhile participants must take account of a real chance of reduction after 2020. ABP's available capital grew to €466 billion in 2019.

More in the chapter headed 'Our financial position'

Cost price of pensions rises

In 2019 we took the last step in the gradual contribution increases in accordance with the contribution policy determined in 2016. The Board of Trustees decided to keep the OP/NP (old age/surviving dependents' pension) contribution for 2020 at the same level as in 2019, with a discount rate of 2.8%. In 2021 the discount rate will be adjusted to a maximum of 2.4%, mainly because ABP has to take account of lower expected returns. One of the reasons for acting in this way is to give social partners time to act now that the cost price of pensions is showing a rising trend. This means that on the basis of the existing pension scheme, that is unless social partners bring about changes to it, participants must be prepared for an appreciable increase in contributions.

More in the chapter headed 'Building a good pension for three million participants'

Focus on the participant perspective: errors corrected

Increasingly intensive focus on the data of our pension administration brings to light errors that affect small and sometimes not so small groups of participants. During the reporting year a number of these errors were remedied. The revision and refund policy was also adjusted. At the same time ABP pro-actively alerted some 16,000 participants to their possible right to a disability pension and facilitated the application procedure for this.

More in the chapter headed 'Building a good pension for three million participants'

Sustainable and Responsible Investment Objectives attained

The objectives of the Sustainable and Responsible Investment policy 2015-2019 were attained. In 2019 the new policy was established, with objectives for the coming five-year period and ambitions for 2030 and 2050. This was done in close consultation with ABP's participants and other stakeholders. In the reporting year ABP was once again proclaimed the most sustainable pension fund in the Netherlands by VBDO, the Dutch Association of Investors for Sustainable Development.

More in the chapter headed 'How we invest pension assets'

Simplifying the pension scheme

Following a long and intensive process, agreement was reached on the simplified pension scheme for military personnel. This simplification will enable us to explain the scheme better to participants and make the administration less complex. A number of minor aspects of the average salary scheme for civilians were simplified in 2019 and further simplification remains high on the agenda.

More in the chapter headed 'Building a good pension for three million participants'

Elaboration of the pension contract

In June 2019 the social partners and the government reached agreement on the main features of the new pension contract. Employers, employees and government started work on further elaboration in the reporting year. There is still much uncertainty as to the consequences of this for ABP's pension scheme. What is clear in any case is that in the new system pensions will move more flexibly in line with financial-economic developments.

More in the chapter headed 'The world around us'

CHAPTER 1

Report of the board of trustees

Preface

Publication of this annual report finds us in the midst of the coronavirus crisis, which is having an unprecedented impact on our society and economy. Our special attention goes first of all to our senior citizens, the health-care professionals, educators, military personnel, police and all who stand in the front line. We react where necessary, but even in these times we keep an eye on the long term. For pensions are and remain a matter for the long term. The coronavirus crisis affects ABP too, but it is still too soon to be able to say exactly what it will mean for our participants' pensions.

At the end of 2019 the level of the funding ratio was such that pensions did not have to be reduced, but the fund's financial position remains worrying. We have seen a further increase in the tension among ABP's pension ambition, its cost price and what we can achieve for our participants. The indexation deficit also grew in 2019. We do not expect to be able to increase pensions in the coming years, and the chance of reduction remains real.

Contributions remain unchanged in 2020, but for 2021 the cost price of pensions will rise further. Our discussions of the pension scheme with social partners include attention to cost price and ambition.

A milestone was passed with the pension agreement. We see it as important that the new contract is better aligned with the personal situation of our participants and with the economic reality, so that we can increase pensions sooner if the economic situation is favorable. But we also need to reduce them if it is unfavorable. We are contributing to the elaboration of this agreement with our knowledge. This is also entirely consonant with our mission: building a good pension together.

It naturally stems from our mission that ABP aims to be the pension fund that participants and employers want to belong to. We therefore give participants and employers pride of place in providing our services. We are steadily getting better at this, but there are also some things that did not go well, sometimes affecting larger groups of participants. We regret this. Our starting point is and remains that every participant receives the pension that he or she is entitled to.

We took steps to simplify our very complex pension scheme in 2019, because in parts it is difficult to understand and administer. For example agreement was reached on the simplified pension scheme for military personnel. We must continue full steam ahead with the simplification of our scheme in 2020.

In order to give our participants greater insight into their own situation we had already launched the personal 'pension pot'. In 2019 a new instrument was added to this: 'Clear Overview and Insight', a tool to help participants with their financial planning. We cannot offer participants certainty, but we can offer them personal insight and support.

We closed the first Sustainable and Responsible Investment policy period in 2019. Surveys reveal that our participants find sustainable investment increasingly important, so we are very pleased to be able to say that all objectives set have been attained. The new policy established in 2019 has ambitious targets for 2025 and also looks beyond. For example by 2030 we aim to have no more investments in coal or oil sand and by 2050 we aim to be climate-neutral investors. With its new policy ABP aims to make a difference in three major worldwide transitions: climate change, shortage of raw materials and digitization, with respect for human rights as a precondition.

A word of thanks

In the first place I want to thank our participants and employers for their trust and for the reactions they give us with which we can improve ourselves. I should also like to thank our Accountability Body, which monitors us critically and gives us support and advice.

The Supervisory Board has had active and valuable input, among other things in strategic issues, the financial structure of the fund and risk management. Many thanks for this.

In 2019 the Board of Trustees took its leave of Joop van Lunteren, our doyen, who for over 13 years has brought his rich experience and great enthusiasm to bear in ABP's Board of Trustees. We owe him a great deal of thanks.

Many thanks also to Nicole Beuken, who has retired from her position as general manager of ABP's Executive Office after 33 years. She was an invaluable source of corporate memory and made an active contribution to the fund's new strategies and governance. She also made successful efforts to bring about improved cooperation among the major industry and sector pension funds.

I also wish to express thanks and appreciation to our employees of ABP and APG, who strive every day to serve the interests of our participants and employers as well as possible. And lastly on behalf of the Board of Trustees many thanks to the social partners and all others who have contributed in one way or another to ABP. We look forward to continuing to build a good pension together!

Corien Wortmann
Chair of the Board

Historical review

	2019	2018	2017	2016	2015
Total assets (A) (in € mln)	**465,619**	**398,971**	**408,838**	**381,816**	**351,397**
Retirement and surviving dependants' pensions	473,560	409,486	390,145	393,278	359,543
Incapacity pension	2,662	1,414	1,397	1,462	1,518
Flexible pension	-	-	-	-	5
Policyholders' risk	108	108	110	299	297
Provision for pension liabilities (B) (in € mln)	**476,330**	**411,008**	**391,652**	**395,039**	**361,363**
General reserve (C= A-B) (in € mln)	**-10,711**	**-12,037**	**17,186**	**-13,223**	**-9,966**
Funding ratio (A/B) (in %)	**97.8**	**97.1**	**104.4**	**96.7**	**97.2**
Discount rate as at year-end (in %) [1]	0.74	1.39	1.48	1.32	1.67
Policy funding ratio (in %)	**95.8**	**103.8**	**101.5**	**91.7**	**98.7**
Minimum capital requirement (+ 100)	104.2	104.2	104.2	104.2	104.2
Capital requirement (+ 100)	126.7	128.2	128.2	127.8	128.1
Real funding ratio (in %)	**77.5**	**84.9**	**82.8**	**75.5**	**80.6**
Future-proof indexation funding ratio (in %) [2]	**123.6**	**122.2**	**122.6**	**121.5**	**122.4**
Pension contributions (net) (in € mln)	**11,041**	**10,267**	**9,064**	**7,765**	**7,589**
Pensions (in € mln)	**11,597**	**11,110**	**10,699**	**10,296**	**9,911**

[1] On the basis of the nominal interest rate term structure published by De Nederlandsche Bank.
[2] This is based on the amended ambition and/or price indexation as at 1 January 2016.

	2019	2018	2017	2016	2015
Numbers (year-end)					
Participants	1,150,592	1,128,671	1,111,106	1,104,792	1,080,490
Former participants	954,702	952,476	946,097	933,126	941,586
Pensioners	910,741	886,529	868,454	850,385	834,529
Total	**3,016,035**	**2,967,676**	**2,925,657**	**2,888,303**	**2,856,605**
Affiliated employers/sub-employers	3,593	3,643	3,691	3,716	3,681
Employed by ABP	43	42	43	37	30
Employed by consolidated entities	2,939	3,152	3,186	3,221	3,413
Other information					
Contribution rate for retirement and surviving dependants' pensions in %	22.9	21.9	21.1	17.8	18.7
Contribution rate and recovery supplements	2.0	1.0	-	1.0	0.9
Contribution rate for incapacity pension (average) (in %)	0.5	0.5	0.4	0.4	0.4
Price indexation (in %) [3]	2.84	2.08	1.38	0.19	1.61
Indexation declared for coming year (in %)	0	0	0	0	0
Cumulative indexation arrears (in %) [4]	19.11	15.82	13.46	11.91	11.7
Asset management expenses in basis points	57	60	65	61	61
Pension administration cost definition per participant (CEM benchmark) (in €)	68	72	76	79	84
Service score (CEM max = 100) (5)	[6]	86	91	86	89
Satisfaction score, pension management (7)					
- participants	n/a	6.7	6.6	6.5	7
- pensioners	n/a	7.2	7.2	7.2	7.4
Net Promotor Score pension (NPS) (7)					
- New participant	-32.3	n/a	n/a	n/a	n/a
- Retiring	5.6	n/a	n/a	n/a	n/a
Z score	-1.0	0.7	0.9	0.5	1.4
Performance score (norm: > 0)	2.4	3.5	3.8	4.0	3.9
Return total (= direct + indirect, in %)	16.8	-2.3	7.6	9.5	2.7
Total return, 3-year average (in %)	7.1	4.8	6.5	8.8	7.7
Total return, 5-year average (in %)	6.7	6.2	8	9.2	8
Total return, 10-year average (in %)	8.4	8.7	6.5	6.1	6.2
Total return, 15-year average (in %)	7.0	6.6	7.6	6.5	5.8

[3] up to the end of 2015: contractual salary increase
[4] calculated from the introduction of the average salary scheme (2003)
[5] Figures for the period 2014-2017 retroactively adjusted due to change in CEM calculation method
[6] the service score 2019 will only become available after publication of the annual report
[7] As of 2019, customer satisfaction will be measured via NPS scores, see also the chapter "Building a good pension for 3 million participants"

The world around us

The financial markets had a strong dynamic in 2019. For ABP too it was a dynamic year. The Board of Trustees closely monitored developments and intervened actively together with the administrating organization, in order to adapt to them as well as possible. We go on to summarize the most salient developments affecting our most important target groups, participants and employers.

Developments in the economy and the financial markets

Economic news in 2019 was dominated by political shifts and associated uncertainty, such as the fierce trade war between the United States and China and the twice missed date of Brexit (the U.K.'s departure from the EU). Measures such as fixed trade tariffs and restrictions on technology and investments had an impact on international trade: the volume of world trade fell by 2%, whereas it had been growing at around 3% per year in the previous few years. Economic growth in the United States and the euro zone remained positive, but the pace of growth declined (in both regions, by around 0.6 pp). 2019 was also the year in which central banks returned to the fray. This had a positive influence on the investment climate, while the underlying economic growth weakened. Labor markets evolved positively in both the United States and Europe. The effect on wages was limited and upward pressure on global prices modest. In August 2019 global fears of a recession led to all-time low interest rates on the longer maturities. In the last quarter interest rates rose relatively strongly (by 0.4 pp), on account of the announcement of the "Phase 1" trade agreement between the U.S. and China. ABP expects lower returns of around 4% per year in the coming years. The cause is above all the low level of interest rates, which depresses bond yields.

The impact of the coronavirus crisis

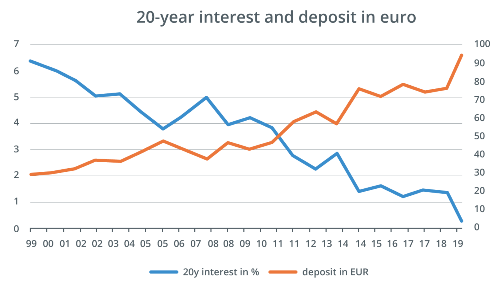
In the first few months of 2020 the coronavirus SARS-CoV-2 spread worldwide, with an unprecedented impact. World financial markets were also hit hard, putting pension funds' financial position under still further pressure. In the first quarter the funding ratio plummeted as equity markets turned red and interest rates also fell: a toxic mix for the financial position of pension funds. Society went into low gear to prevent further spread of the virus. For our participants and employers the fund's continuity of service is of great importance. ABP has adopted measures to make sure that pensions are paid out and that we are reachable for our participants. At the same time we are intensifying monitoring of risks on the financial markets, so that we can act if necessary and possible.

At the time of writing the financial markets are still turbulent and there is much uncertainty and disquiet in society. We cannot yet therefore indicate what the effects of the coronavirus crisis will be on our financial position and our participants' pensions at the end of the year. The financial position at that time will determine whether the fund has to take measures such as reducing pensions. We shall of course keep our participants and employers informed of any significant developments.

Financial position of pension funds under pressure

Interest rates in 2019 were lower than ever. As a result the discount rate published by De Nederlandsche Bank (DNB, the Dutch central bank), which pension funds must use to calculate their liabilities, also reached an all-time low. Many Dutch pension funds had problems with this in 2019.

As presented in the graph below a pension fund needed to withhold €29 in cash in 1999 in order to secure the future payments of € 100. On July 31, 2019 this amount had increased to €91.



Source: answer to questions from the Lower House, September 2, 2019, Ministry of Social Affairs website

These increased liabilities led to falling funding ratios, as a result of which the risk of having to reduce pensions increased. ABP warned participants of this several times during the year. The return on our investments was not able to offset this development; see also the chapter headed 'Our financial position'. At the end of November 2019 Minister Koolmees (Social Affairs and Employment) sent a letter to the Lower House in which he indicated that the rules for pension funds would be made more flexible for one year in order to create greater calm and clarity around pensions. ABP's funding ratio showed a rising trend in the last two months of 2019 and ended the year at 97.8%. This meant that ABP did not have to reduce pensions in 2020 and that it was not necessary to make use of the flexibilization announced by Minister Koolmees. Particularly for the social partners, covering substantial ground with the new pension contract is an ambitious undertaking. ABP offers its expertise and support.

Further elaboration of the new pension contract

In June 2019 the unions, employers' associations and the government reached agreement on the main features of the new pension contract. This was the starting signal for further elaborating the agreement: a steering committee of employers, employees and government has started work on this. The aim is to have the broad lines clear by the summer of 2020. In the second half of 2019 ABP made efforts together with other pension funds, administrators and experts to ensure effective elaboration of the pension agreement. Important changes in the new pension contract include its improved alignment with today's labor market, in which people change jobs more often, and the fact that pensions will more directly and thus more flexibly track economic circumstances. In our view that is easier for participants to understand than the current situation.

A survey conducted by Mercer showed that the current Dutch pension system is the best in the world. Every year the Global Pension Index publishes the ranking of the pension systems of 37 countries which together represent approximately two thirds of the world's population. Denmark and the Netherlands shared first place in 2019.

Sustainability - an important social theme

In the reporting year the theme of sustainability was more topical than ever; the subject regularly made front page news. It is striking that more and more young people are committed to conserving our planet. ABP knows from its own investigation that our participants also find sustainability ever more important. Against this backdrop ABP has closed the first five-year policy period of Sustainable and Responsible Investment. One of the most significant results is assets of €65.6 billion invested in United Nations Sustainable Development Goals (SDGs) at the end of 2019. To determine the policy for the next five years we held discussions with stakeholders, which resulted in a clear focus on three large-scale and important social transitions: climate change, shortage of raw materials and digitization, with respect for human rights as a precondition. The results and developments are commented on in the chapter headed 'How we invest pension assets' in this annual report, and more extensively in our Annual Report on Sustainable and Responsible Investment.

ABP was once again proclaimed the most sustainable pension fund in the Netherlands by VBDO, the Dutch Association of Investors for Sustainable Development. ABP scored 4.6 out of a maximum of 5 points. VBDO's annual benchmarking assesses the 50 biggest pension funds in the Netherlands, which together account for 92% of managed assets, with a total value of more than €1.23 trillion.

Opportunities and threats from new technology

For many years now ABP and APG have concentrated on the optimal use of new technology, with structural investments in systems, manpower and time. New technology and improved methods of data analysis give us faster and better insight into the large volumes of data and enable us to detect and resolve possible inaccuracies faster and to improve the quality of the administration. In 2019 the focus was on improving data quality, resolving historical quality issues and controlling incoming data flows from other data providers. More on the results of this can be found in the chapter headed 'Building a good pension for three million participants'.

In 2019 the importance of digital security in our society was stressed by a large number of external threats and incidents, such as the increase in ransomware. ABP and APG have the securing and continuity of participants' and other parties' data as one of their top priorities. In 2019 APG took part in an extensive cyber-security test for the financial sector, initiated and facilitated by DNB. The test showed that thanks to the preventive, detective and reactive cyber-security and information security measures implemented we are up to speed with the rest of the financial sector. Points for improvement were directly incorporated into our policy and will therefore be tackled structurally.

Fieke van der Lecq, professor of Pension Markets at the Vrije Universiteit of Amsterdam

'It's important for pensions to be doubly explicable in order to gain traction'

Prof. Dr. Fieke van der Lecq is professor of Pension Markets at the Vrije Universiteit of Amsterdam. For her 2019 was an interesting year, in which a lot happened in the Dutch pension sector (and beyond). This went further than just reaching agreement on the pension contract, on which she also collaborated as an independent ('crown') member of the SER (Social and Economic Council).

Fieke van der Lecq is involved with pensions in a number of different capacities. As well as being a professor, involved in teaching and research, she is a member of the Occupational Pensions Stakeholder Group of the European Insurance and Occupational Pensions Authority EIOPA, the EU supervisor for pensions and insurance. She holds several board and advisory positions, writes articles and gives lectures. 'For me there were three salient developments in 2019 in the Dutch pension sector. First we saw that sustainable investment is now really taking off. I find that important, not only because participants want it, but also because all pension funds together have considerable impact and can

A good pension and sustainability are fortunately proving more and more often to go hand in hand

contribute to the generations that follow us having a livable world. For example steps were taken in the sector-wide IMVB (International Socially Responsible Investment) covenant facilitated by the SER. A good pension and sustainability are fortunately proving more and more often to go hand in hand.'

As the second development Van der Lecq mentions the pension agreement. 'A negotiated agreement has been reached and now work is being done on more detailed elaboration. What I like about it is that it does away with the average system for accumulating entitlements and that age-dependent investment becomes possible. That's good for making pensions doubly explicable: the new pension must be easy for participants to understand and it must be acceptable. As far as I'm concerned, this quality of being doubly explicable is the conditio sine qua non for giving the new pension contract real traction.'

Rights management is becoming a hot topic

'The third development is the change in the administration chain,' she continues. 'Previously much emphasis was placed on the asset management side of pensions, but now we're seeing this shift toward rights management. The regulations for administration are getting stricter and 'new' players specializing in IT and administration are taking advantage of this. This will undoubtedly lead to shifts in that market, and this in turn will have repercussions for pension results. Interesting developments, which I shall be following closely in the coming years.'

‘For me there were three salient developments in 2019’

Mission, vision and strategy

In the reporting year we definitively established our strategy for the coming years and further elaborated it. We use KPIs to make the attainment of our targets concrete and measurable. Progress was made on a number of partial strategies, but there were also significant points for attention.

Our mission

Building a good pension together is ABP's mission. We believe in the power of collectivity and solidarity, both for making best use of advantages of scale and for sharing good fortune and adversity. The three million participants accruing pensions with us are our clients and at the same time our principals. Together with them and the roughly 3,600 affiliated employers, we are building a good pension service. With personal insight and an action perspective on important junctures in life, which often also mean a moment of choice for the pension.

For realizing our mission there are there core values that are crucial:

- We are engaged with each and every participant;
- We are experts;
- We work sustainably.

These core values are anchored in our annual plans and policy documents.

Vision and strategic objectives

Our ultimate goal is for participants and employers to be eager to join ABP. We aim to achieve this by:

- building good services together with participants and employers;
- making pension an attractive benefit together with the social partners;
- building a good pension for the future together with society.

Mission, vision and strategic objectives come together in our strategic roadmap.

Roadmap ABP

Building a good pension together:
Participants & employers want to be with ABP

A Good services

1 Our **pension management** (administration and communication) focuses on the experience of participants and employers

2 Our **asset management** achieves the best possiblesustainable and and responsible returns

B An attractive scheme

3 Our **pension scheme** is simple, manageable and explicable

4 Our **financial structure** strikes a balance between contributions, security and ambition

C Good pensions for the future

5 We are committed to realizing a good **pension system** in the Netherlands

6 We are **the pension experts,** also in terms of pension innovation

D Solid foundation

7 We have a **professional Board of Trustees** with a broad support base
8 We are in control of **outsourced activities** to APG
9 Our **internal corporate management** is in order

Progress in 2019

In the reporting year progress was made on most of the partial strategies, but there were also some significant points for attention. These results and points for attention are more extensively commented on in the following chapters.

Significant results 2019

Result	Notes	Part of strategy
Revision and refund policy adjusted	As a result of discovered mistakes in our administration ABP has adjusted the revision and refund policy. based on the values that we have defined for our participants,	1 and 3
pro-actively alerted participants AOP	Thanks to upgraded data-analytics we discovered that approx 16,000 participants have a possible right on a disability pension but did not apply for it yet, The application is simplified,	1 and 3
Clear Overview and insight	In order to supply our participants with more insight and perspective we performed a pilot in 2019 with a new instrument for financial planning: Clear overview and Insight,	1
New process complaints	The new process for complaints is more transparent. easier and accesible,	1, 8 and 9
Sustainable and Responsible Investment policy 2020-2024 established	In cooperation with our participants and stakeholders we defined a new policy for Sustainable en Responsible Investments,	2
Agreement on pensionscheme military personnel	After a long and intense period an agreement was reached in 2019 on simplification of the pensionscheme for military personnel,	1 and 3
Integrated risk reporting has been implemented	Our risk management has improved thanks to the integrated approach and reporting on risk we have to handle,	7, 8 and 9
Contribution to on the new pension contract	ABP has been actively contributing to the further development of the new pension contract,	5 and 6

Significant actions

Action	Notes	Part of strategy
Customer satisfaction	The negative NPS-scores are down on our expectations	Mission
Financial position	In 2019 the financial position of ABP deteriorated, Because of this the missed indexation has increased,	1, 2, 3 and 4
Structural improvements in correcting administrative errors	The improved insight in administration will result in the detection of more errors, We will secure the process improvements of the lessons learned from 2019,	1, 3, 7 and 9
Simplification of the average salary scheme	In 2019 the simplification of the average salary scheme did not meet our ambition, This is an important attention point for 2020; simplification of communication is part of this,	3 and 9
Transparent inclusion policy on investments	In 2019 we made steps in making our inclusion policy more transparent, Nevertheless this can be improved en we will continue to work on this,	1 and 6
Improvement on efficiency in asset management	Because of the fact that asset management involves relative high costs we have started the transition to insource the asset management to APG where this can be achieved, The steps we made in 2019 are a good starting point to build further on this strategy,	2 and 8
Necessaty for a new pensionscheme	ABP will continue to strive for a fit and as good as possible pensionscheme for our participants,	4, 5 and 6

As well as the Participant's Compass, the Employer's Compass also came into use
2019 was the first full calendar year in which we used the Participant's Compass. This compass is intended as a practical tool for both ABP and APG to help them keep focused as much as possible on the participant despite all the everyday distractions. In practice the Participant's Compass also makes for alignment of ABP and APG. In 2019 an Employer's Compass was introduced on the same basis, in close consultation with employers. Both compasses are being used and applied more and more. And yet making their effect clearly visible to participants and employers remains a challenge. Certainly not everything is going well yet, as we observed once again in 2019. However we also use these two compasses to evaluate things that go wrong, to be able to translate the lessons learned into structural improvements for our two most important target groups.

Our financial position

In the reporting year ABP's financial position was the focus of constant attention by the Board of Trustees. The current funding ratio started 2019 at 97.1% and ended the year at 97.8%. The policy funding ratio fell from 103.8% to 95.8%. Although ABP does not have to reduce pensions in 2020, the fund's financial position remains worrying.

Tension in the 'pension triangle' increases further

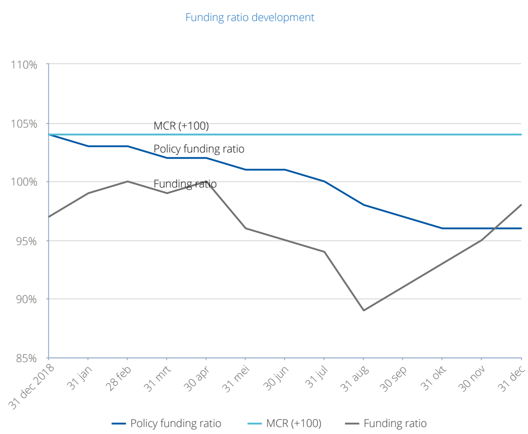
With the grim economic circumstances and their effects on the fund's financial position, 2019 was a tense year for ABP. The tension in the 'pension triangle' - ambition (the scheme) - costs (contributions) - certainty (risks) - increased further in the reporting year. As regards ambition, the chance of being able to increase pensions receded further and the indexation deficit again grew. As far as costs are concerned, the current contributions are too low in relation to the low interest rates, the returns we expect to be able to obtain in the future and the ambition for the scheme. As for certainty, the risk that we shall have to reduce pensions increased again. In 2019 ABP issued multiple communications, directly and through the media, to inform participants of the important developments around the fund's financial position and the possible consequences for pensions. In the social debate about the new pension contract, in which we explicitly put the interests of our participants first, we stress that it is incomprehensible to our participants that with the size of our assets and the return on investment obtained we are unable to increase pensions and that there is a real chance that we may have to reduce them in the future. The financial position and the economic outlook at the beginning of 2020 are cause for concern.

Fluctuating current funding ratio

ABP obtained a return on investment of 16.8% in 2019, equivalent to growth in assets of €67 billion. (This result is further commented on in the chapter headed 'How we invest pension assets'). At the same time interest rates continued to fall, particularly in the summer period. In the fourth quarter there was something of a recovery, with the actual year-end funding ratio finally being slightly higher than the year before: 97.8% (year-end 2018: 97.1%).

The policy funding ratio (the average of the current funding ratios over 12 months) fell from 103.8% at the beginning of 2019 to 95.8% at December 31, 2019. The recovery of the current funding ratio in the fourth quarter was not enough to offset the sharp fall in the summer due to the low interest rates.

The figure hereunder shows the development of the current funding ratio and the policy funding ratio compared with the minimum capital requirement (MCR) of 104.2% from the end of December 2018 to the end of December 2019. This shows that the MCR level of 104.2% was not reached at year-end 2019. This means that pension reduction in 2021 is a real option (see also the explanation later in this chapter). The required capital is 126.7%.



The following table shows which factors contributed to the change in the current funding ratio.

Funding ratio development

in %

	2019	2018
Funding ratio at previous year-end	97.1	104.4
Contribution vs accrual	-0.5	-0.8
Change in the interest rate term structure	-13.1	-4.1
Return on investments	16.4	-2.3
Interest added to the liabilities	0.2	0.3
Update of actuarial assumptions on liabilities	0.1	-0.6
Other	-2.4	0.2
Funding ratio as at year-end	**97.8**	**97.1**

The most important influencing factors:

- on the basis of the interest rate term structure, contributions received were insufficient to cover the entitlements newly accrued in 2019, as a result of which the funding ratio fell by 0.5 percentage points;
- interest rates fell sharply, resulting in an increase in the provision and leading in turn to a fall of 13.1 pp in the funding ratio;
- the positive investment result increased the funding ratio by 16.4 pp;
- other movements include the result on payments of benefits, the result on actuarial assumptions and cross effects.

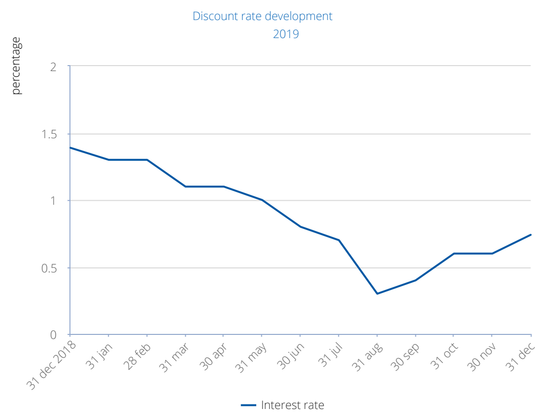
Policy funding ratio

At the end of 2019 the policy funding ratio stood at 95.8% (2018: 103.8%). The funding ratio above which the annual increase in pensions could have been granted in full amounted to 123.6%. The real policy funding ratio fell from 84.9% in 2018 to 77.5% in 2019.

Development of the discount rate

In order to value the pension liabilities, ABP has to use the interest rate term structure published by DNB. At the end of 2019 this amounted to 0.74% (end of 2018: 1.39%). An adjustment is applied to the market yield curve for maturities over 20 years. This adjustment ensures that interest rates for long maturities gradually move towards a historic average, the UFR (Ultimate Forward Rate). The UFR was 2.1% at year-end 2019 (year-end 2018: 2.3%). Since the UFR is based on a long-term average and interest rates have fallen in recent years, this rate will decrease further in the future. At present the UFR method leads to a higher discount rate, which results in lower liabilities, which in itself has the effect of increasing the funding ratio.

The figure hereunder shows the development of the actual discount rate.



No increase in pensions

The Board of Trustees has established a policy for pension increases, using the legal requirements as demarcation. From a policy funding ratio of 110% ABP may gradually increase pensions, at around 123.6% we can increase them by the annual inflation rate in accordance with the ambition, and from around 127% increases can also be retroactive. This applies to accumulated entitlements of former participants, pensioners and active participants. The policy funding ratio at the reference date in the reporting year (October 31, 2019) was 96.3%. This means that pensions could not be increased in 2019. The missed increase amounted to a maximum of 19.1% at year-end 2019. Since the crisis in 2008 ABP has not been able to allow pensions to grow in line with prices (with the exception of 2010). Nor do we expect to be able to increase pensions for the coming years.

Important mid-term review

In 2019 a mid-term review was carried out of the three-yearly ALM study performed in 2018. On the basis of this routine mid-term review the Board of Trustees concluded that the tension in the 'pension triangle' had increased to the extent where action was necessary. There were three 'knobs' that could be turned: the investment policy (including interest rate hedging), contributions and ambition; the social partners decide on these last two. Against the backdrop of low interest rates, adapting the investment policy would not bring attainment of the long-term ambition any closer and was therefore not an option. The Board of Trustees has made a conscious choice to continue with the premium policy of 2019 in 2020; see also the explanation in the chapter headed 'Building a good pension for three million participants'.

No pension reduction in 2020

Since the current funding ratio came to 97.8% at the end of December (above the critical threshold of 95%), there will be no pension reduction in 2020.

Recovery plans in 2019 and 2020

In the spring of 2019 ABP submitted a recovery plan; this was obligatory because at the end of 2018 the policy funding ratio was below the required level of approximately 128%. The purpose of a recovery plan is to check whether the autonomous recovery power of the fund is sufficient to bring the policy funding ratio back to the required level within the ten-year recovery term. If this is not the case, pension cuts may be required in order to allow the fund to recover to the required level within those ten years. According to the recovery plan submitted in 2019, the policy funding ratio will rise to a level just above the required funding ratio during the recovery term. On this basis the Board of Trustees concluded that it was not necessary to take supplementary measures in 2019. At the end of 2019 the policy funding ratio was still below the required level. This means that a new recovery plan had to be submitted by April 1, 2020.
In addition to the situation in which the actual funding ratio is below the critical funding ratio, pension funds must also carry out a reduction if at six consecutive year-ends the policy funding ratio is lower than 104.2%; for ABP the critical date is December 31, 2020. To avoid having to carry out a reduction, the policy funding ratio or the actual funding ratio at that date must be above 104.2%. For 2021 and the following years the chance of reduction thus remains real in any case.

Feasibility test 2018 and 2019

ABP conducted its regular annual feasibility test in 2019 based on the situation at year-end 2018. The Board of Trustees uses this test to see whether the pension results (both in the neutral and the adverse scenario) remain above the threshold agreed with the social partners. The calculation used the current funding ratio at year-end 2018. ABP passed the annual feasibility test in that the outcomes were within the limits established by the fund. ABP will conduct another feasibility test before July 1, 2020, using the financial position at year-end 2019 as a starting point.

Financial crisis plan activated

In view of the fund's impaired financial position the Financial Crisis Plan was activated in 2019. This is an instrument for mitigating strategic and financial risks. This is commented on more extensively in the chapter headed 'Risk management'.

Looking ahead to 2020

Financial position badly affected at the beginning of 2020

Since the balance sheet date ABP's actual funding ratio has again fallen sharply. Stock markets worldwide have been hard hit in the first few months of 2020 by the impact of the coronavirus. We see this in our investments too. So there is certainly cause for concern, although as a pension fund we have a long-term horizon for investments. The future is not only uncertain as regards the financial position of the fund, but also because the new pension contract has not yet been fully worked out. We are optimistic as to the chances of the new contract offering prospects in due course for our participants. At the same time we know that the current framework may compel us to reduce pension accumulation and payments. On December 31, 2020 we will know whether pensions have to be reduced in 2021, but we alert participants now to the fact that these circumstances are hitting us hard and that as a result the chance of reduction in 2021 is real. The current financial position can be found on our website.

In view of these exceptional circumstances, as Board of Trustees, we have decided to bring forward the ALM study. This will now be carried out in 2020, among other things in order to assess the effects of the coronavirus crisis.

Development of contributions after 2020

In the contribution decision for 2020, passed in November 2019, the Board of Trustees decided to reduce the discount rate from 2021 from 2.8% to a maximum of 2.4%. In January 2020 the Board of Trustees passed a multi-year decision on the discount rate, with 2.0% as the new anchor point. This level will be reached progressively over three years: from 2.4% in 2021, to 2.2% in 2022 and finally 2.0% from 2023. The reduction of the discount rate is directly related to ABP's lower expected future returns. We took this decision in January 2020, among other things so as to give the social partners the opportunity of possibly adapting the pension scheme to it. In November 2020 the Board of Trustees will establish the definitive contribution for 2021, after further consultation with the social partners and advice from the Accountability Body.

Building a good pension for three million participants

Building a good pension means that we place participants and employers center-stage in providing our services. In 2019 we carried out some improvements in this respect. The contribution policy for 2020 and thereafter was an extra important agenda item for the Board of Trustees in the reporting year in view of the increased tension in the 'pension triangle' - ambition/costs/certainty. Also in 2019 following a long drawn-out process, agreement was reached on the simplification of the pension scheme for military personnel.

Developments in the contribution policy

Multi-year contribution decision continued

In 2019 the contribution policy continued to be implemented as established in 2016. The starting point at that time was a basic contribution based on a real return of 2.8%. Since this would have involved a sharp increase in contributions in 2017, it was decided to spread the increase over three years. In 2019 the last step was taken in the three-year phased increase in the contribution. The contribution supplement was increased by 1 percentage point to 2%. The total contribution added up to 24.9% for the average wage scheme (civilians).

The table alongside presents the components of the actual contributions, 'damped', cost-covering contributions and undamped cost-covering contributions for 2019. The link to the contribution income for the financial year is explained in the note on contributions (net) in the company financial statements.

Composition of contributions:	Actual	Damped. cost-covering contributions	Undamped. cost-covering contributions
a. portion for vested liabilities	4,613	4,613	12,563
b. pension administration cost markup	105	105	105
c. solvency margin markup	1,287	1,287	3,505
d. portion for contingent liabilities (indexation)	1,388	1,388	-
e. markups/markdowns on the damped, cost-covering contributions	2,758	-	-
Total amount of contributions 2019	**10,151**	**7,393**	**16,173**
Total amount of contributions 2018	8,934	7,136	14,676

Contribution for 2020 established

In November 2019 the Board of Trustees decided to continue the contribution policy for another year in 2020. The contribution for retirement and surviving dependents' pension remains, including supplements, at the same level as in 2019: 24.9%. ABP's Accountability Body issued a negative opinion on the contribution and indexation resolution; a minority was positive. The Board of Trustees and the Accountability Body agreed on the need to take steps in the coming years in view of the rising cost price, but a majority of the Accountability Body already wanted to take the first step in 2020.

The contribution breakdown for the average-pay scheme for 2020 (and 2019) is presented in the table.

Contributions

as a percentage of pensionable salary (salary less contribution threshold)

	2020	2019
Contribution rate for retirement and surviving dependents' pensions	22.4	22.9
Contribution supplement on the contribution rate for retirement and surviving dependents' pensions	2.5	2.0
Contribution rate for retirement and surviving dependents' pensions, including supplements	24.9	24.9
- payable by employers	17.4	17.4
- payable by employees	7.5	7.5
Contribution rate for surviving dependents' pension top-up (ANW)		-
- payable by employers		-
- payable by employees		-
Sector-based contribution for incapacity pension (average) (1)	0.9	0.5
- average payable by employers	0.6	0.3
- average payable by employees	0.3	0.1
- Subtotal expressed as contribution base (average)	**25.7**	**25.4**
- Subtotal expressed as a percentage of salary (average)	**19.0**	**19.0**
Purchase of conditional retirement and surviving dependents' pension rights	2.6	2.6
- payable by employers	2.6	2.6
- payable by employees	-	-
- Total as percentage of salary (average)	**21.6**	**21.6**
The state pension offsets for the years in question amount to (in €):		
for group and individual schemes	14,200	13,800
for sector-specific schemes	21,400	20,100

(1) For the purpose of this overview, the Incapacity/disability pension (AOP) contribution has been converted from the AOP state pension contribution threshold to the retirement benefit/surviving dependants' benefit (OP/NP) contribution threshold.

Contribution funding ratio

The contribution funding ratio started 2019 at 80%. This reflects the relationship between the contribution paid in a year and the value of the pension accrued during that year, which led to an increase in the provision for pension liabilities. The contribution to be paid in is based on a real return of 2.8%. The pension accumulation is valued on the basis of the prescribed interest rate term structure; this ensures that the contribution funding ratio is interest rate sensitive. As a result of falling interest rates the contribution funding ratio deteriorated during the year.

Parameters Committee
The Board of Trustees establishes the multi-year contribution policy on the basis of scenarios with expectations as to returns and interest rates. The assumptions that pension funds may make regarding expected returns and inflation are covered by rules. Every five years the Parameters Committee looks into these assumptions, which are directly related to economic developments. As a result of this investigation, in 2019 the expected return and inflation were revised downward. The Parameters Committee also investigated the interest rate that pension funds use to value their liabilities: the interest rate term structure or calculation rate. For long-term liabilities pension funds make use of the Ultimate Forward Rate (UFR). The Parameters Committee has proposed a new method for determining the UFR. If this new method is introduced, it will have a negative effect on our funding ratio.

Simplification of the pension scheme

Agreement on scheme for military personnel

Following an intensive process that had gone on since 2015, in 2019 agreement was reached on the simplification of the pension scheme for military personnel. The result is an average salary-based scheme similar to that in place for civilians with a number of specific components for military personnel. The pension scheme for military personnel was part of a wider agreement on labor conditions concluded by the Ministry of Defense. The Board of Trustees had pressed for adjustment of this scheme in order to make it easier to explain and more comprehensible to participants and to reduce the error sensitivity of the administration. The agreed simplified scheme came into effect retroactively from January 1, 2019. In the reporting year there was one ongoing lawsuit between ABP and the trade unions. ABP lodged an appeal against the court's ruling. In the end the social partners reached agreement on a new pension scheme and in consultation with the trade unions the appeal was withdrawn.

Simplification necessary

Simplification of the average wage scheme is an important action point of the Board of Trustees. In the reporting year some steps were taken in that direction but they fell short of our ambition. These simplifications came into effect from January 1, 2020:

- the various voluntary pension savings products were combined into a single new savings product from 2020;
- the possibility of choosing the desired amount of the partner's pension that is exchanged for retirement pension or vice versa has been simplified. From 2020 participants can choose to exchange in full or not at all;
- the conditions of transfer have been rewritten and made more accessible in the interests of ease of explanation and comprehensibility.

In 2020 we will continue to work on the simplifications considered necessary, in consultation with the social partners, who have to decide on a large number of them. Our aim is to carry out as many simplifications as possible before the new pension contract comes into force.

Errors in administration remedied

On the basis of data investigation, ABP concluded that a group of participants who were entitled to the Dutch state pension (AOW) were not receiving any supplements to their benefits although they were entitled to them. Because of concurrent years of service, participants who are each other's partners and who both accumulated pensions before 1995 with ABP are entitled to a supplement. These participants receive the supplement to their pension as soon as they are both entitled to the AOW. It transpired that the monthly supplement had been paid up to the end of 2018 to over 245,000 participants but that it had mistakenly not been paid to a further 6,600 participants. This was corrected for 2,200 participants (1,100 couples) in 2019 and for the remainder it will be corrected in 2020. ABP participants with a partner who accumulated pension rights with another fund before 1995 can also apply for this supplement once they reach state pension age providing they give ABP the correct information on their partner's pension accumulation.

An error in the SVB administrative data led to a number of participants receiving too much pension in 2019 and a number too little. Based on the policy in force at the time, the Board of Trustees decided to pay the missing portions of the underpaid pensions and to request reimbursement of the excess amounts paid. A total of 1,187 participants were involved. In 632 cases the correction led to an increase in pension payments. For 555 participants the pension payment was reduced. At first they were also required to pay back the excess amounts received in accordance with the policy then in place. This led to great unrest in this group. The Board of Trustees then decided to assess the policy in place; based on this assessment the revision and refund policy was amended. All participants concerned have been personally informed of this.

Revision and refund policy made more flexible

Partly as a result of the mistakes made and the unrest that this caused among participants, in 2019 ABP evaluated and amended the revision and refund policy. The Board of Trustees decided to make the policy more flexible in line with the strategy and the Participant's Compass and so create more space for the interests of individual participants. One of the most important changes is the adjustment of the term for reimbursements. Previously participants had to reimburse excess pensions paid by ABP over a period going back up to five years. This met with incomprehension on the part of participants, since the event giving rise to the reimbursement might be far in the past. ABP took this signal seriously and has shortened this period to a maximum of nine months. This reduces the financial consequences for participants and makes it easier for them to understand the connection between the adjusted benefits and the change in their personal situation.
Another important part of the new policy is that participants now have three months before the reimbursement term comes into effect. This gives them time to prepare and possibly to agree another payment arrangement with ABP.
If participants have received too little, the nine-month period does not apply: ABP pays the shortfall without limitation. This is unchanged relative to the old policy. The new policy came into effect on August 1, 2019.

Participants actively approached for AOP

Based on new insights resulting from improvements in our data analysis, ABP discovered that a group of disabled participants were making no use of the disability pension or the contribution-free pension accumulation while possibly being entitled to them. In 2019 ABP pro-actively approached these participants (approximately 16,000). By the end of 2019 approximately 3,300 advance payments had been made; we increased the surviving dependent's pension of some 200 participants because their deceased partner or ex-partner had been entitled to a disability pension; around 400 participants receive a bigger retirement pension including definitively recognized disability pension. We helped approximately 150 participants as a priority on account of their personal situation. This action led to an increase in liabilities in the reporting year.
At the same time the application process has been made clearer and simpler for participants. This can be found inter alia on ABP's website.

Use of new data technology: more errors come to light

Thanks to new technology ABP is better equipped to detect and resolve inaccuracies in the pension administration. This improves the quality of the administration of the pension scheme. The advantage is that with the help of improved analysis techniques we can check faster and more thoroughly whether an error detected in a small group of participants also affects other participants. In other fields too, having a better grip on data is proving highly beneficial. In carrying out our pension administration we often have to rely on data from other parties such as the UWV and the SVB. Thanks to the improvements that ABP has made to the data coupling with these bodies, we have a better insight into possible mismatches between the data provided by these parties and the processing in our administration. In the event of any mismatch we are able to undertake action faster with our participants, employers and partners. ABP and APG work closely together in this area, in the Grip on Data program.

Regular pension communication

Sending of UPOs (Uniform Pension Statements)

To inform participants of the status of their pension, ABP sends out the legally established UPO on an annual basis. Rules apply to this: all UPOs must be sent by September 30 of each year. At September 30, 2019 ABP had sent 99.5% of the UPOs for its active participants. Those for participants with net pensions were still pending dispatch.

There were also 743 participants for whom we were unable to guarantee the completeness of the available data, and in these cases we made the conscious choice not to provide them with a UPO. In the case of the Ministry of Defense, Statements had yet to be sent to reservists and participants with concurrent pensions. At December 31, 2019 UPOs had been sent to 99.9% of the group of around 1.1 million participants; the total number of unsent UPOs at that date was 1,269 (2018: 1,048). These participants were informed by letter in January 2020; questions are answered personally.
The UPO for military personnel was adapted to the simplified pension scheme in 2019. In 2020 the UPO will be extended with three scenarios. This is a legal obligation. Participants will see adverse, average and optimistic scenarios for their retirement pension.

Aside from UPOs, participants can view their pension rights on Mijnpensioenoverzicht.nl (MPO, formerly the Pensions Register). ABP supplies the information for MPO. Thanks to the live connection participants can consult a real-time overview of their pension data and make calculations based on this. At the 2019 year-end, 99.9% of our participants had access to MPO (year-end 2018: 99.5%). The three scenarios, legally obligatory from 2020 for the UPO, have been incorporated into MPO since October 2019. Here participants can already see in the three scenarios how their pension may evolve.

Sending of GUPOs (Uniform Pension Statements for Pensioners)

For pensioners, the deadline for sending annual statements is December 31. At year-end 2019, we had sent out 99.8% (839,232) of the GUPOs (2018: 99.9%). As in previous years, the target of 100% was not attained because in a number of cases necessary information was missing. For example the surviving dependents' pension forecast was missing from approximately 250,000 GUPOs because of the transition to a new system. We are working to resolve this.

Sending of SUPOs ('Sleepers'' Uniform Pension Statements)

The Pension Act obliges pension administrators to make an annual UPO available to former participants; once every five years the SUPO must be provided digitally or in writing. ABP did this in 2019. A realistic KPI agreement was made with APG: by December 31, 2019, 99.8% of former participants must have received a SUPO or have had it made available to them via MijnABP. At December 31, 2019 the percentage achieved stood at 99.2%, so the rule was not fully complied with. This is the result of problems with data of two specific groups (participants who have swapped between retirement and surviving dependent's pension, and participants whose Part-time Factor/Basis of Calculation = 0.0). These problems will be remedied in 2020. Former participants so requesting have received manually prepared SUPOs.

Value transfers out

In 2019 ABP had to bring a halt to value transfers out because of the rules concerning the policy funding ratio. In order for value transfers to be allowed, the policy funding ratios of both pension funds concerned must be 100% or higher. For many funds in the current market circumstances this was not the case, and as a result the sector is largely closed for value transfers.

Small pensions

A pension is regarded as 'small' if at the time of ending the participation in the pension scheme it is below the legal surrender threshold on an annual basis. In 2019 this threshold was €484.09 gross per year. Pension administrators may make use of the legal possibility of transferring small pensions to the pension administrator with which the former participant accumulates pension rights. ABP makes use of this possibility, but participants may also opt to leave their small pensions with ABP. The value transfer of these small pensions is not dependent on the policy funding ratio.

Insight and perspective for action are becoming more important

Personal 'Pension Pot' wins award

One of the key points in our placing participants center-stage is that we want to give them greater insight into their pensions and offer them a perspective for action. In view of the new pension contract, this will become even more important. To this end in 2018 we developed, among other things, the Personal 'Pension Pot', which participants can view via MijnABP. In 2019 the Personal Pension Pot was distinguished with an award from the trade journal Pensioen Pro.

New: Clear Overview & Insight

In the reporting year a pilot scheme was run with the new application 'Clear Overview & Insight' (CO&I). CO&I is an instrument for financial planning, developed to help participants obtain insight into what they have now and what they will need later. CO&I offers perspective for action and ability to make choices by throwing light on the effect of those choices. In 2019 the demonstration version was further developed and a pilot scheme was carried out with 35,000 participants. An ample majority of this group indicated that the instrument helped them with making choices and showed what they could do as participants to influence their financial situation. Starting at the end of 2019 the new instrument is being offered to groups of participants in phases.

What do our participants think?

In 2019 we conducted a survey to find out how participants perceive their communication and contact with ABP. Aspects they perceive as positive are service-mindedness and helpfulness. Critical notes were sounded on the fact that several communications are sometimes necessary to obtain an answer and on calculations that raise queries. This feedback helps us to adjust the standard correspondence and to fine-tune the coaching of Customer Contact Center and pension administration employees. It also provides important information for improving the participant experience in processes such as retirement and becoming a new ABP participant.

This past year the Board of Trustees also sought small-scale, more in-depth dialogue. For example we held conversations with pensioners in lunch gatherings and ‘kitchen table chats'. Subjects that came up related above all to our inability to increase pensions, the indexation deficit and ABP’s policy on sustainable and responsible investment. The Board of Trustees finds these conversations valuable and is grateful to participants for their openness and personal input. These conversations help us to focus on the messages to which we need to give more prominence in our own communication, but also for example in the social debate about the transition to the new pension contract.

The Board of Trustees also spoke with participants at trade fairs and congresses, for example at the Education Fair and at pension meetings of senior citizens’ associations and trade unions. We not only gave presentations on ABP, but above all we also listened to participants’ concerns and answered their questions.

Customer satisfaction in figures

With the establishment of the strategic roadmap and the Participant’s Compass and Employer’s Compass that derive from it, ABP has gone from measuring customer satisfaction with a number of mainly pension-related processes to measuring customer loyalty, one of ABP’s strategic goals. Before, we used to ask participants and employers to assign a numerical score to the provision of our services. Starting in 2019 we now use the NPS (Net Promoter Score). This involves their being asked, after using a process such as becoming a new participant or taking retirement, or a channel such as the website, MijnABP or employers’ relationship management, to what extent they would choose ABP on a scale of 1 to 10. The NPS is also one of the KPIs forming part of the SLAs that we have concluded with APG. The various processes and channels for which we measure this score will be further expanded in the coming years. The switch to this way of measuring means that the figures for 2019 are not directly comparable with those of previous years. A trend will start to emerge from the 2020 measurement on.

The table indicates that the more personal the provision of service, the higher the NPS. This applies equally to participants (telephone contact) and employers (Relationship Management). We take these findings into account in applying the Participant’s Compass and the Employer’s Compass, and this is particularly so with the low NPSs, which form important points for attention. Our aim is to further improve the perception of the provision of our service across the entire range.

Net Promoter Score

	2019
NPS after using participants channels	
- Website ABP.nl	-20.3
- MijnABP	-2.7
- Phone	11.8
NPS after (pension) processes	
- Relationship administration	18.9
- Relationship management	30.4
NPS after (pension) processes	
- Become a new participant	-32.3
- Retire	5.6

On a scale of 1 to 10, how likely would participants and employers be to choose ABP if they were able to arrange the pension themselves? This NPS question is posed after a participant or employer has made use of a particular channel or process. The Net Promoter Score is then calculated by subtracting the percentage of scores of 6 or less from the percentage of scores of 9 or more. The NPS can vary from -100% to +100%. In the interests of representativeness the score is calculated on the basis of a twelve-month moving average.

New process for complaints and objections

In the reporting year a new process was established for participants to express dissatisfaction (complaints and objections), with the aim of making this more transparent, more accessible and simpler. Participants do not have to indicate in advance whether they have a complaint or objection. In the new policy we make sure that these communications are picked up through the right channel and dealt with by the right department. A pilot scheme was run in the second half of 2019, and in November the Accountability Body issued a positive advice on the new arrangements for handling complaints. Information about the procedure is easy to find on the website; the text is in line with the recommendations of the Ombudsman for Pensions. In 2020 we will introduce this process, with the approach that the first contact with a participant who disagrees with something must take place within five business days. We use feedback from participants to continuously improve the information on the website.

Complaints

Processed complaints by type

	2019	2018	2017	2016	2015
Information provision	34	63	45	79	80
Processing delay	10	25	20	26	38
Application of laws and regulations	11	30	21	33	21
Customer friendliness	3	7	4	31	25
Pension calculation and payment	30	46	53	16	36
UPS	-	-	2	6	2
Other	32	60	92	30	18
	-	358	-	-	-
	124	-	-	-	-
Total complaints	**244**	**589**	**237**	**221**	**220**
Outstanding on December 31	4	3	10	7	8

Appeals

Appeals and settlements

number	2019	2018	2017	2016	2015
Appeals lodged	36	27	40	50	56
Appeals procedures terminated without ruling	7	7	10	5	11
Ruling: decision upheld	24	25	33	36	63
Ruling: decision overturned	1	10	9	4	3
Outstanding on December 31	23	19	34	46	66

In 2019, the Appeals Committee received 36 new appeals and settled 32 appeals. In 24 cases, the administrator's decision was upheld, while in one case it was overturned. In seven cases the appeal was withdrawn. There were 23 appeals outstanding at December 31, 2019. The most important subjects addressed in appeals were the right to partner's pension, the amount of partner's pension and the amount of the retirement pension.

Lizelle du Plessis, senior credit analyst APG

‘Would I invest my own money in this?’

In 2019, ABP realized a return on its investments of 16.8% (€67 billion). The task of investing its pension capital was outsourced to APG. Lizelle du Plessis is one of APG’s senior credit analysts. She monitors sectors and companies in order to give substantiated investment advice to the portfolio managers at APG who invest in fixed-income securities for ABP.

‘As a senior credit analyst, I assess market developments and operating performances, financial and non-financial. Each analyst is responsible for a number of sectors. I am responsible for automotive and paper, packaging and pulp. Based on my analyses of companies in these two sectors, portfolio managers decide either to invest in something or just walk away.’

Sustainability is playing an increasingly important role, in addition to risk and return.

Challenging year

2019 was a challenging year for the sectors for which Du Plessis is responsible, to say the least. The automotive industry experienced the direct effect of the trade war between the US and China. In addition, the emissions regulations are going to get stricter from 2020. And Brexit also brought further uncertainty. In the paper, packaging and pulp sector, the demand for coated wood-free paper plummeted. One paper company in our portfolio had no choice but to carry out reorganization. Digitization has also had an impact on this sector. All in all, there were so many impactful developments that I had to make a conscious effort to keep my focus and calm in order to identify potentially successful investment partners.’

Link

Du Plessis always keeps the people she is working for at the forefront of her mind. ‘I am a link in the pension capital of the members at ABP. And that’s exactly how I feel. That’s why I always start off by asking myself the question: Would I invest my own money in this? If the answer is yes, then I look carefully at the prospects in the long term. Sustainability is playing an increasingly important role, in addition to risk and return. Certain suppliers of automotive parts may start to lose sales due to the rise of electric cars, for example. Can those companies adapt to the changing circumstances? In my other sector, for example, you see companies who have benefited from the trend to replace plastic disposable packaging with more sustainable solutions made from recyclable materials. Ultimately, our investments in fixed-income securities in 2019 performed better than the benchmark: so it was not only an intense year but also a good one.’

‘Based on my analyses portfolio managers decide either to invest in something’

How we invest pension assets

During the reporting year ABP made a start on implementing the Strategic Investment Plan for 2019-2021. In 2019 the five-year Sustainable and Responsible Investment Policy Plan 2015-2019 was also completed: the objectives have been attained. A new policy was drawn up in the reporting year, with objectives for the next five years and long-term ambitions. For this we held discussions with participants and other stakeholders. The overall return on the investments came to €67 billion (16.8%), somewhat lower than the benchmark.

ABP’s investment convictions

In 2019 ABP reviewed its investment convictions because the existing convictions were out of date. The investment convictions form the basis for all preferences and choices relating to the investment portfolio. They give direction to the strategic investment policy, the implementation of that policy and the cooperation with APG. They also provide an important starting point for explaining and rendering account of our investment choices.

ABP's investment beliefs

- Risk, Return, Costs and Sustainability
  ABP participants benefit from a balanced decision-making process based on four criteria: risk, return, costs and sustainability. ABP is able optimally to weigh up these four components against each other.
- Sustainable and responsible investment
  ABP can invest responsibly and make the investment portfolio sustainable without this being to the detriment of the portfolio’s risk-return profile.
- Long-term horizon
  As a pension fund, ABP has a long-term horizon offering investment possibilities that are not available to investors with a shorter time horizon. This concerns both access to private investment categories and public investment strategies with a longer investment horizon.
- Market efficiency
  Financial markets are not perfectly efficient. ABP opts for more or less active management depending on the efficiency of the market. With active management ABP looks to obtain extra return on investment or to avoid extra costs.
- Investment risk
  We have to take risks in order to obtain returns on investments. As a rule, higher expected returns go hand-in-hand with higher expected risk.
- Diversification
  By spreading investments over different categories we expect to achieve a better risk-return trade-off for the investment portfolio. Diversification within investment categories can further amplify this effect.
- Cost-conscious
  Access to private investment categories in particular, with a net positive effect on the total investment portfolio, entails higher costs. ABP is cost-conscious and requires added value

whenever costs are to be incurred.

Start of execution of the Strategic Investment Plan 2019-2021

In 2019 a start was made on implementing the Strategic Investment Plan for 2019-2021. This plan is based on the strategic investment framework, which derives from the ALM study carried out in 2018:

- an investment mix consisting of 60% equities and alternative investments and 40% fixed income securities;
- interest rate hedging ranging from 25% to 50%;
- no inflation hedging.

We adhered to these starting points in the reporting year: the mid-term review of ALM changed nothing in this regard (see also the chapter headed 'Our financial position').

One of the objectives of the Strategic Investment Plan 2019-2021 is for ABP to invest more in the real economy, such as real estate, infrastructure and private equity. The Board of Trustees finds this shift toward more illiquid categories important: although it will entail higher costs because time-intensive and long-term investment projects are involved, these categories will also make for better expected returns and risk diversification. Moreover, they are in line with our policy of sustainable and responsible investment.

Aside from investing in the real economy, we want to maximize our gains from emerging market growth. The Strategic Investment Plan 2019-2021 also gives expression to the Board's 2016 decision no longer to regard hedge funds as a separate investment category: investing in hedge funds is not a goal in itself, but ABP invests in hedge fund strategies if they are a responsible choice within the strategies of other investment categories. The Board of Trustees sees hedge funds - providing they are carefully selected - as appropriate to add for extra return.

In the reporting year the shifts were set in motion in accordance with these ambitions. At the end of 2019 execution was on schedule in average terms. Aspects that progressed faster than planned included investments in emerging markets and in real estate. The redistribution of the allocation to hedge funds to other investment categories is running somewhat behind schedule on account of the complexity and the simultaneous transfer to APG. We are doing this because it makes for lower costs and greater transparency and control.

Deepening of knowledge

The Board Committee on Investment Policy devoted three days to China in 2019. The aim of this intensive educational session was to increase knowledge of the culture, history and future of China and Chinese markets and parties with which ABP does business. This knowledge is crucial for current and future developments in which China plays a role. In decisions that the Board of Trustees has to take, it happens more and more often that there is a Chinese dimension. Not only when investing in China itself, but also regarding questions about expected global economic growth in the coming years for example, or opportunities in emerging markets or the trade war between the U.S. and China.

During these three days we had presentations by scientists, specialists and business people, each with a relevant view and their own specific knowledge and experience. Special attention was given to sustainability and technological developments. The Board of Trustees also followed educational theme sessions on private equity and factor investing. The aim of these theme sessions is to acquire knowledge of these technical investment subjects so as to be able to take better-grounded decisions in the context of strategic asset management.

Sustainable and responsible investment

Policy period 2015-2019 finalized: goals attained

At the end of 2019 ABP finalized the policy period 2015-2019 for sustainable and responsible investment. All objectives were attained, some of them amply; the definitive figures and extensive comments on them can be found in the Sustainable and Responsible Investment Report and on our website. ABP also shared important results of the Sustainable and Responsible Investment policy during the year with participants, via the website, fact sheets and newsletters.

In this paragraph we sketch out the main lines of developments in 2019 in the field of sustainable and responsible investment. More extensive information can be found in our separate 2019 Annual Report on Sustainable and Responsible Investment.

What do our participants think is important?

In the annual participants survey we ask what they think of ABP's sustainable and responsible investment policy. The survey, carried out by Motivaction, showed that 59% of respondents find it important that ABP should invest sustainably and responsibly. 37% think that if their own pension is slightly less as a result, ABP must still invest sustainably; and 18% think that ABP must do so anyway, regardless of the effect on their own pension. We also asked participants how they see the focus in ABP's new Sustainable and Responsible Investment policy: 57% see the choice of the energy transition as positive ('stand fully behind it' + 'stand behind it'), 71% take that view of the choice of the raw materials transition and 61% are similarly minded as regards digitization. We use the outcomes to provide participants with more targeted and customized information about our investments, since 24% of them still do not know that ABP invests sustainably and responsibly (in 2018 this percentage was 38%).

In discussions with stakeholders for new policy

In 2019 the preparation and establishment of our new Sustainable and Responsible Investment policy stood high on the agenda of the Board of Trustees. This policy was established in December 2019. The new policy came about in consultation with stakeholders. We asked participants what they found important as regards sustainable and responsible investment. The Board of Trustees and the Executive Office also spoke with Dutch and international social organizations, social partners and academics during small-scale working conferences. ABP itself held a number of larger-scale theme meetings, on subjects such as the circular economy and the U.N.'s Strategic Development Goals. ABP also took part in various theme meetings such as OneWorld Live, in which financial service providers and experts discussed how they could contribute to a more sustainable economy. Lastly we commissioned Professor Kees Koedijk to carry out a scientific study on the relationship between sustainable and responsible investment and financial performance. We used all the findings in drawing up our new policy.

New goals and ambitions for 2020 and beyond

As the biggest pension fund in the Netherlands, ABP is very careful about the impact it can have on major social and economic developments. We therefore align this Sustainable and Responsible Investment policy with the United Nations Sustainable Development Goals (SDGs). In our policy for the period 2020 and beyond we focus on the three great transitions that are under way: climate change, raw materials shortage and digitization, with respect for human rights as a precondition. Not only are new objectives established for the period 2020-2024, but also ambitions for 2030 and 2050.

Although the targets set are ambitious, we are determined not to end up in a situation of 'compulsive investment'. Return, risk and costs are investment criteria that are just as important as sustainability. So as to make no concessions to either aspect (ambitions or investment criteria), we will inform our stakeholders where we stand every year in accordance with the 'comply or explain' principle.

Country exclusion policy adapted

ABP does not invest in sovereign bonds of countries in respect of which an arms embargo of the UN Security Council is in force. In the new policy for sustainable and responsible investment this is extensively explained: sovereign bonds of countries in respect of which an arms embargo of the European Union is in force are also excluded. The list of excluded countries can be found on our website.

Progress on IMVB Covenant

At the end of 2018 the Pension Federation and 73 pension funds signed the Covenant on International Socially Responsible Investment of Pension Funds. (IMVB is the Dutch abbreviation for International Socially Responsible Investment). In this covenant the sector commits to investing more sustainably together with social organizations, trade unions and government.
In the reporting year a start was made within the covenant on developing a set of instruments to help with the implementation of the agreements made. At the end of 2019 the list of these instruments was published. A small number of funds, including ABP, are also taking part in a supplementary initiative to bring about improvements for people and environment in six specific sectors or companies. In 2019 the first of these companies was determined: a large mining company.

Refinement of tax policy

In 2019 ABP made a start on the thorough review of the tax policy. This comes about as a result of legislative and regulatory developments and guidelines, but also of the social discussion about companies' own tax responsibilities. In order to arrive at a new policy, in 2019 we looked at the conditions that ABP is obliged and determined to fulfill, the center of gravity being in the tax investment structures. In this context among other things we had exploratory conversations with major international parties in the field of asset management. We are expressly seeking to collaborate with other asset managers in order to strengthen the control of tax risks (as part of the integrity risk category) and the communication of our tax standards. We expect the tax policy to be definitively established in the course of 2020, after which we will move to implementation.

Investing in the Netherlands

ABP's investments in the Netherlands rose to €21.0 billion in 2019 (2018: €15.8 billion); this is 4.5% of total invested assets (2018: 3.7%). Approximately half of the assets invested in the Netherlands consist of loans and real estate. In 2019, €500 million was invested in sustainable mortgage loans; in this way ABP contributes to the move to make homes in the Netherlands sustainable. The real estate portfolio grew largely as a result of investments in hotels (citizen M) and outlet centers. A stake was also acquired in a wind farm in South Holland. The wind energy generated can supply 35,000 households with clean electricity.

ABP is a shareholder of Inkef Capital. In 2019 Inkef Capital's investments included Cashforce (cash flow forecasting for businesses), Aidence (artificial intelligence), GTX Medical (neural repair technology), Urban Sports Club (sports and fitness platform) and Calypso Biotech (therapeutic antibodies for auto-immune diseases). We visited two Eindhoven companies in the Inkef Capital portfolio: Shapeways (3D printing) and GTX Medical. This gave us an interesting insight into innovative developments in the Dutch venture capital landscape.

Program for 2019-2021

To stimulate investment in the Netherlands in a responsible way, the Investing in the Netherlands 2019-2021 program has been set up. It consists of two parts: research and substantiation, and development.

Research and substantiation

The research and substantiation part has four areas for attention.

1. Making an inventory of strategic shareholdings in the Netherlands and investigating what effects we achieve with a major shareholding in a Dutch company.
2. Improving the overview of and insight into the engagement policy.
3. Focusing more clearly on the extent to which the Netherlands profits from companies' activities outside the Netherlands.
4. Closer examination of the market for Green Bonds and stimulation of issuing bodies, making it simpler to invest in sustainable solutions in a standard way.

Strategic shareholding is part of the regular consultation between ABP and the sustainability team of Fiduciary Management. Work was done in the reporting year on a research proposal for active shareholding and the improvement of the engagement policy. ABP also contributed via APG to the first issue of a Dutch Green Bond; on subscription, an amount of approximately €170 million was allocated. The analysis of the degree to which the Netherlands profit from companies outside the Netherlands started in February 2020.

Development

ANET

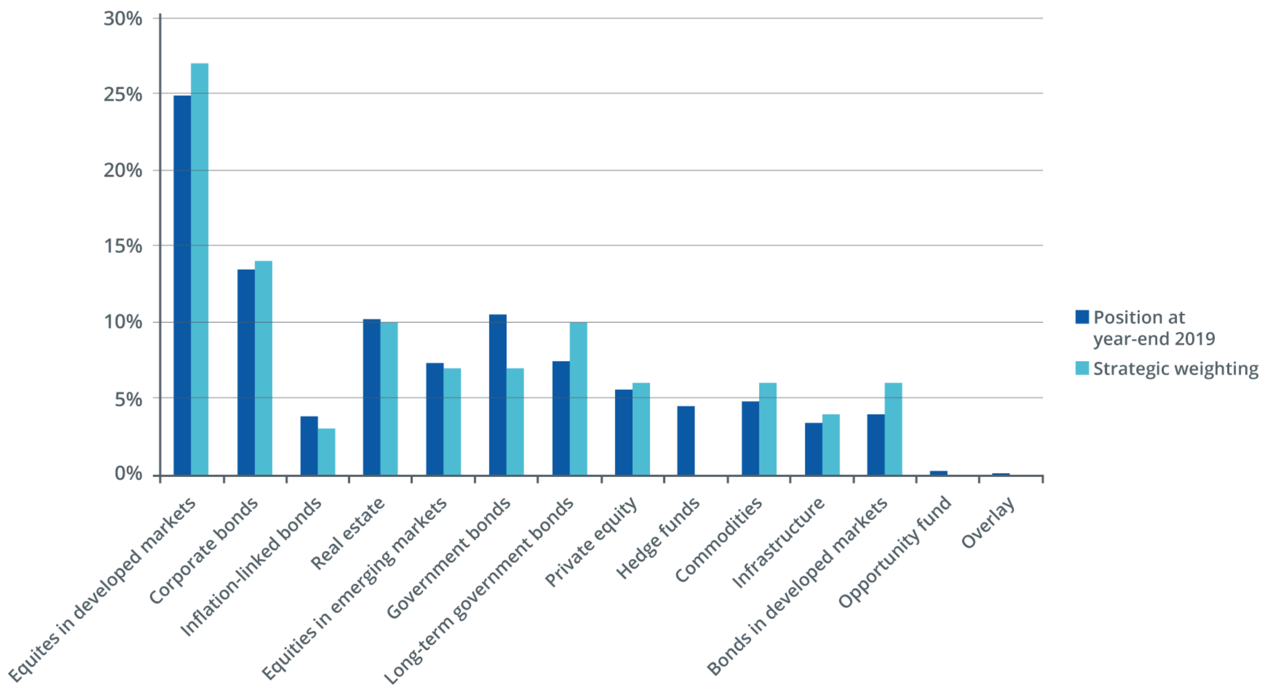
For the development part of the program ABP started in 2019 with an initial commitment of €50 million for the new ANET fund. ANET stands for ABP Netherlands Energy Transition. With these Dutch investments we combine good returns for pensions with solutions for combating and preventing climate change. The portfolio is being constructed in line with ABP's policy (investment convictions, allocation to real assets, responsible investment policy, pro-active best effort investments in the Netherlands). The fund invests particularly in project finance, loans, mainly corporate, and private equity. In the past year the investment team was completed. The number of potentially interesting energy transition investments in the pipeline is growing steadily. The energy transition ecosystem, which is an important network for ANET in the Netherlands, has also been set up.

In this past year the ANET team sat around the table with Invest-NL a number of times to explore one another's fields of work and investigate possibilities for working together. Both mandates, those of Invest-NL and ANET, focus on energy transition in the Netherlands. In this context Invest-NL mainly concentrates on supplementary measures for situations in which the market (which includes ANET) is not, or not yet, willing or able to finance certain investments. In 2020 we will continue to build ANET.

ABP commits to the objectives of the Climate Agreement
In 2019 ABP committed to the objectives of the Dutch Climate Agreement and the Paris Agreement, together with the Dutch pension funds, insurers, banks and asset managers. In July an agreement was signed to this effect. All parties will render transparent account of how they give this commitment concrete expression. With a collective representation of some €3 trillion we as the finance sector can increase our impact in spurring and facilitating the climate transition in the Netherlands.

Composition of investments

Breakdown of the investment portfolio by category

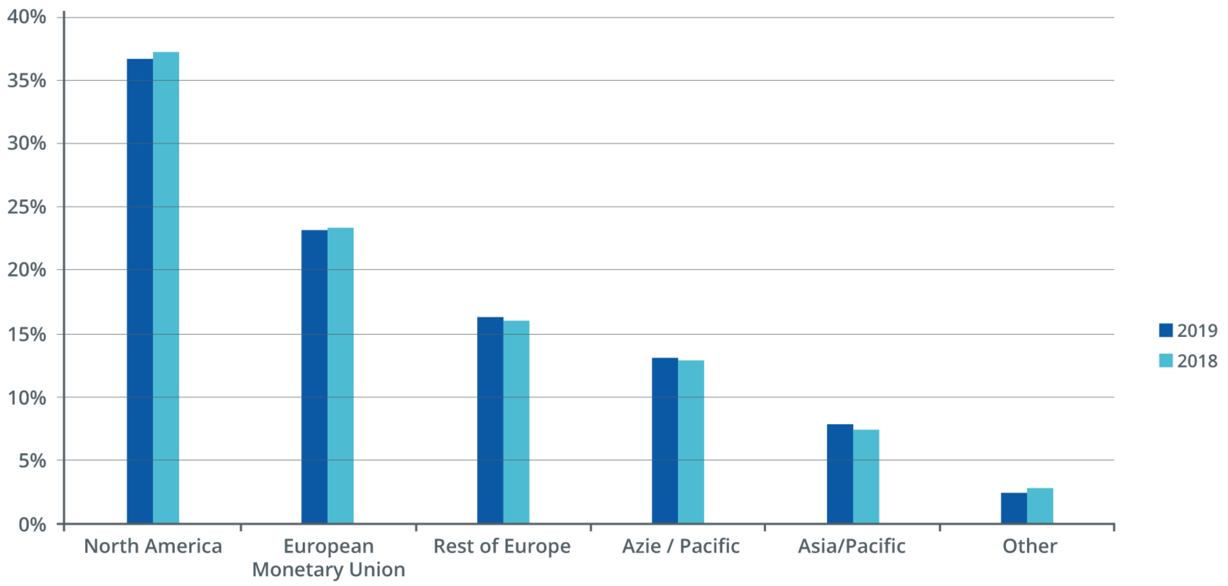


The table above shows the strategic breakdown of the categories in the investment portfolio at year-end 2019. APG can depart from the strategic weights for each category within limits set by ABP in the Strategic Investment Plan, for example, if this can make a positive contribution to the result. The table also shows the actual positions at year-end 2019, based on the net assets invested.

Distribution by region and sector

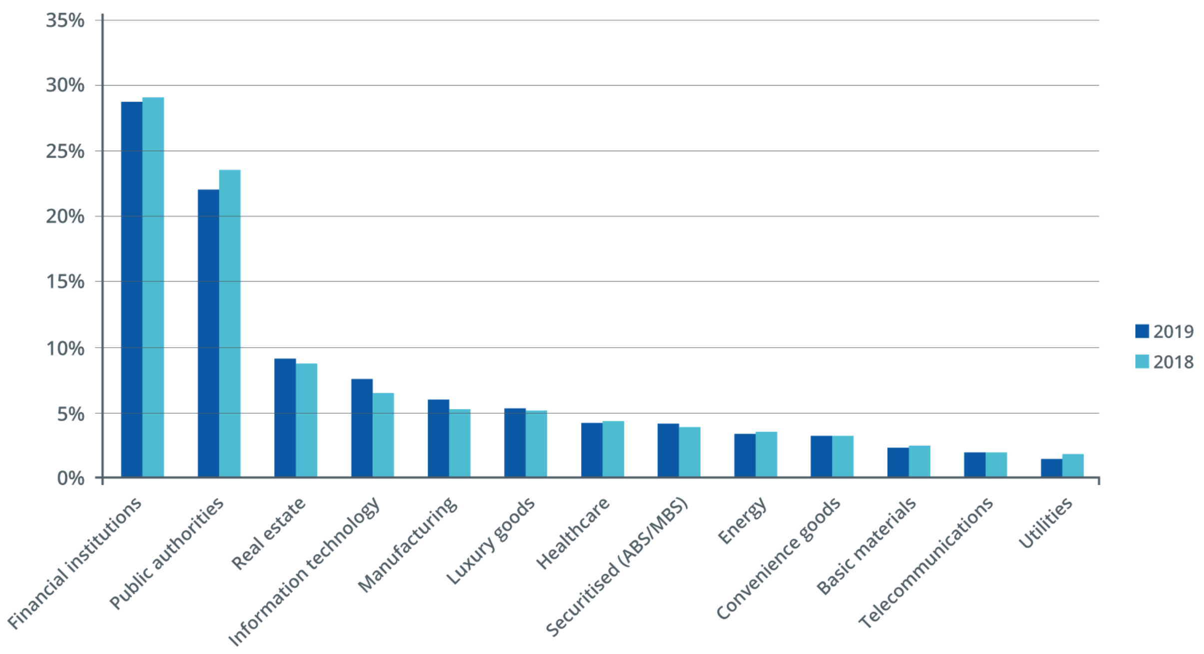
By distributing investments across regions and sectors, we reduce the risks within the investment categories. The two figures show this spreading of risk, with a graphic representation of the distributions in 2019 and 2018 (the total for some regions and sectors may not equal 100% because of rounding). The figures shown are based on the asset headings related to total assets. Derivative positions form part of this, as a result of which investments in the Netherlands (8.0%) are more than reported in the paragraph 'Investing in the Netherlands' (4.5%).

Breakdown of the investment portfolio by region



The investment portfolio allocation is largely the same as it was in 2018. Investments in the Netherlands increased from 7.4% to 8.0%.

Breakdown of the investment portfolio by sector



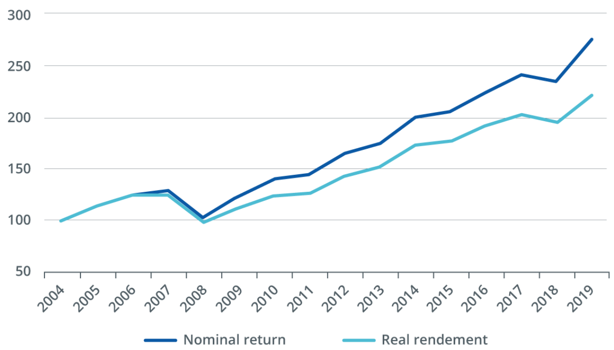
As in 2018, the financial sectors and the government are the main sectors in which ABP invests. 'Financial institutions' is the largest sector (28.8%), with equities and corporate bonds in the sector as well as financial products such as derivatives (2018: 29.1%). Derivatives are mainly held in the context of the interest rate hedging policy, as described later in this chapter. Due to our investments in sovereign bonds, the sector 'government' makes up 22% of our portfolio (2018: 24%).

Return on investment came to 16.8%

The net return on investments came to 16.8% for full-year 2019, as against -2.3% in 2018. This equates to an amount of €66.9 billion (2018: -€9.3 billion). Interest rate hedging contributed 1.8% of this (2018: 0.4%). The following asset classes produced positive (unhedged) returns: fixed-income: 8.7% (2018: 0.4%), equities: 27.4% (2018: -5.9%), alternative investments: 14.6% (2018: 6.8%), and real estate: 18.4% (2018: 3.3%). The negative result of the currency hedge (-1.4%) leads to the overlay category's showing a negative return of -0.1% (2018: -1.9%).

For long-term investors such as pension funds, it is relevant to assess the return over a longer period as well as the annual return. The table below shows the cumulative return for the past fifteen years, both nominal and real. The real return is calculated by adjusting the nominal return for inflation.

Return from 2005 to 2019 (cumulative)



ABP's real return is determined based on price inflation. This method started in 2016; up to the end of 2015 the real return was determined based on wage inflation. The average nominal annual return from 2005 to the end of 2019 was 7.0%. For 2019 only, the nominal return was 16.8% and the real return 13.7%.
The figure shows an index status based on a cumulative return. The percentages are average annual return figures.

Returns below the benchmark

Although the return in 2019 was positive, it was 0.4% below the previously established benchmark (2018: 0.6%). This equates to an amount of -€1.4 billion (2018: €2.5 billion). The Equities category (-0.6%; 2018: -1.4%) and especially the Alternative Investments category (-3.8%; 2018: 6.9%) fell short of the benchmark and made for a negative contribution, whereas the other categories made a positive contribution.

The cumulative outperformance over the past five years compared with the benchmark was 2.6% (2018: 4.3%), which equates to €9.9 billion (2018: €15.7 billion). Most of the excess return was produced by the private equity, emerging markets equities and credits portfolios.
Cumulative outperformance over the past ten years was 8.2% (2018: 10.9%), which equates to €23.7 billion (2018: €30.0 billion).
In view of the underperformance relative to the standard portfolio in 2019 and the falling multi-year trend, we are less satisfied with the investment result obtained.
Although we constantly monitor the mandating process and intervene whenever possible, the grim investment year 2019 did not lead to an optimal result.

Return and benchmark

Category	Weighting	Portfolio return	Portfolio return	Benchmark return	Relative return	Relative contribution	Relative contribution
	%	%	€ mln	%	%	%	€ mln
Fixed-income investments	**39.0**	**8.7**	**13,950**	**8.5**	**0.2**	**0.1**	**241**
Government bonds	10.3	5.6	1,683	5.7	-0.1	0.0	-37
Long-term government bonds	7.3	11.7	3,480	11.7	0.0	0.0	-3
Corporate bonds	13.4	9.4	5,273	8.6	0.7	0.1	438
Emerging-market bonds	3.9	15.1	1,959	16.2	-0.9	0.0	-151
Inflation-linked bonds	4.1	4.7	1,555	4.7	0.0	0.0	-6
Equities	**32.5**	**27.4**	**35,876**	**28.2**	**-0.6**	**-0.1**	**-714**
Developed markets	25.2	28.2	27,672	30.4	-1.7	-0.4	-1,983
Emerging markets	7.4	25.3	8,204	20.9	3.6	0.3	1,270
Alternative investments	**18.2**	**14.6**	**10,149**	**19.1**	**-3.8**	**-0.7**	**-2,573**
Private equity	5.6	22.3	4,733	31.2	-6.8	-0.4	-1,427
Commodities	4.8	16.5	2,610	17.6	-0.9	0.0	-158
Opportunity Fund	0.2	-18.7	-188	32.9	-38.9	-0.1	-504
Infrastructure	3.2	13.3	1,619	17.3	-3.5	-0.1	-348
Hedge funds	4.4	7.1	1,375	7.9	-0.7	0.0	-135
Real estate	**10.1**	**18.4**	**7,382**	**11.6**	**6.1**	**0.6**	**2,483**
Real estate	10.1	18.4	7,382	11.6	6.1	0.6	2,483
Overlay	**0.1**	**-0.1**	**-422**	**0.2**	**0.0**	**-0.2**	**-833**
Interest rate hedging		1.8	7,066	1.8	0.0	0.0	-
Inflation hedge		-0.1	-220	-0.1	0.0	0.0	-
Currency hedge		-1.4	-5,657	-1.5	0.0	0.0	152
Other		-0.4	-1,611	0.0	0.0	0.0	158
Active Asset Allocation						-0.3	-1,143
	100%	**16.8**	**66,935**	**17.2**	**-0.4**	**-0.4**	**-1,396**

The table shows the returns of the various investment categories relative to the benchmark. These are net return figures less asset management costs and exclude currency hedging results. Because not all the investments are denominated in euros, a proportion of the currency risk is hedged (more about this later in this chapter).

Interest rate hedging policy

ABP hedges approximately 25 percent of the interest rate sensitivity of the funding ratio. With the combination of investments in equities and alternative investments and this partial hedging we expect to be able to offer more pension-purchasing power to our participants and to be able to index in times of inflation. In the past ten years we have several times looked closely at our interest rate policy. We have always found a limited hedging of the interest rate sensitivity to be appropriate to the ambition of being able to achieve a sufficient return on investment. We have however fine-tuned the interest rate policy and made the degree of hedging dependent on the levels of interest rates. Minimum hedging remains at 25%. We achieve part of this with our fixed income investment portfolio (bonds). Because our investments consist largely of equities, we have to use interest rate derivatives in order to bring the hedging up to the desired level. In determining our policy we also take account of the liquidity risk and credit risk associated with these instruments.

The following table depicts the return of the interest rate hedge for the period from 2015-2019.

Breakdown of ABP return

in %

	2019	2018	2017	2016	2015
Investment portfolio	15.0	-2.7	8.0	8.2	3.2
Interest-rate hedge	1.8	0.4	-0.4	1.3	-0.5
Total	**16.8**	**-2.3**	**7.6**	**9.5**	**2.7**

investment portfolio return was calculated by adding the total and the interest rate hedge

In line with previous years, a minimum of 25% of the interest rate sensitivity of the pension liabilities was hedged in 2019 (2018: 25%). Due to the fall in interest rates, this had a positive impact of 1.8% on the return (2018: 0.4%). This equates to an amount of €7.1 billion (2018: €1.7 billion). Deviations around the standard level of 25% hedging are allowed within a certain bandwidth in the interests of efficient implementation.

Currency hedging

In 2019, we partially hedged our investments in the U.S. dollar, pound sterling, Swiss franc and Japanese yen. This strategic currency hedging was set up to ensure that fluctuations of the euro exchange rate relative to the currencies in which we invest is fully or partially offset, thereby reducing the sensitivity to these fluctuations. We do this because ABP’s contributions and pension payments are all denominated in euros, and we wish to add an extra level of security when investing in asset classes denominated in foreign currencies. In 2019 the total return on the hedging of the currency risk amounted to -1.4% (2018: -2.3%), which equates to -€5.7 billion (2018: € -9.5 billion). The negative return from this hedge was mainly driven by the development of the relative value of the euro against the U.S. dollar. This is because in 2019 the U.S. dollar appreciated considerably against the euro (2.2%). However, this had a positive impact on dollar-denominated investments: these became more valuable in euro terms, which improved the return (in contrast with the effect of the currency hedge described above).

Active asset allocation

Based on the strategic asset allocation as established in the Strategic Investment Plan (60% equities and alternative investments and 40% fixed income) we endeavor with our active asset allocation to take short-term advantage of expected returns on investment categories. In 2019 active asset allocation made a negative contribution to returns. In equities and alternative investments, there was some overweighting of alternative investments, which cumulatively made for a lower contribution to the return.

Inflation derivatives

ABP has no explicit inflation hedging policy. The relatively small portfolio of inflation derivatives, deriving from a previous policy on inflation hedging, delivered the same return as the benchmark: -0.1% (2018: 0.0%). This equates to -€220 million (2018: -€116 million).

Improvements in administration

Fiduciary function strengthened

In the reporting year the fiduciary function was further strengthened. Among other things, clearer guidelines were drawn up for the investment processes, leaving ABP more in control. In 2020 the workings of the fiduciary function will be assessed.

Policy for FGRs adapted

On the basis of a past policy ABP has invested in funds in which other Dutch pension funds also invest (FGRs, a special kind of Dutch mutual fund). In 2019 the Board of Trustees decided on the basis of an evaluation to gradually move out of these funds into portfolios in the name of ABP alone. The most important advantage is that this gives ABP more control and flexibility to attain its ambitions as established in the Strategic Investment Plan and the Sustainable and Responsible Investment policy. In 2020 the implementation plan will be elaborated to bring about the switch to own portfolios.

Market developments by investment category

Fixed income securities

Driven by central banks' expansionary monetary policy, in 2019 interest rates fell globally in the economically most important countries. This generally brought about higher valuations of bonds, even in emerging markets. In Europe, interest rates on sovereign bond markets of the countries with the highest credit ratings (the core countries) fell below zero in 2019. For longer maturities the fall in interest rates was greater and consequently yields were higher. The biggest falls in interest rates were seen in Italy, Spain and Portugal. Partly because central banks started to buy corporate bonds as well as sovereign bonds, corporate bonds also produced positive yields. This also had an effect on riskier (high-yield) corporate bonds. Inflation-linked bonds lagged somewhat compared with other fixed income securities on account of the slightly lower inflationary expectations.

Equity markets

Equity investments had a very good year. Losses on stock markets in the last quarter of 2018 were more than recouped in 2019: equity markets recovered when central bankers decided to continue with monetary stimulus measures. There was a brief dip in August caused by uncertainty about the trade war between the United States and China. In the end all regions were up at year-end in euro terms. U.S. equity markets once again performed better than other developed markets, while emerging markets such as China performed somewhat less well than developed markets.

Real Estate

In the reporting year investors still showed great interest in real estate, resulting in growing real estate valuations in most markets. As in the case of equity markets, developed markets, the United States and Europe performed better than emerging markets.

Alternative Investments

Alternative investments performed well in general, leading to a positive return on balance. In line with rising equity markets, valuations in the private equity portfolio also increased sharply. Returns on commodity investments were largely driven by the recovery in crude oil prices during the year, following a sharp price correction at the end of the previous year. At the same time valuations of precious metals were higher, mainly due to higher gold prices. The Thematic Investment Fund (formerly Opportunity Fund), which includes intellectual property such as rights to films and television series and energy-related investments among its assets, posted a strongly negative return, mainly as a result of write-downs on certain investments in energy infrastructure. At the same time other infrastructure projects produced positive returns. Hedge funds obtained slightly positive returns of around 3% in their operating currency, the U.S. dollar; as a result of the dollar's appreciation the return in euros was more than twice as much. The currency risk (including that of hedge funds) is hedged at the overlay level. The results of this are commented on under the heading 'Currency hedging' earlier in this chapter.

Rogier de Haan, MAX Ombudsman

‘We hear personal stories’

Rogier de Haan is the Ombudsman for the broadcaster Omroep MAX. On workdays, members of the broadcaster who need help with legal questions, complaints and problems with companies and bodies can call a telephone advice line. ABP kept Rogier de Haan very busy in 2019. His actions led to the rapid review of the revision and reimbursement policy, for example.

‘We have noticed that our members certainly think about their pensions a lot,’ says Rogier de Haan. ‘That is definitely also due to the fact that our target group are coming up to retirement age or already retired. There was a lot of focus on pensions in the media in 2019, especially at macro level. What we hear are genuine personal stories. And we’ve certainly had them: we’ve been kept busy, especially with ABP, as the largest pension fund in the Netherlands.’

Our members think about their pensions a lot.

De Haan talks about how he, as the Ombudsman, initiated proceedings against ABP in 2019 when a number of retired members were confronted with the recovery and deduction of their pensions, as a result of administrative errors. ‘We suddenly received a number of messages. I knew what the legal position was from previous cases and I was also familiar with the sentiments. A pension is an important source of income on which people base the management of all their finances. If their pension suddenly changes, people get worried. The rationale of ABP was actually correct: the policy needed to be implemented. But did it have to be done on automatic pilot? Implementation seemed to be carried out without any awareness of sensitivities.’

Prevention

‘It was good for us, but especially for our members, to see that ABP adjusted the reimbursement policy in response to that file. Nicole Beuken, managing director of ABP at the time, appeared on programs broadcast by us a couple of times in order to clarify the situation. We have also been (and still are being) kept busy with questions from ABP members who built up their pension before 1995 at the same time as their partner and may be entitled to a supplement. We still get a lot of telephone calls about that. We as the Ombudsman and journalistic editors clearly have the job of not only making sure that our members are kept properly informed but also of keeping ABP and other pension funds on their toes. It’s not about errors being made – you can’t avoid that. But pension funds could avoid considerable unrest and damage to their reputation if they were to carry out that critical assessment internally first.’

‘We keep pension funds on their toes.’

Administrative expenses

In 2019 total administration costs decreased. ABP breaks down these costs into costs of managing the pensions and costs of investing the contributions.

Development of total administration costs

Administration costs consist of the costs charged by APG, general operating expenses of the pension fund and the cost of external asset managers. The general operational expenses of the pension fund are allocated specifically to pension management or asset management where possible. If this is not possible, the costs are distributed. Controlling and responsibly reducing administration costs is one of the Board's prime objectives. The costs of pension management fell in 2019, thanks in part to the impact of the efficiency improvements that APG initiated in 2016, while at the same time guaranteeing the service level for participants and employers. The costs of asset management increased in absolute terms, but in relative terms (measured in basis points) they decreased. These costs are broken down into management fees, performance fees, and transaction fees. Further explanations of the development of the pension management and asset management costs are given hereunder.

Pension management costs

Costs of pension administration continue to fall

In 2019 total pension management administration costs (the cost of participant transactions, communication with participants, employer and data management, governance, and financial management) were down by €4 million, from €145 million to €141 million. This decrease can largely be attributed to further simplification of the pension scheme, more efficient process execution, and further digitization of participant communication.
At the same time, the expenses for better provision of services to participants and employers have increased. For example, new initiatives were launched to provide insight and perspectives for action to participants and we invested in improving the participant and employer experience. We also prepared the expansion of the UPO with three scenarios and accelerated the provision of data to Mijnpensioenoverzicht (formerly the Pension Register). On balance, we managed to reduce costs.

Total administration costs also include a sum of €10 million to cover the internal costs of the pension fund. This item was unchanged from 2018 (€10 million).

Cost per participant continues its downward trend

The cost per participant is our most important cost indicator for pension management. Thanks to the cost reductions achieved, the cost price per participant fell in 2019 for the sixth year in a row. The cost price per participant fell by €4, from €72 to €68.

Pension management costs

	2019	2018	2017	2016	2015
Pension management administrative expenses (x € 1,000)	141,129	144,729	149,962	155,372	160,450
Number of participants, CEM definition	2,061,333	2,015,200	1,979,560	1,955,177	1,915,019
Cost per participant in €)	68	72	76	79	84
Difference vs last year	-4	-4	-3	-5	-4

Costs per participant were also positively affected by the increased number of active participants and pensioners. The cost price per participant is determined on the basis of participant numbers according to the definition of the Pension Federation. Only active participants and pensioners are counted for this calculation. The total number of active participants and pensioners combined rose by about 46,000 from 2,015,200 at year-end 2018 to

2,061,333 at year-end 2019. 2019 once again showed growth in all participant categories. The number of active participants increased by around 1.9%, while the number of former participants rose by 0.2%. The fastest increase, of approximately 2.7%, could be seen in the pensioners category.

Participant population

in number of persons

	31-12-2019	31-12-2018	31-12-2017	31-12-2016	31-12-2015
Participants	1,150,592	1,128,671	1,111,106	1,104,792	1,080,490
Former participants	954,702	952,476	946,097	933,126	941,586
Pensioners	910,741	886,529	868,454	850,385	834,529
Total	**3,016,035**	**2,967,676**	**2,925,657**	**2,888,303**	**2,856,605**
Retirement pension	656,859	638,787	621,218	603,308	586,859
Incapacity pension	44,728	40,665	41,106	41,740	43,106
Dependents' benefits	201,534	199,788	198,978	197,911	196,788
Orphans' pension	7,620	7,289	7,152	7,426	7,776
Total number of pensioners	**910,741**	**886,529**	**868,454**	**850,385**	**834,529**

The increased number of active participants is explained by the recovering economy and increased employment, particularly in the central government and local councils sectors. The increase in the number of former participants, which is mainly a consequence of labor mobility, flattened somewhat relative to 2018 due to the effect of the new rules on value transfers for small pensions. The increase in the number of pensioners is caused in general by the aging population and in particular by ABP's action on disability pensions (see also the chapter headed 'Building a good pension for three million participants').

New agreements, lower costs

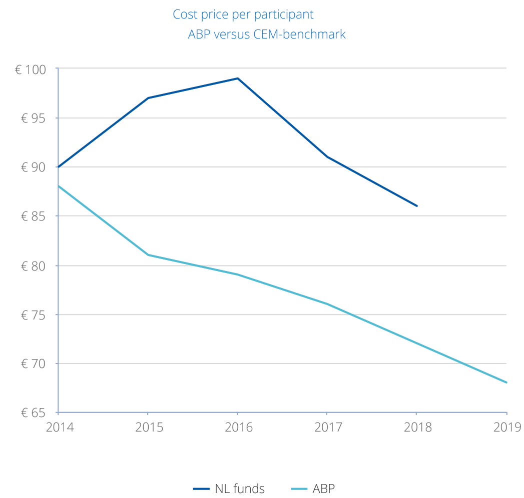
The costs of pension administration form part of the agreements that ABP makes with APG. For the period 2018-2020 one of the objectives is to achieve a further reduction in these costs. With the decrease of €4 per participant this was once again achieved in 2019. The expectation is that the price per participant can again be reduced in 2020, albeit by less than last year. We will achieve this by concentrating on further simplification of the pension scheme and more efficient execution of processes, while at the same time improving the quality of the administration and of our services.

Market comparison of pension management costs

As Board of Trustees, we find it important to see how ABP performs compared with other funds in the area of pension management costs. Therefore ABP follows CEM Benchmarking's global studies, in which ABP is compared with:

- a group of large Dutch pension funds;
- a group of large Dutch and foreign pension funds;
- the total group of Dutch and foreign pension funds.

The figures for the group of large Dutch pension funds are the most relevant to ABP since these funds are the most comparable.
In 2018 (the latest year for which CEM data are available at the date of issue of this annual report) costs of pension management per ABP participant, at €72, were well below the average for the major Dutch pension funds (€86). The figure shows the multi-year development of the cost price per participant for ABP and for major Dutch pension funds as a whole.



In 2019 CEM started comparing pension funds' investments in participant and employer experience. These figures were known at the end of 2019: in this aspect ABP is one of the funds setting the pace. In the next few years CEM will further expand this component of the benchmark, partly at ABP's request.

Asset management costs

Asset management costs in context
The absolute amounts of asset management costs regularly give rise to questions, particularly from participants, as to how beneficial and/or necessary they are. A fair and proper evaluation of the costs of asset management must take account of the volume of assets invested, the targeted returns, risk diversification and performance obtained. The amount of asset management costs depends directly on ABP's scale and therefore on our volume of assets invested: with three million participants and invested assets of €466 billion (year-end 2019) we are the biggest fund in the Netherlands. Furthermore, ABP has consciously opted for an active investment style. This entails higher costs, but it is our view that this way of investing offers the best possibilities of achieving the target returns and spreading our risks so as to ensure a good pension for participants.

Management fees
Management fees relate to choices in the composition of the investment portfolio. Illiquid investments are in principle more expensive than liquid investments, but provide a higher return and contribute to our objectives, for example in the area of risk diversification and sustainable and responsible investment. We endeavor to have the management carried out as far as possible by APG in order to keep these costs down; any outsourcing to specialized external managers must offer added value.

Performance fees
Only if an external manager achieves a performance in excess of an agreed minimum (benchmark) return does it receive a performance fee. The higher the return, the more favorable for our participants, but the higher the absolute costs too. ABP is willing to pay performance fees only from the time an external manager achieves a (multi-year) performance that exceeds the agreed (benchmark) return. In the case of illiquid investments performance fees are determined on the basis of unrealized returns, but they are paid only on realized returns. Consequently in the event of lower performance over a given period it can happen that the provision for these performance fees has to be adjusted downward, resulting in a negative figure for performance fees for that period.

Transaction costs
Transaction costs are the costs that ABP incurs in buying and selling investments. These costs are influenced by the volume of assets under management and our active investment style.

Investment and transaction costs 2015-2019

	2019		2018		2017		2016		2015	
	€ mln	bps	€ mln	bps	€ mln	bps	€ mln	bps	€ mln	bps
Management fee	380	8.6	362	8.8	343	8.8	335	9.1	334	9.5
External asset managers' fees	851	19.3	794	19.4	827	21.1	808	22.0	861	24.4
Custody fees	51	1.2	53	1.3	50	1.3	48	1.3	45	1.3
Other expenses	172	3.9	161	3.9	170	4.4	173	4.7	183	5.2
Management fees	**1,454**	**33.0**	**1,370**	**33.4**	**1,390**	**35.6**	**1,364**	**37.1**	**1,423**	**40.4**
Performance fees	1,058	24.0	1,090	26.6	1,131	28.9	867	23.7	739	20.9
Investment costs	**2,512**	**57.0**	**2,460**	**60.0**	**2,521**	**64.5**	**2,231**	**60.8**	**2,162**	**61.3**
Transaction costs	392	8.9	397	9.7	467	11.9	204	5.6	218	6.2
Total costs of asset management	**2,904**	**65.9**	**2,857**	**69.7**	**2,988**	**76.4**	**2,435**	**66.4**	**2,380**	**67.5**

Costs up in absolute terms, down in basis points

Total asset management costs (consisting of management and performance fees and transaction costs) increased relative to 2018 by €47 million to €2,904 million. In basis points, total asset management costs fell by 3.8 bps.

Management fees increased in 2019 by €84 million. This increase was largely due to the 16% increase in assets under management. As a result absolute costs also increased. In basis points, management fees fell by 0.4 bps. This is due to the fact that management activities are carried out by APG wherever possible, which entails lower costs.

Performance fees were down by €32 million because lower returns than agreed were posted on the private equity portfolio and the Opportunity Fund. In basis points the reduction was 2.6 bps relative to 2018.

Transaction costs were down by €5 million, mainly due to a decrease in the equities category; the relative decrease amounted to 0.8 bp.

Period 2015-2019

In the period 2015-2019 investment costs fell from 61.3 bps in 2015 to 57.0 bps in 2019. The reduction in management fees for external asset managers made the biggest contribution to this. This reduction is related to the choice made by the Board of Trustees for more in-house management and direct investments as opposed to investing in funds managed by external parties. As a consequence of this choice the other costs also decreased.

Performance fees vary from year to year and are directly related to the returns obtained.

In the same period, reported transaction costs increased by 2.7 bps to 8.9 bps in 2019. The most important cause of this increase is the amended definition in the regulations on the reporting of transaction costs starting in 2017. With effect from 2017 the cost of the spread, implicit or otherwise, in transactions for the purchase or sale of fixed income securities must also be reported.

Reconciliation of asset management costs

The asset management costs are recognized in the financial statements in accordance with Guideline 610 of the Guidelines for Annual Reporting. This relates to invoiced costs. Costs of the external asset managers that were not invoiced were netted off in the investment results in the financial statements. As a consequence, the costs recognized in the financial statements (Notes to the Company statement of income and expenses, see table: Investment results (net)) were lower than the amount recognized in the report of the Board of Trustees. The table reconciles the two.

Reconciliation of asset management costs

in € million

	Total 2019	Total 2018
Report of the Board of Trustees		
Management fees	1,454	1,370
Performance fees	1,058	1,090
Transaction costs	392	397
Total	**2,904**	**2,857**
Financial Statements		
Directly invoiced costs: Management fee	488	421
Variance:	**2,416**	**2,436**
Relates to directly invoiced costs (part of the investment results in the financial statements)		

Development of total investment costs by category

Investment costs by category

	2019				2018			
	Average managed assets in € mln	€ mln	bps per class	bps of total	Average managed assets in € mln	€ mln	bps per class	bps of total
Fixed-income investments		**126**		**2.9**		**127**		**3.0**
Government bonds	67,666	28	4	0.6	56,556	25	5	0.6
Corporate bonds	59,970	61	10	1.4	55,372	72	13	1.7
Emerging-market bonds	14,759	36	25	0.8	11,867	30	26	0.7
Inflation-linked		**12**		**0.3**		**17**		**0.5**
Inflation-linked bonds	1,273	11	83	0.2	31,306	15	5	0.4
Alternative Inflation	26,860	1	1	0.1	1,930	2	11	0.1
Equities		**304**		**6.9**		**207**		**5.1**
Developed markets	114,628	119	10	2.7	111,328	142	13	3.5
Emerging markets	36,640	185	51	4.2	35,579	65	18	1.6
Alternative investments		**2,063**		**46.9**		**2,103**		**51.3**
Real estate	44,441	281	63	6.4	40,084	270	67	6.6
Private equity	22,979	1144	498	26.0	20,208	1,186	587	28.9
Opportunity Fund	1,076	-17	-156	-0.4	1,371	34	251	0.8
Commodities	17,652	49	28	1.1	18,414	56	30	1.4
Infrastructure	12,530	154	123	3.5	11,131	123	110	3.0
Hedge funds	20,019	452	226	10.3	18,579	434	234	10.6
Overlay		**6**		**0.1**		**6**		**0.1**
Overlay & other	-192	6		0.1	-3,588	6		0.1
Total management and performance fees	**440,302**	**2,512**		**57.0**	**410,137**	**2,460**		**60.0**

Totals use unrounded figures
bps per class are calculated by comparing the costs per class with the capital (NAV) of the same class
bps of total are calculated by comparing the costs per class with the total capital (NAV) of the fund

The table above presents the costs for each investment category. In order to provide further insight into the level of costs and their development over time, two additional ratios are calculated: "bps per cat." and "bps of total". The first (bps per category) compares the costs of the relevant investment category with its net asset value. This provides an insight into how expensive or otherwise an investment category is. The second ratio (bps relative to the total) expresses the costs of the relevant investment category in relation to the total net asset value of the pension fund. This ratio makes clear which investment category contributes most to total costs.

The cost level of alternative investments (46.9 bps, 2018: 51.3 bps) is higher than those of equities (6.9 bps, 2018: 5.1 bps) and fixed income securities (2.9 bps, 2018: 3.0 bps), but this category offers significantly better prospects of returns. The real costs of illiquid investments in Q4 are not always available on time. In such cases, the real costs up to the end of Q3 are included and supplemented by estimates for Q4, based on the real Q4 costs of the previous year.

Private equity and hedge funds are the asset classes with the highest levels of remuneration. Combined, these categories make up nearly 10% of the portfolio, but they are responsible for 36.3 bps of the total 57.0 bps in asset management costs. Net of costs, private equity achieved a net return of 22.3% (2018: 15.4%); for hedge funds the net return amounted to 7.1% (2018: 8.5%). Based on these returns the Board of Trustees considers the level of costs of these categories as responsible and acceptable.

Management fees by category

	2019				2018			
	Average managed assets in € mln	€ mln	bps per class	bps of total	Average managed assets in € mln	€ mln	bps per class	bps of total
Fixed-income investments		**128**		**2.9**		**113**		**2.8**
Government bonds	67,666	28	4	0.6	56,556	25	5	0.6
Corporate bonds	59,970	66	11	1.5	55,372	61	11	1.5
Emerging-market bonds	14,759	34	23	0.8	11,867	27	23	0.7
Inflation-linked		**12**		**0.2**		**17**		**0.5**
Inflation-linked bonds	1,273	11	10	0.2	31,306	15	14	0.4
Alternative Inflation	26,860	1	1	0.0	1,930	2	11	0.1
Equities		**194**		**4.5**		**197**		**4.8**
Developed markets	114,628	108	10	2.5	111,328	110	10	2.7
Emerging markets	36,640	86	24	2.0	35,579	87	24	2.1
Alternative investments		**1,113**		**25.3**		**1,037**		**25.2**
Real estate	44,441	208	48	4.7	40,084	200	50	4.8
Private equity	22,979	444	190	10.1	20,208	386	192	9.4
Opportunity Fund	1,076	20	164	0.5	1,371	24	173	0.6
Commodities	17,652	47	27	1.1	18,414	50	27	1.2
Infrastructure	12,530	103	86	2.4	11,131	103	92	2.5
Hedge funds	20,019	290	145	6.6	18,579	274	148	6.7
Overlay		**6**		**0.1**		**6**		**0.1**
Overlay & other	-192	6		0.1	-3,588	6		0.1
Total management fees	**440,302**	**1,454**		**33.0**	**410,137**	**1,370**		**33.4**

Totals use unrounded figures
bps per class are calculated by comparing the costs per class with the capital (NAV) of the same class
bps of total are calculated by comparing the costs per class with the total capital (NAV) of the fund

There were no major shifts in the management fees per investment category in 2019. For alternative investments management fees (in euros) increased, mainly due to the expansion of the private equity portfolio.

Although total management costs increased, in basis point terms they actually decreased.

Development of performance fees

Performance fees by category

	2019				2018			
	Average managed assets in € mln	€ mln	bps per class	bps of total	Average managed assets in € mln	€ mln	bps per class	bps of total
Fixed-income investments		**-3**		**-0.1**		**14**		**0.3**
Government bonds	67,666	-	-	-	56,556	0		
Corporate bonds	59,970	-5	-1	-0.1	55,372	10	2	0.2
Emerging-market bonds	14,759	2	1	0	11,867	4	3	0.1
Inflation-linked		**-**		**-**		**0**		**0.0**
Inflation-linked bonds	1,273	-	-	-	31,306	0		0.0
Alternative Inflation	26,860	-	-	-	1,930	0		0.0
Equities		**110**		**2.5**		**10**		**0.3**
Developed markets	114,628	10	1	0.2	111,328	32	3	0.8
Emerging markets	36,640	99	27	2.3	35,579	-22	6	-0.5
Alternative investments		**951**		**21.6**		**1,066**		**26.0**
Real estate	44,441	73	17	1.7	40,084	70	18	1.6
Private equity	22,979	699	304	15.9	20,208	800	396	19.5
Opportunity Fund	1,076	-37	-345	-0.8	1,371	11	78	0.3
Commodities	17,652	2	1	0.0	18,414	6	3	0.2
Infrastructure	12,530	51	41	1.2	11,131	20	18	0.5
Hedge funds	20,019	163	81	3.7	18,579	159	86	3.9
Overlay		**-**		**-**		**0**		**0.0**
Overlay & other	-192	-		-	-3,588	0		0.0
Total performance fees	**440,302**	**1,058**		**24.0**	**410,137**	**1,090**		**26.6**

Totals use unrounded figures
bps per class are calculated by comparing the costs per class with the capital (NAV) of the same class
bps of total are calculated by comparing the costs per class with the total capital (NAV) of the fund

In 2019 total performance fees decreased, both in absolute terms and in basis points. The negative performance fees for fixed income securities (-€3 million) and the Opportunity Fund (-€37 million) are particularly striking. In these asset classes provisions for performance fees had to be adjusted downward in 2019. Part of the provision built up in the period up to and including 2018 for remuneration to be paid out in 2019 was thus reversed, leading to negative performance fees for 2019. Performance fees for private equity were down on the previous year, while those for emerging market equities were up. This is attributable to the fact that the performance of both categories were respectively lower and higher than the benchmark.

Development of transaction costs

Transaction costs by category

	Average managed assets 2019 in € mln	Total 2018
Fixed-income investments		
Government bonds	20	11
Corporate bonds	78	74
Emerging-market bonds	49	33
Inflation-linked		
Inflation-linked bonds	11	19
Alternative Inflation	-	-
Equities		
Developed markets	36	43
Emerging markets	17	38
Alternative investments		
Real estate	21	22
Private equity	- 4	3
Hedge funds	81	87
Commodities	7	6
Opportunity Fund	1	-
Infrastructure	28	8
Overlay		
Overlay & other	47	53
Total	**392**	**397**

Totals use unrounded figures

In 2019 transaction costs fell by €5 million in net terms, with Equities showing the biggest falls and Infrastructure and Emerging Market Bonds the biggest increases. Transaction costs for illiquid investments were mainly advisory fees of external parties. As a result of increased investment in the real economy, notably infrastructure, more advisory fees were incurred in 2019, as is necessary in order to be able to invest responsibly in concrete projects. For investments in fixed income securities the transaction costs consist largely of implicit spread costs. Since more purchase and sale transactions took place in 2019, spread costs increased.

Market comparison of asset management costs

The Board of Trustees tests to see the relationship of ABP's asset management costs to those of other national and international funds and whether they are effectively applied. To this end, ABP follows the annual CEM global benchmark surveys, bearing in mind the inherent limitations of a benchmark survey.
For the market comparison of the asset management costs we are happy to compare ourselves with our global peers, given our size and activities. For the performance benchmark we make the comparison with our Dutch peers on account of the regulations that Dutch pension funds have to deal with.

The latest CEM report for 2018 (the figures for 2019 are not yet available at the date of writing) shows that ABP's costs excluding transaction costs are slightly higher than those paid by our global peers for a comparable asset mix. This comes in particular from above-average outsourcing via funds of funds, private equity, hedge funds and external active mandates. In 2019, as explained, we took further steps to have more of these activities carried out by APG. The average five-year outperformance (0.7%) is still high in comparison with our Dutch and global peers (0.0% and 0.4% respectively). We consider this positive on balance.

Talking to our stakeholders

ABP communicated regularly in the reporting year with employers and important secondary stakeholders about topical significant subjects. As Board of Trustees, we find it important and valuable to talk to them personally whenever possible.

Employers

In conversation

In the reporting year, ABP has regularly entered into discussions with employers - who, along with participants, are a primary target group of the fund. A number of Board of Trustee members spent (part of) a day with ABP account managers. They visited educational institutions in primary and secondary education and higher professional education. In our dialogue with employers we try to focus on issues that are relevant to them as much as possible, such as pension awareness, sustainable employability and labor mobility.

In November, ABP updated employers in three major meetings about the latest developments concerning pensions and ABP. Subjects covered included the current financial position, changes in the pension scheme for 2020, the fund's financial situation and our investment policy. They also included sector-wide subjects such as the new pension contract and the postponed increase in pensionable age for state pensions.

'Pension Reset' partner event

Every year ABP organizes a gathering for various stakeholders in the government and educational sectors in which it explains and comments on relevant developments. The purpose of the event is to share knowledge and to continue building a good pension in an inspiring manner. 'Pension Reset. En route to happy participants' was the theme in 2019. With representatives from the government and educational sectors, the major employers and other involved parties important and relevant to ABP such as supervisors, government, scientists, other pension funds, social organizations, political spokespersons and also internal organs such as the Accountability Body and the Supervisory Board, we spoke, among other things, about the urgency of an appropriate new pension contract and pension fund's capacity for change. The event was scored 7.4 out of 10 (2018: 7.6).

Pension ambassadors

ABP organized a number of feedback days for pension ambassadors in 2019. These are professionals (mostly HR) working for employers affiliated with ABP, with extensive knowledge of pensions. Members of the Board of Trustees were also present at these sessions. We listened to the pension ambassadors' experiences: what is going well, what could be improved. We also answered questions and discussed current topics and themes together.

Knowledge transfer

The number of users of the ABP Pension Academy, ABP's online learning environment, increased by 43% in 2019. Two new in-depth modules on pension and partner were added in 2019: one about pensions in the event of a partner's death, the other on pensions in the event of separation. Like the others, these modules were developed together with our panel of employers. The purpose of the ABP Pension Academy is to help employers answer employees' questions on pensions faster and more easily. Of the users providing feedback, 97% feel that the given training helps them to answer questions about pensions better. In addition to this, ABP also offers Knowledge Days. Since 2019, one of the conditions that employers must meet is the completion of the online courses before being allowed to attend a Knowledge Day. Knowledge Days held in the autumn were rated on average 8.7 out of 10.

Other stakeholders

Dialogue with stakeholder groups

As Board of Trustees, we regularly converse with stakeholders who are active in the field of environment and society, both at their request and our initiative. In example, within the reporting year there were conversations with Greenpeace, Both Ends and Urgewald about our investments in oil sands and fossil fuels. Additionally, two dialogue sessions were held for stakeholders important to ABP on our new policy from 2020 (see also the chapter headed 'How we invest pension assets'). ABP also took active part in the annual Vatican Dialogues on climate change in relation to fossil fuels (oil and gas).

Meeting on the circular economy and SDGs

ABP is keen to maintain active dialogue with relevant stakeholders on our Sustainable and Responsible Investment policy. In 2019, as well as small-scale conversations with advocacy groups, we also held a congress with the theme 'Work on investing in SDGs. Transition to a circular economy'. Together with NGOs, advocacy groups and investment specialists we spoke about the circular economy in relation to the United Nations Sustainable Development Goals. The roughly 100 attendees rated the congress 8.2 out of 10. ABP used the outcome of this session to fine-tune the new Sustainable and Responsible Investment policy.

Best communication practices shared

During the reporting year ABP organized a themed session with the Pension Federation on pension communication, under the slogan 'The Power of Simplicity'. In addition to three plenary presentations there were workshops on communicating comprehensibly and effectively, data visualization, communicating about reductions and types of participant. The session was attended by 200 professionals and directors active in the pension sector.

ABP in the media

The media spotlights often focuses on ABP, as the largest pension fund in the Netherlands. As Board of Trustees, we think it is important to be visible ourselves and to take our responsibility in social (pension) discussions. In 2019 we regularly agreed to interview requests. These included the TV consumer program MAX Meldpunt about the errors in our administration, the consequences for participants and the new revision and refund policy, the national daily De Telegraaf about unnecessary reduction of pensions and news broadcaster NOS Journaal about ABP's financial position. We also share news from and about ABP via social media. During the reporting year, our chairman of the board started making vlogs on current topics. We also answer participants' questions via social media (more than 50,000 messages in 2019), most of them via Twitter and Facebook.

Pensioen3Daagse: Mastering finances

The Pensioen3Daagse is an important annual stakeholder event. Queen Máxima opened the ABP Realitycheck.nl campaign, aimed at increasing women's financial awareness. Together with Board of Trustees Chair, Corien Wortmann, she spoke to female participants of the 'Mastering finances' training session. The start of the campaign received a lot of media attention. The campaign was well viewed online (website and social media), the realitycheck.nl website had more than 11,000 unique visitors at the end of 2019. The resources and instruments were used more than 1,800 times offered through that website, including a personal action plan.

Vocational secondary school teacher and entrepreneur Shauna Plompen

‘My pension is no longer a blind spot’

In the year when Queen Máxima launched the ABP annual Reality Check program – which aims to provide female members with more insight into their pension and pension choices – teacher and entrepreneur Shauna Plompen discovered that her pension was a blind spot.

Because women more often work part-time, on average the pensions they build up are 40% less than the pensions built up by men at ABP. It also appears that they focus less on their financial future. Full-time vocational secondary school teacher and new entrepreneur Shauna Plompen keeps a close eye on her finances: ‘When it comes to money, I’m extremely strict: earn and save money first, then you can spend it. I consider security and financial certainty to be extremely important.’

Confronting

‘I teach finance to vocational secondary school pupils and thought that I knew everything that there was to know about it. But in 2019, I discovered that I had a blind spot: my pension. I had never been on the ABP website and didn’t know how much pension I had built up either. It was quite confronting.

> I teach finance and thought that I knew everything that there was to know about it. But in 2019, I discovered that I had a blind spot: my pension.

I mapped out my incomings and outgoings for the training course entitled “Mastering finance”. Then I used the Clear Overview & Insight tool which can help you get a better handle on your total income, even if you are going to work less. Relevant for me, as my long-term plans are to be more adventurous. I will then build up less of a pension with ABP, unless I arrange supplementary savings through ABP or elsewhere myself.’

She understands the fact that her generation is not very active in thinking about pensions and retirement. ‘It’s still such a long way off. But I have also noticed that my generation is much more concerned about the work-life balance. What do you want to do apart from your work? As far as I’m concerned, you earn money to be able to achieve your goals and reward yourself. By traveling, learning new things and developing as a person. Now, but also later! So it’s good to continue to keep a close eye on your pension too. Of course, there is always a solution for getting out of a negative situation. But I would prefer to anticipate that situation rather than have to top up my pension pot later on.’

'When it comes to money, I'm extremely strict: earn and save money first, then you can spend it.'

Risk management

In the context of risk management monitoring and control of the financial risks and execution risks were on top of mind of the Board of Trustees. In the category of financial risks the Board of Trustees has performed a mid-term review of the 2018 ALM-study. The Board of Trustees explicitly assessed what measures can be taken, related to our investment and premium policy, in order to decrease the tension in the pension triangle. In the category of controlling execution risks we worked on data quality and improvements in connecting with data of other relevant parties. The risk willingness on administrative errors remains low.

Our risk principles

By means of pro-active and integrated risk management ABP aims to ensure that the risks which threaten attainment of its strategic goals are identified, analyzed and controlled. As part of this, ABP organizes its risk management in such a way that it becomes an inseparable integrated part of the regular processes. In all our activities, including the monitoring of the activities outsourced to APG, we use six leading risk principles:

1. **Execution of the strategy and of our core tasks requires risk control.** When we talk about risk control, we distinguish between risks we deliberately seek out for strategic reasons and risks that arise in the execution of our core tasks as a pension fund. For example, this means that we manage risks that are expected to be offset by positive returns in order to realize our objectives. This specifically concerns investment risks. We seek exposure to these risks for strategic reasons. Aside from that, we monitor, analyze, and manage risks linked to the execution of our core tasks. They are not expected to be offset by positive returns. ABP therefore aims to reduce and where possible to eliminate these risks, which particularly concern risks in the areas of execution and integrity.
2. **We integrate risk awareness at all levels.** We aim to create a culture that allows risk management to flourish and we, as Board of Trustees, set the tone for this culture through our behavior at the top. The Board of Trustees communicates the importance of risk management through its words and its actions. ABP has integrated risk awareness and risk management into its daily business at all levels.
3. **We always make decisions based on an appropriate risk assessment.** When making decisions, we aim to be transparent about all relevant facts and the risks associated with them. We therefore identify the risks before every decision. We estimate the likelihood and impact of each risk, so that we can adjust our risk management to our risk appetite.
4. **Risk management is inextricably linked to the execution of ABP's core tasks.** The person with operational responsibility for a certain core task is responsible for the management of the risks associated with this activity. These activities and the associated risk management are also independently monitored.

5. **When taking control measures, we keep the proportionality principle in mind.** When making policy decisions and creating our risk management system, we test the effectiveness and efficiency of any control measures. Control measures are not a goal in and of themselves: for all significant risks we consider which - if any - control measures are required.
6. **We react to and anticipate new and changing risks.** We realize that risks are not static, so our risk management system is also dynamic.

How we organize risk management

ABP appointed the following independent holders of key functions in 2019:

- the head of pension policy as the holder of the key actuarial function;
- the head of risk policy as the holder of the key risk management function;
- the head of internal control as holder of the key internal audit function.

These holders of key functions comment on their findings and give their recommendations in a quarterly report to the Board of Trustees. We discuss these subjects in a Board meeting with a view to subsequently making any adjustments that may be necessary. If necessary, as Board of Trustees, we ask for more information or further investigation. If there are any developments in the meantime requiring direct action we are directly informed of them.

At the basis of ABP's risk management is the 'three lines of defense' model. In line with our risk principles, the first line of defense is responsible for its own activities and the risks associated with these activities. The second line of defense (the actuarial and risk management functions) supports, advises, coordinates and watches over the first line to make sure that it effectively fulfills its own responsibilities. The third line of defense (the internal audit function) checks to see whether the combination of the first and second lines of defense functions correctly and provides an objective, independent opinion on this.

New in 2019: integral risk reporting by the holder of the key risk management function

ABP has used a new, integral risk reporting system, under the responsibility of the holder of the key risk management function since 2019. The purpose of this reporting is for an independent official to provide the Board of Trustees with transparency about the risks, what they mean for ABP and how ABP deals with them. The reporting is of a forward-looking nature and assesses whether newly identified risks lead to the risk profile's deviating from the risk appetite. If such is the case, the holder of the key risk management function includes a risk dossier in the report, in order to clarify the management context and examine the interdependencies and correlations among different risks.

The Board of Trustees also receives direct reports of relevant risks from the Executive Office of the Board, together with a risk assessment and possible control measures. Activities and tasks outsourced to APG are also monitored by the Executive Office. Any significant developments arising from this are reported to the Board of Trustees. In his independent capacity the holder of the key risk management function monitors how the Executive Office does this; this is also part of the integral reporting.

Own-risk assessment

Pursuant to IORP-II, from 2019, it is legally obligatory from to perform an own-risk assessment (ORA) at least every three years. The ORA explains how insight is obtained into the interdependence between ABP's strategic roadmap, the material risks that may arise in attaining it and the possible consequences for participants and the fund itself. Another part of the ORA is the description of how we structurally measure, assess and where necessary fine-tune the effectiveness of our risk management. In the reporting year ABP took the initiative of sharing our knowledge of the drawing up of the ORA with the pension sector. ABP will share the definitive ORA document with DNB in 2020.

Risk categories and risk willingness

We have divided our risks into four categories: strategic risks, financial risks, administration risks and integrity risks. These four categories together cover ABP's entire risk spectrum; we use them to determine our risk appetite. The Board of Trustees recalibrates the risk appetite at least every three years.

ABP uses a three-point scale for risk appetite; see also box text.

Risk willingness

Risk willingness is the amount of risk that ABP is prepared to take in striving toward its objectives. The choice of objectives and associated strategies must be in line with the degree of risk willingness. For example, if risk willingness is low, the strategy chosen must not entail too much risk. Risk willingness also has consequences for weighing up risks against each other. If the risk willingness for a particular risk is low for example, it may not be increased in order to reduce another risk. The definitions:

Low

Choose the option with the smallest or with very limited risk; not prepared to trade off risk against other risks, or only to a very limited extent.

Medium

Choose to run limited risks if costs do not outweigh benefits; in the right circumstances, prepared to trade off risk against other risks.

High

Choose to run risk, but control the possibility of loss; prepared to trade off risk against other risks.

The descriptions of the four risk categories and the associated risk willingness are shown in the table hereunder; a brief description and explanation is given for each risk category.

Risk willingness

Risk category	Description	Risk willingness	Explanation
Strategic risks	Risks related to the achievement of the pension fund's objectives,	Low - Medium	Strategic risks need not only be risks that we want to avoid or mitigate, By preparing for the future and taking on new challenges. for example with IT innovation. we are also looking for new strategic risks,
Financial risks	Risks related to the financial position of the fund and the pension rights of pensioners and the pension entitlements of (former) members,	Medium - High	Financial risks that are expected to yield a positive return are deliberately sought out and the associated risk appetite is high, The risk appetite is average with regard to a number of financial risks that are not matched by positive returns. such as liquidity risk. counterparty risks and sustainability risks (ESG),
Execution risks	Risks resulting from insufficiently effective business operations. as a result of which the strategic objectives of the pension fund are not achieved,	Low - Medium	Implementation is a core task of ABP, That means that we are exposed to execution risks, There is no positive return for this execution risk, ABP accepts a limited (residual) risk if controlling an execution risk is too expensive: the benefits must outweigh the costs,
Integrity risks	The risk associated with not complying with written and unwritten rules of ethical business operations,	Low	ABP does not accept any risks with regard to knowingly not complying with written and unwritten rules of ethical business conduct, ABP strives to always fully comply with written and unwritten rules of ethical business operations. including legislation and regulations. the Pension Funds Code and our own integrity policy,

Development of risks in 2019

Strategic risks

ABP's strategic risks and their possible impact form an integral part of our strategic roadmap. In our strategy we also take account of different future scenarios. This ex ante approach ensures that we can establish realistic KPIs that we can use to monitor progress. This enables us to take accurate corrective action if necessary. We carried out a SWOT analysis (strengths, weaknesses, opportunities and threats) in 2019. ABP also used a strategic risk analysis to test the extent to which it carries out actual concrete activities to attain the strategic objectives in 2019.

Financial risks

Financial crisis plan activated

In the reporting year ABP activated the Financial Crisis Plan for 2019. The crisis plan consists of six steps to be gone through:
Step 1 - Reason for crisis plan;
Step 2 - Analysis of crisis situation;
Step 3 - Inventory of measures;
Step 4 - Assessment of measures;
Step 5 - Proposed resolution by Board of Trustees;
Step 6 - Opinion issued by Accountability Body and definitive resolution of the Board of Trustees.

Steps 1 and 2: Reason for the crisis plan and analysis of the crisis situation

The fall in the funding ratio led to a deterioration of the financial position in the reporting year and a real chance of pension reduction. The Board of Trustees saw this as a reason to activate the crisis plan and to analyze the crisis situation.

Steps 3 and 4: Inventory and assessment of measures

The Board of Trustees then identified the possible measures and assessed them. The Board of Trustees once again assessed the impact of the possible measures on participants' pensions and in conjunction with this also the pension triangle. In order to be able to make a good assessment, and also in view of the all-time low interest rates, in 2019 ABP specifically factored in a persistent low interest rate scenario in the mid-term review of the ALM study. This enabled the Board of Trustees to analyze how ABP's financial position would evolve in an alternative scenario in which interest rates were to remain low for an extended period. See also the chapter headed 'Our financial position'.

Steps 5 and 6: Board decision process and opinion of the Accountability Body

The Board of Trustees was able to close down the Financial Crisis Plan for 2019 at the beginning of 2020 without having to take measures to reduce pensions. ABP's financial position had recovered sufficiently by year-end. The Board of Trustees did however decide in November 2019 to adjust the contribution policy from 2021. This is because the cost price of pensions has increased. ABP's Accountability Body issued a negative opinion on the contribution and indexation resolution; a minority was positive. The Board of Trustees and the Accountability Body agreed on the need to increase contributions because pensions had become more expensive, but the Accountability Body wanted to take the first step in 2020.

Sensitivity analysis of funding ratio

The table shows that the increases to the market interest rates had a positive impact on the funding ratio because the interest rate risk is not fully hedged. If investment returns are positive, the funding ratio will also increase. The reverse is true for decreases in the market interest rate and negative investment returns. For example, if in early 2020 the interest rate falls in a short time by 0.5 pp and equities do not increase in value, the funding ratio will fall from 97.8% to 93.3%. The chapter headed 'Our financial position' explains the development of interest rates in 2019 and ABP's interest rate hedging policy.

Sensitivity analysis of funding ratio

Market interest rate change		-1.0%	-0.5%	0.0%	0.5%	1.0%
Return on equities	30%	104.9%	110.1%	115.4%	120.7%	126.1%
	20%	99.6%	104.5%	109.5%	114.6%	119.7%
	10%	94.2%	98.9%	103.6%	108.4%	113.3%
	0%	88.9%	93.3%	97.8%	102.3%	106.9%
	-10%	83.6%	87.7%	91.9%	96.2%	100.5%
	-20%	78.2%	82.1%	86.0%	90.0%	94.1%
	-30%	72.9%	76.5%	80.2%	83.9%	87.7%

Financial risks that we have deliberately sought from the point of view of returns are monitored and mitigated under our Strategic Investment Plan. More information can be found in the chapter headed 'How we invest pension assets'.

Administration risks

ABP outsources the administration of the pension records, the asset management, fiduciary advice, and the fund support to APG. We have set out the agreements with APG on the outsourced activities in contracts and Service Level Agreements, including the associated KPIs. The contract with APG Asset Management was updated in 2019 and new SLAs have been agreed for 2020. The monitoring and control of administration risks form an explicit part of these.

Direct insight thanks to the management dashboard

We expanded the management dashboard, which gives ABP quick insight into the fulfillment of agreements made (KPIs) and the most important figures of the fund in 2019. Based on the indicators shown for administration results and risks we can take any necessary corrective actions as Board of Trustees, in a timely manner. The dashboard also shows us every quarter whether the fund is still on course and where the administration processes can perhaps be further improved. The Board of Trustees also discussed the funding ratio and the investment portfolio every quarter by reference to analyses in the dashboard.

Improved incidents manual

ABP and APG drew up a detailed incident manual to complement the existing rules on incidents in 2019. The incident manual aims to prevent and resolve undesired situations with and possible negative effects on participants or employers. The incident manual indicates which actors within ABP and APG are involved in monitoring and early detecting to prevent and resolve incidents. It also sets out how we are to assess and deal with signals and situations so as to be able to trigger the right follow-up actions. It also contains a stakeholder checklist which makes clear which internal and external stakeholders are to be informed in the event of an undesired situation with a possible negative impact on participants or employers. An important part of the incident manual is the post-incident assessment, so that we continue to improve our organization.

Integral Crisis Management Plan

In 2019 ABP combined and enhanced the existing crisis management plans and emergency procedures in a single plan: the ABP Integral Crisis Management Plan (ICMP). The ICMP forms the manual for ABP on how to proceed in exceptional situations and how Board decisions are to be taken in such exceptional circumstances. The definition used for exceptional situations ('crisis') is an event that may lead in a short period to great material or intangible damage for ABP or participants and that with very limited time to decide and a high degree of uncertainty calls for decisions and operational action falling outside the organization's normal daily procedures.
The ICMP forms a practical manual for dealing with exceptional situations in which existing policy has to be deviated from, temporarily or otherwise, or temporarily and with great speed. In principle the regular decision-making process is always the starting point. However if that is not possible, this exceptional decision-making procedure comes into play. At the same time we amended the Articles of Association as they relate to how to proceed in exceptional situations. The ICMP also provides that in exceptional situations ABP must set up a multi-discipline operational crisis management team to take operational measures to prevent or limit damage as a result of the crisis. In view of the coronavirus crisis the ICMP was activated at the beginning of March 2020.

IT risks

Within ABP and APG great attention is paid to IT risks. The focus was specifically on the risks of outsourcing to third parties in 2019. At the same time there was undiminished attention for the securing of information and cyber-risks. As well as technical measures, organizational measures were also taken, including awareness-raising training sessions for ABP directors and employees.

Operation and cooperation of the fiduciary model under the microscope

The Board of Trustees commissioned IMD Business School to develop a business case with the theme: how is the fiduciary model introduced by ABP in 2017 working? The case was set up on the basis of a real life dilemma. The Board of Trustees dealt with the case in order to look at whether and, if so, how the chosen model contributes to more efficient execution of the investment policy, more independence in the distribution of roles and greater transparency in the processes. The case is also being handled by the management of APG Asset Management in 2020. Our lessons and findings will be incorporated into the evaluation of the fiduciary model scheduled for 2020.

Integrity risks

Integrity risks relate to the conduct of the Board of Trustees, the Executive Office and the administration organization, the security and accuracy of processes and systems and the quality and reliability of external partners. We attach great importance to compliance with legislation and codes of conduct in force and ensure appropriate monitoring and precautionary measures to mitigate these integrity risks.

In the reporting year there were four individual reports to the Dutch Data Protection Authority of data leaks from ABP. ABP also reported monthly in bulk form to the Data Protection Authority reporting items returned to us by the postal authorities that transpired to have been incorrectly addressed. Wherever possible these cases were used to take remedial measures and improve processes.

In control statement 2019

The developments and risk management activities of the fund and the administrative organization described above resulted in the In Control Statement 2019 of the Board of Trustees.

ABP's Board of Trustees is responsible for the fund's financial position and hence for the existence, configuration and performance of the risk management and control systems. The purpose of these systems is to monitor the attainment of the strategic, operational and financial objectives of the pension fund and to make reliable financial reporting possible. They are further aimed at identifying and limiting the risks that the pension fund takes and to which as a result of its environment it is exposed. The risk management systems must also ensure strict compliance with the relevant laws and regulations. ABP's Audit Committee periodically discusses its assessment of the configuration, existence, and performance of the fund's risk management and control systems.

The internal risk management and control systems are designed to provide a reasonable degree of assurance regarding the identification and control of risks. The systems cannot guarantee that the strategic, operational and financial objectives will actually be achieved, nor can they completely prevent all material errors and instances of fraud or non-compliance with relevant laws and regulations. The Board of Trustees has taken steps to mitigate the impact of such risks as far as possible. The Board of Trustees notes that, by the nature of the pension fund's activities, some risks are beyond its control, such as demographic changes and developments on the financial markets.

ABP exercises risk management primarily through the committees to which the various areas of risk management are allocated. Risk management within the fund is discussed by the Board of Trustees partly on the basis of integrated risk reporting. The Executive Office is responsible for the independent assessment of the fund's own risk management and the risk management performed by the administrative organization in relation to the outsourced processes. The external auditors notify ABP of the findings of their regular audit activities and of specific investigations carried out at ABP's request. ABP also commissions other external agencies to conduct specific investigations. For some years, the administrative organization has had a comprehensive control framework of process descriptions, checks and test reports in place to ensure effective and consistent risk management. The reports on the assessment of this control framework, including the management statements, Standard 3402 type II and Standard 3000 reports and periodic reports issued by the Board and management of the administrative organization, as well as the fund's own risk management function, provide a sufficient basis for the issue by the Board of Trustees of its own In Control Statement (ICS).

In the 2019 In Control Statement, the Board of Trustees makes an explicit pronouncement on the quality of the risk management and control systems by which the fund's objectives in regard to financial reporting are achieved. The decision to focus on financial reporting in the ICS was partly dictated by international corporate developments in the area of reporting on internal risk control and the best practice stipulation of Corporate Governance Committee II. This In Control Statement relates to the financial reporting risks with regard to the 2019 financial statements, the figures presented in the 2019 Board report, and the 2019 quarterly reports.

Partly on the basis of the 2019 In Control Statements received from the administrative organization, the Board of Trustees declares that the internal risk control systems are in operation to manage the strategic, financial, operational and compliance risks related to the achievement of ABP's objectives.

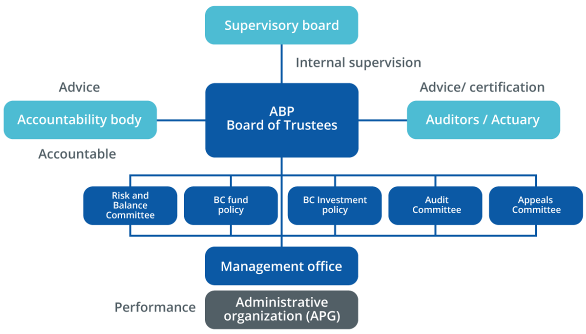
With respect to the financial reporting risks, the Board of Trustees declares with a reasonable degree of certainty that the risk management and control systems in 2019 have performed in such a way that the said financial reporting products contain no material misstatement.

Governance

In the context of our governance, the implementation of IORP-II and the further elaboration of the fitness policy were important points of focus for the Board of Trustees.

Our governance structure

The governance structure of ABP remained unchanged in the reporting year.



Composition of the Supervisory Board and the Accountability Body

The composition of the Supervisory Board did not change during the year under review. Three new members joined the Accountability Body, in replacement of three sitting members.

In the section 'Management and key representatives' at the end of this annual report fuller personal information can be found on the members of both bodies, such as gender and date of birth.

Changes and re-appointments on the Board of Trustees

Two appointments took place to the Board of Trustees of ABP. On March 1, 2019 Ms. Krista Nauta joined, nominated by VSO, the Association of Government Sector Employers. She succeeded Mr. Joop van Lunteren, whose term of office had expired. With this appointment ABP complies with Norm 33 of the Code of the Dutch Pension Funds, which states that the Board of Trustees must have members both older and younger than 40.

With effect from March 7, 2019 Mr. Loek Sibbing joined the Board of Trustees of ABP. He took the place of Mr. Erik van Houwelingen, who has accepted a position elsewhere. Mr. Sibbing was also nominated by VSO.

Presence board

Meeting	Number of meetings	Participation rate
Two-day board meeting including thematic sessions	8	91%
Board committee on Pension policy	9	89%
Board committee on Investment policy	11	91%
Audit committee	8	96%
Risk and Balance Sheet committee	8	92%
Consultation meetings with the Accountability Body	6	81%
Consultation meetings with the Supervisory Board	5	1)

1) The consultation meetings with the Supervisory Board are always attended by a delegation of the Board of Trustees on a rotating schedule. As such, no participation rate is reported.

In 2019, three Board members were re-appointed for further four-year terms of office. Ms. Conchita Mulder and Mr. Xander den Uyl were re-appointed with effect from April 1, 2019. Both were nominated by the pensioners' representatives on the Accountability Body. Ms. Geraldine Leegwater was re-appointed with effect from September 1, 2019, nominated by CMHF (Federation of Intermediate and Higher Employees in Government, Education, Companies and Institutions). The schedule for retirement by rotation of Board members is shown hereunder.

In the section 'Management and key representatives' at the end of this annual report fuller personal information can be found on the members of the Board, such as age and other positions held.

Retirement schedule

ABP board members	End of term
Ms. CM Wortmann-Kool	01-01-2023
Ms. M Doornekamp	01-04-2021
Mr. C van Eykelenburg	01-09-2020
Mr. P Fey	01-05-2021
Ms. GAC Leegwater	01-09-2023
Ms. J Meijer	01-08-2021
Ms. CM Mulder-Volkers	01-04-2023
Ms. K Nauta	01-03-2023
Mr. AJM Sibbing	07-03-2023
Mr. PA Stork	01-10-2021
Mr. XJ den Uyl	01-04-2023
Mr. A van Vliet	16-02-2024
Mr. JPCM van Zijl	01-04-2024

Messrs. Van Vliet and Van Zijl have meanwhile been re-appointed for further four-year terms of office.

Articles of Association updated

In the reporting year the Articles of Association were updated with the agreement of the Accountability Body. VSO was dissolved on January 1, 2020, as a result of which employers' nominations for the Board of Trustees will now come from two newly established bodies, the State of the Netherlands as employer of the Central Government, Police, Defense and Judiciary (RDPR) and the Foundation for Autonomous Public Employers (ZPW).

The process of mandating decisions to Board committees, the activities and composition of the Board's Investment Policy Committee and the description of the position of the external actuary were also all updated.

Governance model and annual evaluation

The Board of Trustees of ABP functions as one team, with clearly established responsibilities and mandates. Based on the results of the evaluation of the governance model in 2018, the Board of Trustees focused its attention in 2019 on the optimal application of Board members' expertise to strategic themes. In this way the chosen model works more efficiently, improving the quality and speed of decision-making. In 2019 the three-yearly evaluation was prepared. This involves the presence of an external party. See also the paragraph headed 'Compliance with the Code of the Dutch Pension Funds' later in this chapter.

Further elaboration of the Fitness policy

In line with the evaluation of the governance model, in the reporting year an inventory was made of the knowledge and areas of expertise in the Board of Trustees, both individually and collectively. A matrix was made of this. This matrix was compared with the fitness policy established in 2018. This policy contains the legally obligatory areas of expertise, together with extra fields of expertise that are of strategic importance to ABP: communication and participant experience, asset management (as a stand-alone component), IT and risk management. Based on the matrix we may conclude that all areas of knowledge are represented within the Board of Trustees and that the Board of Trustees can be considered suitable for the performance of its function.

At the same time we continue to invest constantly in our further development. Guided by the matrix we attended various group and individual training sessions in the reporting year, in areas that included IT, pensions, particularly the financial aspects, and tax. Special attention was given to specific aspects of asset management, including a three-day program on China; see also the chapter headed 'How we invest pension assets'.

Implementation of IORP-II

By virtue of IORP-II, the EU directive on pension funds, pension funds must make adjustments to their governance, risk management and communication with participants. With the coming into force of IORP-II, ABP is legally obliged to appoint separate holders of key functions for risk management, internal audit and the actuarial function. Specific requirements apply to these holders of key functions as regards independence and expertise. ABP has consciously opted to place these key functions in the Executive Office, in order to comply optimally with the requirements of the law, with an eye to quality and costs. In the reporting year these holders of key functions were tested and approved by DNB, as was the chosen structure. The Board of Trustees made regular use of the knowledge and insights of the holders of key functions, in the various committees for example.

Policy on positions in other companies, Code of Conduct and whistleblowers' arrangements

The Compliance Officer oversees compliance with ABP's Code of Conduct. This Code of Conduct applies to persons connected with ABP (members of the Board of Trustees, the Supervisory Board, the Accountability Body and the Executive Office). This Code of Conduct contains among other things the policy on positions with other companies. It also contains stipulations on the prevention of fraud, handling confidential information, dealing with actual and potential conflicts of interest, gifts and invitations, and handling privileged and price-sensitive information. No exceptional circumstances or deviations arose in the execution, observance or control of the Code of Conduct in the reporting year. The Compliance Officer was not aware of any fraudulent conduct or dealings by persons linked to ABP.

ABP's whistleblowers' arrangements allow misconduct by persons linked to ABP to be reported. No use was made of the whistleblowers' arrangements in the reporting year.

Any potential or imminent shortcomings in compliance with legislation and regulations are highlighted by the Compliance Officer in the compliance reporting and brought to the attention of the Board of Trustees. This enables us to intervene in time if a possible breach of the laws or regulations threatens to happen. In 2019 four compliance reports were drawn up and discussed.

Compliance with the Code of the Dutch Pension Funds and the Pension Act

One of the most important starting points of our compliance policy is observance of the Code of the Dutch Pension Funds. Because we do not comply with Norms 16, 25 or 28, further explanation is in order.

- Norm 16: as well as the members of the Board of Trustees and the Supervisory Board, members of the Accountability Body must also sign the annual Statement of Compliance with the Code of Conduct; members of the Board of Trustees and the Supervisory Board already sign this every year. Starting with the revision of the Code of Conduct in 2020 we will also apply this norm to members of the Accountability Body.
- Norm 25: each trustee has a vote, irrespective of the governance model. We do not comply with this norm, in that ABP's Articles of Association stipulate that the independent Chair of the Board of Trustees appointed by that Board does not have the right to vote.
- Norm 28: the Board of Trustees must assess its performance annually and once every three years it must do so with an external party. In 2019 we did not manage to carry out the annual evaluation. We did start preparing to carry out an evaluation with an external party in 2020.

As regards compliance with the Pension Act, in the reporting year there were no instances of:

- penalties or administrative fines being imposed (Article 96 a) of the Pension Act);
- an instruction in the meaning of Article 171 being given to the pension administrator (Article 96 b) of the Pensions Act);
- a receiver in the meaning of Article 173 being appointed (Article 96 c) of the Pensions Act).

Public Interest Entities

With effect from January 1, 2020 large pension funds are legally designated as 'Public Interest Entities' (PIE). This status entails stricter requirements as regards quality control and independence of the auditor certifying the annual accounts. These include obligatory rotation of auditors and segregation of advisory and auditing activities. Before being designated a PIE, ABP already had a policy of rotation of auditors and segregation of advisory and auditing activities, but where necessary relations with the auditor have been brought into line with the PIE regulations.

Berry Reijnen, director Mosagroep

'Getting closer to retirement'

Mosagroep is a partnership consisting of nine school boards in the Meuse basin, from Limburg to Betuwe. Mosagroep takes care of all the administration for approximately 125 primary schools. In 2019, director Berry Reijnen gave a presentation on what goes on within the organization at the request of the ABP board.

'Mosagroep manages around 2500 salary files,' explains Berry Reijnen. 'In doing so, pensions only actually come up for discussion when a person is coming up to retirement. What we are now seeing at "our" schools is a generation that is approaching retirement. So we are certainly getting asked a lot of questions about pensions. In February 2019, around a hundred colleagues felt the need to talk to a pension advisor. What would retirement actually mean for them and what options did they have? We presented this situation to ABP and before the summer holidays, around thirty from that group had had a personal consultation. A further eighty consultations are planned for the spring of 2020.'

Strengthening each other

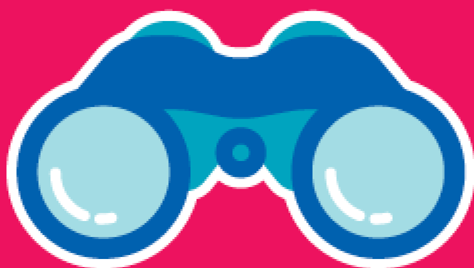
Reijnen himself was invited by the ABP board to come and talk about how retirement works at the schools. 'I gave a presentation and then we had a brainstorming session on how we could work together more in order to strengthen each other. We also discussed practical matters such as how to deal with the older generation who are less accustomed to communicating digitally. One solution is the personal consultations that we currently offer,

> Pensions only actually come up for discussion when a person is coming up to retirement.

or a webinar under the guidance of Mosagroep, for example. Another option is for ABP to 'train' a number of our people so that we can provide retirement guidance ourselves at the affiliated schools. This will enable us to offer our internal customers additional added value. Win-win-win: for ABP, for Mosagroep and for the staff at the schools.'

Besides this interactive information session with the board, Reijnen attended one of the sounding board sessions with employers in Amsterdam. 'I noticed how closely ABP listened to what we were saying there too. I see that as being an extremely positive development. So for me, 2019 was the year when I got closer to retirement. Not because of my age,' he laughs, 'but rather in terms of my awareness. ABP is also in the process of taking that step itself. The distance has been reduced.'

‘At “our” schools a generation is approaching retirement. So we are certainly getting asked a lot of questions about pensions.’



CHAPTER 2

Accountability and Supervision

Report of the Supervisory Board

Summary

In this report the Supervisory Board gives an account of its activities and its findings in the reporting year 2019. The Supervisory Board has chosen to summarize the most important points for attention from 2019 in chapter 1. In chapter 2 the Supervisory Board renders account of its working methods and mission statement. In chapter 3 it gives an overview of findings and recommendations based on the supervision performed. In chapter 4 finally we look ahead to 2020 and the proposed supervisory themes.

For ABP 2019 was yet another eventful year. The Board of Trustees had to deal with some important subjects, which were also hot topics outside the fund. These included notably the risk of having to reduce pensions, accumulation, contributions, interest rates and calculation rates and trends in funding ratios as aspects of the financial position. The interaction between the fund and participants came up for discussion, not only in the context of communication about the financial position but also in that of explanations and disputes about the granting of pensions (disability, forgotten pensions, concurrent years of service) or partner's pensions. The Board of Trustees also devoted much attention in 2019 to the debate on the pension system and appropriate risk control. The Supervisory Board considers that the Board of Trustees provides adequate insight into the consideration of these matters in its Report. These issues were also of great relevance to the Supervisory Board, which held its own deliberations on all these matters from the point of view of supervision

The financial position

In the reporting year the financial position deteriorated. The funding ratio reached a low point in August and the risk of having to reduce pensions quickly increased. The mid-term review, the annual thermometer for balance sheet risks, led to the crisis plan being activated. Particularly in the scenario of protracted low interest rates, prospects for the pension result are not bright, and new pension accumulation is very expensive. The Board of Trustees informed the Supervisory Board in various phases about possible measures for further limiting the risks. In this regard the Supervisory Board spoke with the Board of Trustees about the balance sheet risk, the setting of the contributions, the reduction scenario and communication on the financial position.

The Supervisory Board recognizes that the Board of Trustees acknowledged the seriousness of the situation and acted accordingly. The increased risk received the necessary attention in Board committees and Board meetings as well as in the integrated reporting. No short-term remedy is to hand. The longer term measures have been set in motion, among them the reduction of the discount rate and thus an increase in contributions with effect from 2021. The Supervisory Board weighed up the arguments of the Board of Trustees and understands its starting point - that contributions should not be increased in 2020, mainly in view of the limited financial impact and the importance of having sufficient traction for a structural increase in 2021. In this area the Supervisory Board sees as its most important points for attention for 2020 and beyond:

- fundamental discussions with all interested parties on their ambitions in relation to their risk attitude;
- and managing future expectations with a view to having a realistic picture.

Discussion on the system

From the supervisory perspective attention was given to the debate on the overhaul of the pension system and to the agreement of principles. For ABP participants the result presented contains good starting points based on which the social partners, the government and the pension sector can elaborate a new pension contract. The most important points for attention in the further elaboration are correct rules for calculation, suited to the nature of the new contract, the materialization of the switch or transition to the new system and the necessary fiscal space.

The Supervisory Board takes a positive view of the Board of Trustees' steering its own course in this debate on the pension system in even-handedly promoting participants' interests. The fund has also shown itself ready to bring its experience and expertise to bear in this fractious discussion.

In principle the scheme is the preserve of the social partners. Nonetheless, as Supervisory Board, we appreciate the fund's active stance in various consultative sessions including the G5 (group of five largest cities in the Netherlands: Amsterdam, Rotterdam, The Hague, Utrecht and Eindhoven), the PF (Pension Federation) and its own contacts.

Attitude to financial risk

The Board of Trustees informed the Supervisory Board about the newly re-established own risk attitude. In accordance with the agreements in 2019 the Board of Trustees used the mid-term review to give the fund's governing bodies greater insight into the financial risks. The Supervisory Board takes a positive view of the openness shown by the Board of Trustees in explaining the financial risks. As a result the policy is now more transparent.

The Supervisory Board repeatedly raised the evaluation of the interest rate policy pursued over a number of years with the Board of Trustees from the standpoint of being able to render account of the policy pursued. An evaluation recently took place. The Board of Trustees shared the observations arising from this with the Supervisory Board; they will be used as the starting point for reconsideration of the financial policy and risk attitude.

From the risk appetite and the mid-term review it was evident that the Board of Trustees continues to consider the investment risk appropriate to the fund. The frames for interest rate risk have been refined however. The Supervisory Board encourages the Board of Trustees from the balance sheet risk perspective to pay more attention to playing through adverse scenarios.

Participants' perspective

The Supervisory Board is very favorably impressed by the Board of Trustees' approach to the 'Participant center-stage' theme. The Board of Trustees at various times demonstrated that it is serious about the participants' perspective, that this starting point is more than just communication and where necessary has consequences for decisions about the content of policy. As examples we can mention the changes made to the revision and reclaim policy and an amendment to the complaints arrangements.

Coronavirus crisis

Although the coronavirus manifested itself in 2020, we want to mention this event, which has a substantial impact for the Netherlands and thus possibly also for the fund and its stakeholders. We cannot yet say how serious the impact of the crisis will be on the future financial position of the fund. We refer you to the paragraph headed "The impact of the coronavirus crisis on our financial position" in the report of the Board of Trustees and the paragraph 'Events after the reporting period' in the Notes to the Consolidated Financial Statements.

Modus operandi of the Supervisory Board

The Supervisory Board supervises the Board of Trustees and oversees the conduct of the fund's business. The Supervisory Board also stands ready to give its advice and opinions, invited or uninvited, to the Board of Trustees. The tasks of the Supervisory Board are set out in more detail in the fund's Articles of Association and the way in which the tasks are carried out is further defined in the Regulations of the Supervisory Board. In carrying out its tasks the Supervisory Board applies the Code of the Dutch Pension Funds (internal supervision must contribute to effective and agile functioning of the fund and to controlled and integral conduct of the business) and the VITP (Association of Internal Pension Supervisors) supervisory code.

The following principles of the VITP supervisory code are of particular relevance to the Supervisory Board:

1. Care of participants' pension must be the priority for supervision;
2. Supervisors must be aware of their responsibility as such and conduct themselves accordingly;
3. Supervisors must ensure their fitness and the effectiveness of their activities;
4. Supervisors shall render account of and be responsible for their supervision.

Up until April 30, 2020 when the annual report for 2019 was approved by the Board of Trustees, the Supervisory Board met six times by itself. It consulted five times with the Board of Trustees. Consultation took place twice with a delegation of the Board of Trustees on the fund's financial position in the run-up to the Contributions & Indexation Memorandum for 2020.

In the context of the supervision agenda for 2019, members of the Board of Trustees and team leaders from the Executive Office were invited to attend meetings of the Supervisory Board for more in-depth consultation. This concerned among other things ICT risks, the practicalities of appointing the new holders of key functions (risk, audit and actuarial) under IORP II, implementation of the new Sustainable and Responsible Investment policy 2020+ and the first steps on the way to a new tax policy. In a meeting with a delegation from the Board of Trustees attention was also given to the state of play regarding the move to place the participant and employer experience center-stage.

In addition to these regular discussions there was also one strategy meeting with the Board of Trustees. In this meeting attention was given to the move to place the participant and employer experience center-stage, the desired positioning as pension experts in the debate on pensions and the goals and ambitions ('easy' versus 'ambitious') in the context of the new Sustainable and Responsible Investment policy 2020+.

There were three consultations with the Accountability Body in the reporting year. Topics discussed with the Accountability Body in 2019 related above all to the balanced weighing up of interests, reducing complexity, the Supervisory Board's accountability report for 2018, the regular activities of the Supervisory Board in the context of the supervision agenda for 2019 and the re-appointment of a member of the Supervisory Board. Members of the Supervisory Board attended meetings of the Board of Trustees with the Accountability Body as observers in order to gain an impression of the dynamic between the two bodies.

During the reporting year there was also one consultation with the external supervisor, DNB. Lastly there was also one consultative meeting with the Supervisory Board of APG. Prior to each consultation with the Board of Trustees, the Supervisory Board met by itself, on the one hand to prepare for the meetings and on the other to exchange observations and findings on the basis of the supervision agenda for 2019. The Supervisory Board is informed of the activities of the Board of Trustees by means of dialogue with the Board, minutes of meetings and quarterly reporting; members of the Supervisory Board also attended Board of Trustees committee meetings as observers. In this way the Supervisory Board gained an impression of the dynamic in the Board's discussions. The Supervisory Board has access to all information on request. Additionally, periodic consultations took place between the chairs or vice-chairs of the two Boards. There was also regular consultation between the chairs of the two Boards on the functioning of the governance model. During the reporting year the Supervisory Board approved the appointment as members of the Board of Trustees of Ms. Nauta and Mr. Sibbing and agreed to the re-appointment of Ms. Leegwater, Ms. Mulder and Mr. Den Uyl.

In the context of the approval of the annual report for 2019, the Supervisory Board took due note of a report from the compliance officer; a member of the Supervisory Board was also present at a meeting of the Audit Committee dealing with the annual financial statements. The external auditor and the certifying actuary of the fund were also present at this meeting. The Supervisory Board observed that the auditor appeared independently in the meetings of the Audit Committee and that the Board of Trustees gave the auditor sufficient opportunity to give its opinion whether requested or uninvited.

Members of the Supervisory Board take care to ensure that their knowledge and skills are always up to date. In this context various seminars and training sessions were attended in 2019. In the spring, members of the Supervisory Board attended a mini-course on balance sheet risk, tailor-made for ABP and attended only by them, prepared by an outside expert. Some members of the Supervisory Board also took part in a summer course which APG offers to the directors and supervisors of its client funds.

Lastly in 2019 a self-evaluation of the Supervisory Board took place with external accompaniment. With the help of the Insights Discovery tool, attention was given to the preferred behavior of members of the Supervisory Board and the perceived role of the Supervisory Board and there was a plenary discussion of issues brought up by members of the Supervisory Board along the lines of 'what went right and what could be improved'. The conclusion of the self-evaluation is that the Supervisory Board has a broad variety of personalities and can draw on many behavioral preferences.

The Supervisory Board is supported by a secretary from ABP's Executive Office.

Findings
General policy
The Supervisory Board is of the opinion that the Board of Trustees of a pension fund has as its task to execute the pension scheme as well as possible while taking account of the mission and vision of the pension fund. To this end the Board of Trustees must establish the objectives of the pension fund and the starting points to be used. The Board of Trustees must also have a vision of future-proof execution. The policy and the considerations underpinning it must be sufficiently clear. Fulfillment of and compliance with the policy and ambitions must be monitored and reported on by means of an appropriate administrative organization and internal control.

The Supervisory Board evaluated the functioning of the Board of Trustees partly on the basis of preparatory documents for Board meetings, reports, dialogue with the Board of Trustees, the forming and passing of decisions and their follow-up. The conclusion of the Supervisory Board is that the Board of Trustees has fulfilled the tasks and responsibilities satisfactorily, taking due account of the interests of the various interested parties so as to achieve a balanced weighing up of interests, ethical conduct of business and appropriate risk control.

Strategy
In 2019 the Board of Trustees, in close coordination with the Accountability Body, established a strategic annual plan on the basis of a multi-year strategy established in 2017. The Supervisory Board was able to confirm that there is a good balance between staying on course on the basis of the multi-year strategy and flexibility in relation to changed circumstances. The Supervisory Board held a dialogue with the Board of Trustees in 2019 with reference to a number of concrete dilemmas to exchange points of view and insights. This dialogue session led to greater mutual understanding of how the strategy can be executed.

Fitness policy
Further steps were also taken once again in the reporting year to assure the quality of the Board of Trustees. An important instrument in this regard was the collective competence matrix. As well as the clear profile outlines with detailed skills and a selection procedure with built-in assurances, the Supervisory Board also attaches value to an assessment of capacity for change. The changes in the sector are significant and the size of this fund is such that none of these changes will leave it unaffected. In this regard objective criteria must be the determinants for fulfilling the Board functions.

The Supervisory Board advises the Board of Trustees, particularly in view of the turbulent developments, to draw up a plan for the succession of board members in the coming years, looking ahead rather than waiting for a vacancy to arise.

Pension scheme
Inevitably much attention and energy on the part of the Board of Trustees went into bringing about a structural settlement for military personnel. The Supervisory Board intensively followed the Board's process aimed at this. Our points for attention were the Board's approach to accommodating the social partners while at the same time keeping an eye on the controlled execution, the legal process and attention to 'plan B'. The Supervisory Board was very pleased that the social partners reached agreement on a viable scheme based on average salary. This will lead initially to more work, but structurally a necessary step has been taken in favor of the controlled and proper execution of the scheme for military personnel, which is also a condition for the controlled and proper execution of all ABP schemes.

The remaining complexity in the schemes causes problems with IT changes, pension administration and provision of services. This will not disappear overnight with a successful overhaul of the system, which in any case is still some way off.

The Supervisory Board takes a positive view of the drawing up of an incident manual, in the preparation of which the Accountability Body also played an important role. The improved arrangements for handling complaints are also a step in the right direction from a service point of view. The Supervisory Board has pointed out however that the most important improvement is a reduction of complexity which will prevent a large proportion of incidents and complaints. The Supervisory Board therefore urges the Board of Trustees to do everything it can in 2020 and subsequent years to reduce unnecessary complexity in the interests of participants and of practicability of the schemes. The Supervisory Board looks forward with great interest to seeing the planned analysis of Appendix K to the pension scheme in the first half of 2020.

Balance sheet and investment risk

From tension in the triangle to crisis situation

The financial situation of ABP deteriorated in 2019 as a result of further falls in interest rates. The Board of Trustees informed the Supervisory Board and exchanged thoughts about the results of the mid-term review and how the Board of Trustees proposed to respond to the deteriorated financial position. The results of the various scenarios were discussed, including the scenario in which interest rates remain low for a long time. The risk of having to reduce pensions in the short term grew. The Board of Trustees changed the status from 'tension in the triangle' to 'crisis situation' and activated the ABP Financial Crisis Plan. The Supervisory Board was informed of the steps and measures considered and taken by the Board of Trustees. The Board of Trustees concentrated on the perspective for action for ABP and looked at short and longer term measures in this regard. The Board of Trustees lobbied the government with a view to avoiding an unnecessary cut in pensions during the transition to a new contract. At the same time the cut scenario was prepared. The Supervisory Board was shown the risk manager's log book as it related to the execution of the financial crisis plan. The Supervisory Board considers that the Board of Trustees satisfactorily realized the seriousness and urgency of the situation and acted accordingly.

The Supervisory Board has advised the Board of Trustees to devote more attention to the situation that will arise if a new pension system is not forthcoming or is much delayed. The Supervisory Board has also advised it to manage expectations more from a long-term perspective in its communications.

Crisis measures: Balance sheet risk

The Supervisory Board has taken due note of the measures adopted by the Board of Trustees for balance sheet risk. The Board of Trustees has refined the framework for future interest rate hedging. The Supervisory Board repeatedly raised the evaluation of the interest rate policy pursued over a number of years with the Board of Trustees from the standpoint of being able to render account of the policy pursued. An evaluation recently took place. The Board of Trustees shared the observations arising from this with the Supervisory Board; they will be used as the starting point for reconsideration of the financial policy and risk attitude.
The equities risk has not been adjusted for either the short or long term. This is in line with the recalibrated risk attitude of the Board of Trustees. With the lower funding ratio this leads to extra tension because the adverse scenarios turn out lower and may even fall below the agreed lower limit. The Board of Trustees has not discussed the risk attitude or the investment risk with the social partners. The Supervisory Board sees this as one of the biggest dilemmas for the fund: in order to escape from the reserve deficit and realize the ambition, it is necessary to take a lot of equity risk, but the flip side is that this entails a risk of sharp price falls, which the fund cannot withstand without a buffer. The Board of Trustees consciously opts for a high level of risk.

The Supervisory Board asks the Board of Trustees to consider devoting more attention, from a balance sheet risk perspective, to playing through scenarios with sharp price falls, with or without further falls in interest rates, and conducting a broad discussion with the fund's stakeholders about the dilemma of the level of risk as it relates to the ambition.

Crisis measures: Setting contributions

The financial crisis situation also led to a review of the level of contributions. The contribution funding ratio had fallen below 60% in the summer. The Board of Trustees informed the Supervisory Board in various steps about the different policy options that it had considered. In September the Board of Trustees advised that it now regarded as important and urgent the adjustment of the discount rate and the increase of the cost price of pensions. Nevertheless in November the Board of Trustees decided not to increase contributions for 2020 but to introduce a lower discount rate of maximum 2.4% starting in 2021. As a result of this the cost price of the contribution in 2021 will rise sharply.

The Supervisory Board took due note of the arguments of the Board of Trustees, the weighing up of interests it had carried out and the opinion of the Accountability Body. In the considerations leading to the Board of Trustees' decision not to increase contributions in 2020, an important argument was to give the social partners sufficient time to adjust the scheme's ambition.

The Supervisory Board's questioning of the Board of Trustees concerned timing above all. Could the process with the social partners not have been started sooner? The Supervisory Board concluded that a sufficient number of varied points of view had been expressed in the Board of Trustees and that the Board had pursued a careful process. As for the outcome of the process there may be different views. From a risk perspective however the Supervisory Board finds the once-only low or too-low contribution in 2020 acceptable. The most important arguments for this are the materiality (a higher contribution in 2020 would not make much difference, but would be above all a signal) and the greater importance of having some traction for a structural increase from 2021.

Communication on the financial position

As a result of the worsened financial position, indexation of pensions became even more remote and the chance of cuts increased. In the Supervisory Board's opinion the Board of Trustees communicates sufficiently realistically on the risk of a reduction. The Supervisory Board sees that dissatisfaction about the lack of indexation is increasing, particularly among older people, and is attracting a lot of attention in the public opinion. The Supervisory Board sees that expectations aroused in the past make acceptance difficult. The Supervisory Board regularly spoke with the Board of Trustees about how, looking ahead, a realistic picture can be given of the pension to be expected. Words in public statements must always be carefully weighed from this perspective. The Supervisory Board advises, particularly as regards the new pension system, staying alert to the creation of realistic expectations.

Sustainable and Responsible Investment policy 2020+

The Supervisory Board spoke with the Board of Trustees about the Sustainable and Responsible Investment policy 2020+. Topics included ABP's most important levers for giving concrete expression to the Sustainable and Responsible Investment policy. The Supervisory Board also questioned the Board of Trustees on experiences and lessons from past years and how these have been anchored in the newly proposed policy. With regard to the inclusion policy, the Supervisory Board is interested in making the results and the effect accessible and comprehensible.

The Supervisory Board positively values the way in which the Board of Trustees has involved stakeholders in forming the policy, among other things in order to reach decisions on the choice of themes. The Supervisory Board also supports the increased transparency of the results and accountability. The Supervisory Board is of the opinion that the new plan has sufficient ambition and looks forward to its materialization. The Supervisory Board advises the Board of Trustees to incorporate one or two interim evaluations so that the objectives and/or the policy can be adjusted on the way to 2025.

The Supervisory Board took note with great interest of the attention devoted by the Board of Trustees to the theme of tax and ethics. The Supervisory Board indicated in this regard that it finds it important for ABP to exert its influence as a major party whenever this is relevant and possible from a social point of view and appropriate to its own identity. The Supervisory Board supports the Board of Trustees in the development of a new fiscally ethical policy and its embedding in the Sustainable and Responsible Investment policy.

IORP-II

The fund has opted to introduce IORP-II in line with developments that were already under way within the fund regarding the setting up of the committee structure and the risk management function. This has resulted in three holders of key functions who also perform important functions within the organization of the Executive Office. The Supervisory Board has spoken extensively about this with both the holders of key functions and the Board of Trustees and understands the arguments on the basis of which this arrangement has been chosen, such as continuation of developments already started, the possible inequality within the Board of Trustees if the holders of key functions were to be on the Board and the efficient use of the expertise existing in the Executive Office. Inherent in the chosen model however is a risk of overlapping responsibilities within the three-lines-of-defense model with operational tasks within a mandated Executive Office. In its supervisory role the Supervisory Board will assess the functioning of the three-lines-of-defense model as so arranged in 2020.

Control of ICT risks

The Supervisory Board gave special attention in 2019 to the way in which the Board of Trustees controls the risks around IT. The reason for this is that the administrative organization is largely automated, and in the future it is expected to be further digitized. At the same time there are external developments, such as increased cybercrime and the strong emergence of new technologies that can cause risks to materialize faster and with greater impact. At the same time a distinction must be made between risks deriving from inadequate data quality and those arising from the unsatisfactory functioning of the automated systems. In 2019 the Board of Trustees was confronted with a number of incidents originating from inadequate data quality.

The Supervisory Board was able to confirm that the integral risk reporting of the key risk management officer on the one hand and the quarterly 'IT dashboard' of the EDP auditor in the Executive Office on the other provide a sound basis for monitoring and controlling IT risks strategically and tactically within the Board of Trustees. The Board of Trustees continues to ask APG to pay attention to appropriate IT governance and its translation into execution of the desired policy.

Participant center-stage

'Participant center-stage' is a theme that was presented by a delegation from the Board of Trustees to the Supervisory Board and was also discussed in consultative meetings and in a strategic session with the full Board. The Supervisory Board saw its view that 'participant center-stage' goes well beyond communication reflected in the approach of the Board of Trustees. This is illustrated by the way the Board of Trustees pro-actively informed participants about unclaimed disability pensions and eventually also in the revision of the reclaim policy following the so-called SVB incident. As regards that SVB incident, the Supervisory Board had some questions as to whether the SVB itself had been sufficiently held to account, in APG's reaction when the incident became known and the subsequent reaction of ABP's Board of Trustees vis-à-vis the participants concerned. The Board of Trustees was initially minded to reclaim excess amounts paid with retroactive effect up to a maximum of five years. On reviewing the reclaim policy the Board of Trustees pointed out that the 'participant center-stage' theme had consequences for the content of the policy. The retroactive effect of the reclaim was substantially curtailed, with an eye to participants' trust and experience. The Supervisory Board is convinced that consistently maintaining the 'participant center-stage' idea in all policy decisions of ABP leads to a fund that will have more success in earning and retaining its participants' trust and therefore looks forward to this approach being continued.

New pension contract

After ten years of largely fruitless discussion, a pension agreement was finally reached. This had a direct consequence for the AOW (state) pensionable age and for possibilities of early retirement from physically demanding occupations. All other components still require elaboration in a complex consultative structure. This applies also to second pillar (supplementary work-related) pensions, which will be elaborated in two variants of contribution schemes. Whatever the ultimate outcome, it will be several years and complex transitions before pension funds settled down under the new arrangements. With rock-bottom interest rates the price of pensions remains just as high as before. Against this backdrop, in the coming years the Supervisory Board will keep an eye on an number of aspects, just as it did in 2019: the fund's financial position, adequate risk control, the process and the engagement of the fund's governing bodies and the stakeholders, traction with employers and participants, balanced weighing of interests, among other things as regards redistribution and other transition issues, and communication.

ABP, both Board of Trustees and Executive Office, actively brought its knowledge and experience to bear in the discussion about the overhaul of the system and the elaboration of the pension agreement. It sees for itself in this a responsibility both in the general interest and vis-à-vis its stakeholders. The Supervisory Board subscribes to and values this approach. The Board of Trustees kept the Supervisory Board constantly informed about this and answered the Supervisory Board's innumerable questions. ABP's contribution with the other major funds in the G-5 seems particularly meaningful. For example where suggestions for the transition from old to new are concerned, or as regards how to deal with the lower limits (the advice being to replace the double emergency brake with a hard lower limit of 90%).

The Supervisory Board feels compelled to point out that the change in the system will not solve all the bottlenecks and sticking points. On the one hand because it will not change the financial position. And on the other hand because it may still be years before ABP and other funds actually execute a new scheme. That means that complexity in the scheme will continue to exert pressure on the administration in the coming years.

Code of the Dutch Pension Funds
Based on the Board of Trustees' reporting of compliance with the Code of the Dutch Pension Funds, the Supervisory Board notes that there are a few points in the code with which ABP only partly complies. This concerns for example the fact that the independent Chair has no vote, the self-evaluation of the Board of Trustees which has been carried forward to 2020 and the introduction of the Code of Conduct for members of the Accountability Body in 2020. In the Supervisory Board's opinion this is sufficiently explained in the Board of Trustees' Report.

To conclude
The Supervisory Board considers it its job to contribute to the quality and effectiveness of the governance and management of the pension fund. As such, the Supervisory Board wishes to serve as a sounding board for the Board of Trustees at all times, and would like the Board of Trustees to feel that it does so.

Approval of the annual report
The draft report was discussed on April 9, 2020 with the Board of Trustees. On April 23, 2020 the report was discussed with the Accountability Body, to which the Supervisory Board rendered account of its activities. On April 30, 2020 in a consultative meeting with the Board of Trustees, the Supervisory Board approved the annual report for 2019 and also handed over its definitive report to the Board of Trustees.

The Supervisory Board would like to thank both the Board of Trustees and the Accountability Body for their constructive cooperation and consultation.

Looking ahead to 2020
In 2020, in addition to the legal and statutory supervisory task, the Supervisory Board intends to give special attention to the following matters:
1. Financial structure
2. Pension system
3. Grip on outsourcing
4. Professional governance
5. Pension management

Depending on the subject, the Supervisory Board will fulfill its supervisory role by monitoring, offering a sounding board, or challenging. The Supervisory Board has drafted a working plan for 2020 which further details the approach and planning.

The Supervisory Board

Hub Hannen, chairman
Kitty Roozemond
Peter de Groot
Nicolette Loonen
Anneke van der Meer

April 9, 2020

Report of the Accountability Body

Through this report, the Accountability Body informs stakeholders of the way in which it carried out its tasks and competences in 2019. We first briefly describe the function and composition of the Accountability Body. We then report on with whom and how often we met during 2019. And lastly we zoom in on the most important issues arising in the reporting year:
1. requests for opinion;
2. other matters;
3. assessment of the performance of the Board of Trustees in 2018;
4. thematic workshops.

About the Accountability Body

The ABP is legally obliged to have an Accountability Body. The task of the Accountability Body is to give advice and opinions, on request or on its own initiative, to the Board of Trustees. The Articles of Association of Stichting Pensioenfonds ABP establish that this advice must in any case cover the following subjects:
- setting and changing:
  - the communications and information policy;
  - the contribution and indexation memorandum;
  - the strategic investment policy;
  - the actuarial and operating memorandum (AOM);
  - the strategic multi-year plan;
  - the recovery plan;
- granting contribution refunds or discounts;
- implementing cuts.

Additionally the Accountability Body carries out an annual assessment of the Board of Trustees' conduct of the fund's business. In this regard the Board of Trustees renders account annually on the basis of the annual report, the financial statements and other policy documents that it uses. The Accountability Body bases its assessment on these and makes recommendations for improvements and adjustments to the policies.

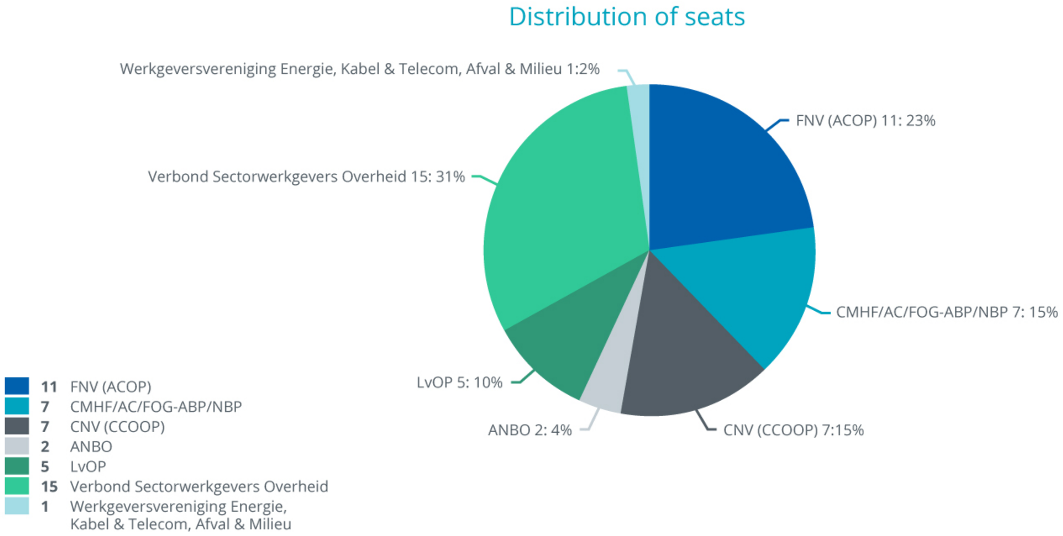
Aside from the aforementioned roles and competences, pensioner members of the Accountability Body have the authority to issue a binding proposal for the appointment or re-appointment of three members to the ABP Board of Trustees to speak on their behalf. In the reporting year the Board of Trustees re-appointed Ms. Mulder and Mr. Den Uyl, who were both nominated by the pensioners' representatives on the Accountability Body.

Members of the Supervisory Board are also appointed or re-appointed on the binding unanimous nomination of the Accountability Body. Based on the current rotation schedule, this reporting year the Board of Trustees, at the proposal of the Accountability Body, re-appointed Ms. Van der Meer for a four-year term.

Composition of the Accountability Body

The Accountability Body comprises 48 members:
- 18 members elected by active participants;
- 14 members elected by pensioners;
- 16 members appointed by employers.

Since July 1, 2018 the distribution of seats has been as follows:



The Accountability Body was saddened to hear of the death on February 8, 2019 of one of its members, Mr. Fons Vrolijk. In the short time that he was a member, the Accountability Body came to know Mr. Fons Vrolijk as a highly dedicated and engaged person.

Meetings in the reporting year

In the year under review, the Accountability Body met twelve times on its own. The Accountability Body has four committees: the Finance committee, the Communication committee, the Investment committee and the General committee. All groupings and the employers are represented in these committees whenever possible. The committees offer advice to the Accountability Body and prepare its meetings with the Board of Trustees; committees do not have any decision-making power.

There were also six consultative meetings with the Board of Trustees. Subjects covered in these meetings included requests for opinion.

In addition to the meetings of its own members and those with the Board of Trustees, the Accountability Body also met three times with the Supervisory Board in the reporting year. The Supervisory Board accounted for its internal supervision to the Accountability Body. The Accountability Body also meets with the Supervisory Board in preparation for the adoption of the findings and the opinion of the Board of Trustee's conduct of the business by the Accountability Body. The most important subjects discussed with the Supervisory Board were the fund's financial position, the decision-making process regarding the Contribution & Indexation Memorandum for 2020 and the Board of Trustees' contribution to the debate around the overhaul of the pension system.

In the reporting year the Accountability Body devoted attention in a number of thematic sessions to topical themes, its own workings, the provision of information and cooperation with the Board of Trustees.

1. Requests for Opinion

Request for Opinion on the Communication Policy Plan 2019-2021

The Communication Policy Plan is a guideline for the way in which it has been decided that the fund should communicate with its participants and with employers. In the consultative meeting of June, the Accountability Body finally issued a favorable opinion on the Communication Policy Plan for 2019-2021. At this meeting the Incident Manual was also explained and discussed.

Request for Opinion on Contracts and SLAs with APG

In January 2019 the Accountability Body issued a favorable opinion on the agreements with APG Rechtenbeheer N.V. In this regard the Accountability Body asked that due attention be given to the conflict resolution procedure contained in the contracts. In November 2019 the Accountability Body gave a positive opinion on the framework agreements and SLAs with all APG entities for 2020.

Request for Opinion on amendment of the Regulations of the Board Committee on Investment Policy

Following the Board of Trustees' resolution that there should always be at least one external member on the Board Committee on Investment Policy, the Accountability Body gave a favorable opinion on the amended Regulations of the Board Committee on Investment Policy. The reason for this is that from the point of view of transparency the Accountability Body attaches importance to independent expertise.

Request for Opinion on the Strategic Plan 2019-2021

The Strategic Plan 2019-2021 is a determining factor for the direction of the fund's activities in this period. It serves as a guiding policy document. For the Accountability Body it is also an important document for being able to assess the Board of Trustees' fulfillment of its responsibilities and the extent to which ambitions have been realized. The Accountability Body was of the opinion that the Strategic Plan presented in January 2019 was too optimistic in tone and that not enough attention was given to recent developments in the broader field of pensions. The direct request was to go more deeply into the proposed choices, risks and strategic goals. This more in-depth exercise was duly carried out. At the same time, given the changing circumstances, the Board of Trustees promised to update the Accountability Body every six months on developments and the consequences for the strategic course steered by the fund.

With the clarification provided by the Board of Trustees and the agreement on periodic consultation, the Accountability Body gave its favorable opinion on the Strategic Plan 2019-2021.

Request for Opinion on the Recovery Plan

The Accountability Body gave a positive opinion on the Recovery Plan. There was also discussion of the possible impact of the conclusions of the Parameters Committee on the proposed Recovery Plan (in fact a technical calculation exercise). The Board of Trustees promised to share any changes in the method of calculation with the Accountability Body.

Request for Opinion on ABTN

The Accountability Body gave a positive opinion on the ABTN (Actuarial and Technical Business Report). We note in this regard that the ABTN is a formal document that is substantively composed of subjects/matters that had already been discussed on other occasions with the Accountability Body. Members of the Accountability Body asked that, in the ABTN, due regard be given to the balanced weighing up of interests.

Request for Opinion on addendum to Contribution & Indexation Memorandum 2019 Military Personnel

In the continued absence of a definitive pension scheme for military personnel, a provisional contribution had been applied from January 1, 2019. In October 2019, pursuant to the negotiated agreement of July 2, 2019, an Addendum to the Contribution & Indexation Memorandum for 2019, Military Personnel, was drawn up in accordance with an agreement with the Board of Trustees. The Accountability Body gave a favorable opinion on the addendum and thereby on the definitive contribution for 2019 for military personnel.

Request for Opinion on Contribution & Indexation Memorandum 2020

In November 2019 the Contribution & Indexation Memorandum for 2020 was discussed. The Memorandum constitutes a combined request for opinion with regard to the old age/surviving dependents pension contribution, the contribution for military personnel and the conditional pension scheme contribution. The Memorandum indicates that no indexation will be granted. The Accountability Body issued a negative opinion. The employers' representatives and four members of the ACOP (federation of public service trade unions) gave positive opinions and thereby adopted a minority position. The negative recommendation was issued on account of the way in which the Board of Trustees intends to go about repairing the financial position of the fund. The Board of Trustees has established that the discount rate needs to be reduced (in 2021, to a maximum of 2.4%) and that this will lead to a higher contribution and/or lower accumulation. Because the Board of Trustees wants to give social partners time to adjust to the changing situation (with financial consequences for both employees and employers), it proposes to wait until 2021 before taking steps on that point. For the majority of the Accountability Body, 2021 is not acceptable because further postponement does not do justice to equitable weighing up of interests, the conclusions of the mid-term review or a more responsible contribution funding ratio. The members taking a minority stand follow the Board's line of reasoning in terms of taking steps in 2020 leading to an adjustment of the contribution and/or other measures in 2021. These members share the conviction that in view of the situation in which the fund finds itself, far-reaching measures are required, but they accept the idea that implementation be postponed to 2021 to bring about some peace on the contribution front in 2020 so that employers and employees have the chance to make specific agreements.
The Accountability Body took due note of the Board of Trustees' explanation of its resolution not to adopt the Accountability Body's recommendation.

Request for Opinion on Amendment of Articles of Association

The Accountability Body gave a positive opinion on the amendment of the Articles of Association. The amendments related to the dissolution of Stichting Verbond Sectorwerkgevers Overheid (VSO) effective January 1, 2020, the representation of the fund by the Board of Trustees, the delegation of decision-making powers to Board committees, the activities of the Board committee on Investment Policy and the description of the position of the external 'certifying' actuary. As regards the delegation of decision-making powers to Board committees, at the express request of the Accountability Body a proviso was added to the effect that this is possible only strictly within the terms of the relevant mandate issued.

Request for Opinion on Changes to Complaints Procedure

The Accountability Body gave a positive opinion on the new complaints procedure of ABP. The process has been shortened and the procedure simplified. There is also now greater transparency in the objections procedure. After one year the new procedure will be evaluated on the basis of meticulous registration.

2. Other matters

Pension scheme for military personnel

In the reporting year there were regular discussions of the pension scheme for military personnel. In the context of the attempts to simplify the pension system for military personnel, a dispute arose between ABP and the social partners about the pension scheme for military personnel at January 1, 2019. In the summer of 2019 the Defense Consultation Sector reached agreement on the new salary structure and starting point for a new pension scheme for military personnel with retroactive effect from January 1, 2019. The Accountability Body emphatically requested the Board of Trustees to inform the relevant target group fully of the content of the scheme and the financial and other consequences, in accordance with the distribution of roles among ABP, the Ministry of Defense as employer and the trade unions concerned.

Incident involving the delivery of SVB data to ABP (APG)

In the reporting year there was an incident with SVB, concerning the delivery of data to ABP for it to be able to establish partner supplements to state old age pensions. As a result of this participants were confronted with requests to reimburse excess amounts of pension received over a number of past years. On the basis of the existing policy, APG started rectifying the pension payments, involving both extra payments and requests for reimbursement of overpaid amounts. The Accountability Body was of the opinion that it had not been informed fully or in a timely manner of this case. We asked the Board of Trustees to take account of previous statements by the Pensions Ombudsman and magistrates in comparable cases. In response, the Board of Trustees promised to evaluate the policy for seeking reimbursement. This led to changes in the policy. The new policy was introduced with effect from January 1, 2020.

Incident Manual

In the reporting year attention was repeatedly requested, particularly by the Accountability Body's Communication Committee, for the handling of incidents. During the year the Accountability Body was involved in the development of the new Incident Manual. This manual will be evaluated at the end of 2020.

Regulations on other positions held by members of the Accountability Body

In the reporting year the Accountability Body drew up internal regulations aimed at providing openness on positions held other than in the Accountability Body. These positions of members of the Accountability Body will be shown on ABP's website.

Sustainable and responsible investment policy

In the reporting year the Investment Committee constantly requested ABP to give attention to sustainable and responsible investment, among other things by asking critical questions about investments in fossil fuels and the effectiveness of engagement strategies. The Investment Committee was also involved at the request of the Board of Trustees in giving expression to the new Sustainable and Responsible Investment Policy 2020+. The Board of Trustees shared and commented on draft versions of this policy, and the committee was given the opportunity of asking questions and making observations about transparency, giving concrete expression to inclusion criteria and other matters.

3. Assessment of the performance of the Board of Trustees in 2018

On April 25, 2019 the Board of Trustees rendered account on the basis of the draft financial statements and annual report for 2018. Prior to this meeting the financial statements and annual report had been dealt with substantively in committee, with comments and explanations being made by the certifying actuary and the auditor. In view of the absence of the Compliance Officer due to sickness, the Accountability Body's questions were answered in the first instance in writing. In November 2019 the Finance Committee was given oral explanations by the Compliance Officer.

The Accountability Body formed an opinion on the actions of the Board of Trustees in 2018. In view of the findings and recommendations, the Accountability Body issued a positive opinion on the actions taken by the Board of Trustees in relation to the policy pursued, the policy choices made and compliance with the principles of good pension fund governance.

The Accountability Body's findings were shared with the Board of Trustees, as were its recommendations. The findings and recommendations are in the annual report for 2018, which can found on ABP's website.

The Board of Trustees reports periodically to the Accountability Body on the follow-up to the recommendations.

4. Thematic workshops

Dialogue on the Strategic Plan

The Strategic Plan aims to be a guiding policy document for the actions of the Board of Trustees, the Executive Office and the administration organization APG. The plan shows how various policy plans and annual plans contribute to the attainment of ABP's goals. The partial strategies were discussed in a thematic workshop in small groups with the Board of Trustees. The results of these discussions were incorporated into the Strategic Plan established in 2019.

Relations between the Board of Trustees and the Accountability Body

In February 2019 SPO organized a thematic workshop for members of the Board of Trustees and the Accountability Body on their respective roles. The question was asked as to how in each of our roles we can strengthen collaboration and one another's functioning. The Board of Trustees expressed its readiness to inform the Accountability Body at an early stage of current developments and themes and to give structural attention to strategic issues in order to arrive together at an in-depth understanding. In the case of formal requests for opinions, the Board of Trustees will also provide insight into the decision-making process in the accompanying texts.

Information on the Pension Agreement

The consequences of the Pension Agreement and the possibilities of bringing about new forms of pension contract were discussed. At the beginning of 2020 the Accountability Body will be kept up to date and involved in developments.

Financial risk attitude, mid-term review, actual financial position

In September the Accountability Body reflected extensively with the Board of Trustees on the financial risk attitude (ALM), the mid-term review and the current financial position, including the increased tension in the 'pension triangle'. In this session we discussed the impact of developments on the financial markets and economic prospects on the fund's financial position and the consequences for our participants. In this regard we looked not just at the long-term effects but also at shorter term consequences. Based on the multi-year contribution policy in place, in the first quarter of 2020 the Board of Trustees will pass a resolution on the reduction of the discount rate to 2.4% or less and share the outcome with social partners, prior to a request for opinion on the Contribution & Indexation Memorandum for 2021 (scheduled for November 2020).
At the request of the Accountability Body a study day was also held on ALM, investments and financial risk attitude. Specialists from external consultants Cardano and the Executive Office of ABP gave explanations to our members about ALM, investment processes and risk appetite.

Balanced weighing up of interests

In June 2019 a themed session was held on the balanced weighing up of interests of past and present participants, pensioners and employers. The Board of Trustees promised that in the run-up to the Contribution & Indexation Memorandum for 2021 it would evaluate the criteria used for effectiveness, proportionality, continuity and solidarity in order to be able to establish whether these criteria still provide sufficient assurance as to the equitable weighing up of interests.

Opinion of the Accountability Body

Introduction
The Board of Trustees reports to the Accountability Body each year in respect of the policy it has pursued and the implementation thereof and as regards compliance with the principles of good pension fund governance, as referred to in the Pensions Act Implementing Decree and the Obligatory Occupational Pension Schemes Act (Wvb) of December 18, 2006.

The Accountability Body is authorized, pursuant to Article 6 (2) of its by-laws to render an opinion each year on:
a. The actions of the Board of Trustees based on its annual report, financial statements and other relevant information, including the findings of the Supervisory Board.
b. The policy pursued by the Board of Trustees in the past calendar year;
c. The policy choices for the future;
d. Compliance with the Code of Dutch Pension Funds.

In this context, the Accountability Body presents its findings, voices its opinion on the actions of the Board of Trustees in 2019 and makes a number of recommendations for 2020.

Formation of opinion
The Board of Trustees rendered account to the Accountability Body for its policy in 2019 on Thursday, April 30, 2020. The Accountability Body was able to form an opinion on the basis of its consultative meetings with the Board of Trustees in 2019, its own observations, the draft annual report for 2019 and the draft Sustainable and Responsible Investment report for 2019. The Accountability Body also took account of information gathered from its discussions with the Supervisory Board, the external auditors, the external actuary, and the pension fund compliance officer in forming its opinion.

General
The Accountability Body pays tribute to the clear 2019 annual report and financial statements. The Accountability Body also acknowledges the Board of Trustees' efforts to attain ABP's objectives during the reporting year.

The new Accountability Body appreciates the way in which the Board of Trustees strives to involve the Accountability Body in its decision-making and in strategic developments. The Board's efforts to involve the Accountability Body in upcoming policy choices are appreciated. Despite the progress made, the Accountability Body is of the opinion that there are still some points for improvement. These points for improvement are referred to in this opinion. The Accountability Body stresses the ongoing importance of open, critical, and constructive consultation between the Board of Trustees and the Accountability Body, with mutual recognition of and respect for each other's responsibility.

At the time of writing, the Netherlands are in the grip of the COVID-19 crisis. This crisis has a great impact on the Netherlands and undoubtedly on the financial position of ABP too. It is still too soon to make a realistic and reliable estimate of this. The Accountability Body is monitoring developments with the Board of Trustees. The Accountability Body assumes that the Board of Trustees will keep it informed of the consequences of these developments for the fund.

Hereunder are the findings and recommendations in respect of 2019. Where a point for attention has been indicated as such for longer, this will be mentioned.

Findings and recommendations

Annual report and financial statements 2019

Finding:

In the context of its duties, the Accountability Body consulted with the external auditor, the external actuary and the compliance officer.

The Accountability Body looks back on fruitful and transparent discussions with the officials concerned. It is partly on the basis of these discussions that the Accountability Body expresses its satisfaction with the financial policy pursued by the Board of Trustees.

The Accountability Body assumes that the Board of Trustees will follow up the recommendations and suggestions of the external auditor and the external actuary and requests it to keep the Accountability Body informed of this.

We learn from the annual report that, thanks to new technology in the pension administration, the Board of Trustees is now better placed to detect and resolve errors. The “Grip on Data” program must ensure that data quality and how data are handled are not only given more attention but also dovetail with digital communication and society’s concerns regarding the protection of privacy. Technological developments regarding the use of data and data traffic demand an active policy in order to make the most appropriate use of them in the administration.

The provision regarding concurrent years of service concerns the rights of participants’ partners to a supplement to their pension if they have both accrued pension rights with ABP at the same time. These cases are known to ABP and the provision is based on them. The provision leads to questions in situations where the pensioner accrued pension rights with ABP to 1995 and the partner accrued rights with another pension fund in the same period. In this situation too there may be a right to a supplement. The Board of Trustees has meanwhile taken steps to settle this matter once for all.

Recommendation:

The Accountability Body asks the Board of Trustees to provide it with further information on how appropriate use is made of the development of data issues.

The Accountability Body asks the Board of Trustees to resolve the overdue issues in the file on concurrent years of service in 2020 insofar as it is in its power to do so and to inform the Accountability Body accordingly. In this context it is also appropriate to ask to what extent the provision made was sufficient.

Asset Liability Management

Finding:

The current circumstances and the development of financial risks lead the Board of Trustees to bring the ALM study forward. The Accountability Body endorses this approach. Drawing up a new ALM study offers the possibility of once again exploring a realistic outlook for the future based on current circumstances. Among other things it will give us the opportunity of looking at the delicate balance between investments on the one hand and pension obligations on the other. It will also bring into sharp focus the balance between the fund’s ambition and the associated risk attitude, which after all is the basis for elaborating policy in the various areas. However, the current circumstances demand more than just a long-term and in-depth vision. In the process of developing the ALM study it is only sensible to also devote attention to the effects and the economic developments as now foreseen. This includes formulating and thinking through more extreme scenarios. As regards the development of the risk attitude, the Accountability Body embraces Article 102a of the Pension Act which expressly gives the Accountability Body a role in establishing the objectives and starting points for the pension fund’s policy, including its risk attitude.

Recommendation:

The Accountability Body asks the Board of Trustees to inform it of how the new ALM study will be set up and to assign it a role in accordance with Article 102a of the Pension Act in elaborating the various subjects, including risk attitude.

The Accountability Body is keen to contribute to reflections on the various scenarios including the more extreme ones.

Reduction of complexity

Finding:

The pension schemes administered by ABP are complex. In this context it is a source of satisfaction that social partners Ministry of Defense agreed a less complex pension scheme in the summer of 2019. Aside from the complexity surrounding the pension scheme for military personnel, the pension scheme for civilians, with its many transitional arrangements, can also be considered complex. The Accountability Body sees that the Board of Trustees is making efforts to reduce the complexity of the schemes. Limited progress was made on this point in the past year.

The Accountability Body expects the Board of Trustees to continue to make the necessary efforts (with social partners in the Pension Chamber) to achieve further simplification. The Accountability Body sees with some concern that the Board of Trustees in its note on the status of the Accountability Body's recommendations in respect of the 2018 annual report states: " ...Appendix K was also discussed. It was decided not to approach this piecemeal now but to look at Appendix K as a whole in the context of the transition to a new pension contract. On the occasion of that possible transition the intention would be to resolve the complexity of Appendix K." In the Accountability Body's view the implementation of a new contract will take considerable time, and it is questionable whether the tortured debate on the resolution of sticking points in Appendix K should take place in that context. In the opinion of the Accountability Body preference should be given to reducing the complexity of as many existing schemes and rules as possible before seeking to implement a new pension contract.

Recommendation:
The Accountability Body requests the Board of Trustees to ask for attention to be given to reducing as far as possible the complexity in the rules as reflected in Appendix K in its contacts with the Pension Chamber rather than waiting for the transition to a new pension contract. The Accountability Body asks the Board of Trustees to keep it informed of progress with steps leading to further simplification.

The Accountability Body also asks the Board of Trustees in seeking solutions for reducing complexity not to lose sight of participants' accrued rights.

Participants' risk awareness
Finding:
There is a direct relationship between the fund's ambition and the financial risks that the Board of Trustees takes in seeking to attain it. In the reporting year the Accountability Body was regularly informed of how risk management finds expression in ABP and what its effects are on the fund's core tasks. The risks of the investment policy are borne by all participants: active participants, pensioners and former participants. So participants should be aware of and give their support to the investment policy. The Board of Trustees has previously promised to look into the possibility of testing the fund's risk attitude against participants' preferences. However the Board of Trustees linked this to the review of the pension system. The Accountability Body understands this and is aware of the challenges involved in a thorough investigation of participants' risk appetite. This does not alter the fact that participants must be informed of the risks and uncertainties in their pension scheme. Thorough, unambiguous communication can contribute in this way to participants' individual awareness of the meaning of developments for their pension.

Recommendation:
The Accountability Body asks the Board of Trustees to intensify its efforts by going well beyond the legally required communications so as to provide appropriate, balanced and unambiguous information to active and former participants and pensioners about the risks and uncertainties in their pension schemes.

Incidents and their resolution
Finding:
In its opinion on 2018 the Accountability Body made recommendations about the role of the Board of Trustees in incidents and adjustments to the policy on crises and incidents. During the reporting year the way incidents are resolved came up many times and was frequently discussed in consultative meetings.

The Accountability Body recognizes that with the setting up of the Incident Manual a first step has been taken in investigating and preventing incidents where possible and appropriately resolving those that still occur. The Accountability Body endorses the conclusion of the Board of Trustees that the Incident Manual needs to be assessed in 2020 to establish how it can contribute to the timely flagging of potential risks.

The Accountability Body realizes that the timing of information and communication about incidents needs to be precise. In past years communication about incidents between the Board of Trustees and the Accountability Body has not always been all it should be, with timeliness and completeness being the main points for attention. Examples of this included lack of clarity about extra AOW state pension partner supplements and the problems around concurrent years of service. Incidents are damaging for participants and lead to questions and incomprehension if they are not resolved clearly and in good time, which in turn leads to attention on various TV consumer programs. The Accountability Body would be happy to look together with the Board of Trustees at possibilities of making improvements to the completeness and timeliness of information.

Recommendation:

The Accountability Body appeals to the Board of Trustees to inform it fully and in a timely manner of how it intends to tackle incidents and what it intends to communicate about them.

The Accountability Body asks the Board of Trustees to inform it of the assessment of the Incident Manual in 2020. The Accountability Body asks the Board of Trustees to show in the assessment with practical examples how the incident manual works in handling incidents and how it can play a role in scanning for and so preventing possible incidents.

Reimbursement policy

Finding:

Following the resolution of an error in the exchange of administrative data between SVB and ABP and the disquiet that this occasioned among participants, in 2019 ABP re-assessed its reimbursement policy.

As a result the Board of Trustees decided, in line with the strategy and the Participants' Compass, to revise the reimbursement policy. One of the most important changes in the reimbursement policy is that, with retroactive effect, the term for reimbursement has been reduced from a maximum of five years to a maximum of nine months. The Accountability Body supports this change of policy since it reduces the financial consequences for participants and makes it easier for them to understand the connection between the adjusted pension amount and the change in their personal situation.

Recommendation:

The Accountability Body asks that the new reimbursement policy be evaluated, taking account of the final processing of this dossier and that the Accountability Body be informed accordingly.

Communication

A. Statements to the media

Finding:

In 2019 there was once again much to do regarding the future of the pension system. The Pension Agreement and its elaboration in the direction of a new pension contract led to a multiplicity of opinions and points of view in various media statements. ABP is involved with the other major pension funds in the underlying calculations of the various scenarios being developed. The Accountability Body supports the Board of Trustees in its bringing its knowledge to bear in the development of the new contract.

Recommendation:

The Accountability Body believes it is a good thing for the Board of Trustees to contribute its knowledge and expertise. However the Accountability Body calls on the Board of Trustees to make sure that the messages it delivers are carefully weighed. Managing expectations is very important in this respect.

B. Distribution of roles and responsibilities

Finding:

The Accountability Body notes that for participants it is often unclear how the role of ABP relates to that of the social partners. The Pension Chamber consists of representatives of employers and trade unions. The Pension Chamber deals with the content of the pension scheme.

It is important for the Board of Trustees to give emphatic attention to this on the ABP website and also to publicize it actively, whenever it appears in the media for example. The distribution of roles and responsibilities must be made clear and comprehensible. In this respect attention must also be given to the interconnections and interdependencies.

Recommendation:

The Accountability Body asks the Board of Trustees to devote more attention on the ABP website to the distribution of roles and responsibilities between the ABP Board of Trustees and social partners in government and education.

Relationship between the Board of Trustees and the Accountability Body

Finding:

In the joint working session of February 28, 2019 agreements were made on the relationship between the Board of Trustees and the Accountability Body. The most important one was to work toward a fully-fledged, adult relationship with respect for one another's role and responsibility. The Accountability Body acknowledges that it has made substantial demands as regards information to be provided to it. The Accountability Body is pleased with the attention given by the Board of Trustees to briefings with requests for opinion and how it involves the Accountability Body in the preparation of important decisions. The Accountability Body believes it is important to deepen this cooperation further, particularly in times when the world of pensions is going to change. Cooperation depends partly on how information is shared, and just as with other issues, here too timeliness and completeness are of the essence. Whether it concerns consultation or asking questions, we must focus on cooperation and seek possibilities – within our respective responsibilities of course – for assuring completeness and depth.

Recommendation:

The Accountability Body expects the Board of Trustees to further deepen cooperation with the Accountability Body in 2020 and, given the current developments, to seek occasions away from the hurly-burly of everyday life on which to exchange and discuss information. The Accountability Body also asks for completeness to be the aim in the transmission of information.

Ambition and its accomplishment

Finding:

A majority of the Accountability Body gave a negative opinion on the Contribution & Indexation Memo for 2020. For years now attention has been requested for the tension between ambition and accomplishment. In 2019 it followed from the mid-term review that the tension between ambition and realization was unrealistically high. Nevertheless the Board of Trustees took no action in establishing the contribution memo for 2020. Following the mid-term review the Board of Trustees had several possibilities: to ask the social partners to reduce the ambition and/or, as a responsibility of the Board of Trustees, to increase contributions.

However the Board of Trustees chose to continue the 2019 contributions policy in 2020 in order to give the social partners the chance to adjust the ambitions (i.e. to adjust the pension scheme). In this way the existing policy of an unattainable ambition is continued for one more year.

Recommendation:

The Accountability Body requests that the Board of Trustees make progress with bringing ambition and realization into line with one another.

Balanced weighing up of interests

Finding:

The Accountability Body continues to request full attention for investigation of aspects of balanced weighing up of interests. Balanced weighing up of interests is at the very basis of the performance of the Board of Trustees' tasks. In a thematic session held in June 2019, the Board of Trustees devoted attention to the legal context and the way in which the Board of Trustees applies the balanced weighing up of interests. It does so on the basis of a test framework drawn up in 2018 in which attention is given particularly to the criteria effectiveness, proportionality, continuity and solidarity. In the discussion during the thematic session members of the Accountability Body asked for attention to be given to the imbalances experienced in the weighing up of interests among various groupings. There were also suggestions that the number of criteria used be increased. The necessary deepening, as promised in 2017 and 2018, must be brought about, not least in preparation for the development of a new pension contract.

Recommendation:

The Accountability Body is pleased with the Board of Trustees' promise to evaluate the testing framework in the run-up to the Contribution & Indexation Memo for 2021 in order to establish whether these criteria are still valid for the balanced weighing up of interests. The Accountability Body asks the Board of Trustees to involve it actively in this evaluation with the possibility of delivering input.

VPL early retirement schemes

Finding:

The funding of the VPL scheme has been under pressure for years. Because a deferred purchase of pension entitlements and rights is involved, ABP cannot draw up the definitive balance until rights have been attributed to the last participant (not later than 1 January 2023). An additional contribution is charged annually to all the nearly one million contributors (through their employers), but the actual purchase of additional pension takes place with only some of the participants (those that are actually entitled to VPL). It is inherent in the VPL scheme that it is an unbalanced scheme, so it is a great challenge for the Board of Trustees to carry out the legal task of balanced weighing up of interests.

For 2020 the contribution for VPL has not been changed, whereas the deferred financing may still entail a future risk. Furthermore the proposed adjustment of the discount rate for the 2021 contribution will also have an influence on VPL contributions.

Recommendation:
The Accountability Body urges the Board of Trustees to continue to keep a close eye on the financing of the VPL. The Accountability Body also requests the Board of Trustees to pay continuous attention to the unbalanced nature of the VPL scheme. The Board of Trustees remains obliged to take account of balanced weighing up of interests in the VPL scheme.

Investments and Sustainability Policy
Finding:
The Accountability Body welcomes the fact that ABP is phasing out its investments in coal and oil sands. Because of its unique inclusion policy, it is difficult to compare ABP with other funds and international standards as regards its investments.

Many parts of the new sustainability policy are still not very concrete, and there is still too little attention given to employment conditions and tax policy. In the Accountability Body's opinion ABP communicates prolifically and pro-actively about its sustainability ambitions and activities. But it sometimes comes over as one-sidedly positive and does not really do justice to the complex reality, dilemmas and sometimes burdensome changes.

With the investment policy a return of 16.8% was obtained in 2019, and over the past 15 years the average was 7.0%. The current degree of risk appetite contributes to the realization of the fund's ambition in the long term. The Accountability Body notes however that in the short term this may possibly lead to pension cuts. This is in direct conflict with the certainty that participants find so important.

Recommendation:
The Accountability Body asks the Board of Trustees to continue with the execution of ambitious sustainability objectives. The Accountability Body advises the Board of Trustees to make the inclusion policy more transparent, among other things by making other criteria public, per sector. The Accountability Body asks the Board of Trustees to show how the impact of the inclusion policy is monitored.

The Accountability Body requests the Board of Trustees to give expression to improvements in employment conditions and tax policy by elaborating concrete criteria, objectives and calibration points. The Accountability Body asks the Board of Trustees to communicate in a balanced way about sustainability policy and activities. This includes indicating which aspects of the policy are not (yet) succeeding and/or seem difficult to attain.

The Accountability Body would be glad to be involved in defining the risk attitude. The Accountability Body asks the Board of Trustees to pay explicit attention to the possible short-term consequences of the investment risk.

Opinion
Based on its own findings, the findings of the external auditors, external actuary, compliance officer and Supervisory Board, the Accountability Body issues a positive opinion on the actions taken by the Board of Trustees in relation to the policy pursued, the policy choices made and compliance with the principles of good pension fund governance.

Response of the board of trustees to the opinion of the accountability body
The Board of Trustees noted with interest the findings and recommendations of the Accountability Body. The Board of Trustees thanks the Accountability Body for the positive opinion it has issued on the policy pursued in 2019. The Board of Trustees will include the recommendations of the Accountability Body in the performance of its duties in 2020.

Lastly, the Board of Trustees thanks the Accountability Body for its dedication, the constructive collaboration, and its members' great engagement.

CHAPTER 3

Financial statements

Contrary to convention, the company financial statements are presented first, followed by the consolidated financial statements. This is because the company financial statements provide a more accurate view of the pension fund's financial position. The company financial statements form the basis of the other external publications and the information on management policy contained in the Board of Trustees report.

Contents

Company financial statements

Company balance sheet

after appropriation of result (in € million)

	31-12-2019	31-12-2018
ASSETS		
- real estate	63,530	52,171
- equities	192,405	155,621
- fixed-income investments	176,459	162,154
- derivatives	43,601	31,428
- other investments	53,534	48,429
Investments (1)	**529,529**	449,803
Other assets (2)	**1,944**	1,888
Total assets	**531,473**	**451,691**
CAPITAL AND LIABILITIES		
- general reserve	-10,711	-12,037
- specific reserves	1,060	1,025
Pension fund capital (3)	**-9,651**	-11,012
Provision for pension liabilities (4)	**476,330**	411,008
- cash collateral received	22,144	15,986
- short positions	272	115
- short-term borrowing	19,206	15,382
- derivatives	21,244	18,924
Investment-related liabilities (5)	**62,866**	50,407
Other liabilities (6)	**1,928**	1,288
Total capital and liabilities	**531,473**	**451,691**

Company statement of income and expenses

in € million

	2019	2018
INCOME		
Pension contributions (net) (7)	**11,041**	10,267
-investment results (gross)	67,894	-8,434
-less: asset management costs	-488	-421
Investment results (net) (8)	**67,406**	-8,855
Total income	**78,447**	**1,412**
EXPENSES		
Pension payments (9)	**-11,597**	-11,110
Movements in provision for pension liabilities		
- pension accruals	-13,484	-12,517
- added interest	967	1,019
- utilized for pensions	11,664	11,185
- result on actuarial assumptions	-1,076	-447
- utilized for pension administration costs	75	82
- change in market interest rate	-64,330	-16,175
- change in actuarial assumptions	660	-1,990
- change in respect of value transfers	72	-536
- other movements in provision for pension liabilities	130	23
Total movements in provision for pension liabilities (10)	**-65,322**	-19,356
Collection cost supplements in pension contributions (11)	**105**	110
Value transfers (12)	**169**	517
Pension administration costs (net) (13)	**-141**	-145
Interest charges on investment-related liabilities	-299	-315
Other income and expenses	0	-20
Total expenses	**-77,085**	**-30,319**
BALANCE OF INCOME AND EXPENSES	**1,361**	**-28,907**
Appropriation of the balance of income and expenses:		
- added/charged to general reserve	1,326	-29,223
- added to specific reserves	35	316

Company cash flow statement

in € million

	2019	2018
OPENING BALANCE OF CASH	**878**	**841**
MOVEMENTS		
Cash flows from pension activities:		
- contributions received	11,146	10,657
- value transfer payments received (12)	261	820
- pensions paid (9)	-11,597	-11,110
- value transfer payments made (12)	-92	-303
- operating expenses paid (13)	-141	-145
Cash flow from pension activities	**-423**	**-81**
Cash flows from investment activities:		
- repayments and sales of investments (1)	88,998	43,608
- advances and purchases of investments (1)	-92,189	-38,704
- direct investment income (8)	8,009	7,532
- indirect realized results from derivatives and results on exchange	-9,688	-7,857
- investment expenses paid (8)	-488	-421
- cash collateral received	6,157	-1,117
- other movements	-160	-2,923
Cash flow from investment activities	**639**	**118**
CLOSING BALANCE OF CASH (14)	**1,094**	**878**

Notes - General

Features of the pension schemes

Introduction

ABP is the pension fund for people working in the public sector, in education and in designated and specifically admitted 'bodies', as well as the airports sector. The scope of a particular pension scheme is determined by the Pensions Board of the Council for Public Sector Personnel Policy (Dutch Acronym: ROP). Only when ABP has examined the schemes agreed by the Pensions Board in terms of financial feasibility, practicality, and general acceptability does ABP assume responsibility for their implementation and administration.

The legal relationship between ABP and the affiliated employers is outlined in the administration regulations; the legal relationship between ABP and participants is documented in the pension regulations.

The administration regulations contain provisions governing compulsory and voluntary affiliation, details and information to be disclosed, and the payment of contributions. The pension regulations contain provisions concerning the pension payment entitlements and accumulated pension rights of participants. The precise contents of the two sets of regulations can be found on the pension fund's website (www.abp.nl). In this section we will discuss the essential features of the pension schemes.

General

Pensions are accrued up over an employee's working life and become payable on retirement, on becoming disabled or otherwise unfit for work or on the death of the employee - in the case of surviving dependants. Pension scheme contributions are not regarded as salary, but pensions are taxed, except in the case of net pensions, which are paid tax-free. The accrued pension rights represent unconditional obligations on the part of the pension fund towards its members. The pension fund assumes all the risks. There is no reinsurance of risks. Pension accrual ceases on termination of active participation by a pension scheme participant.

Participants on redundancy pay, entitled to a termination payment, those on unemployment benefit or on incapacity benefit continue to partially accrue pensionable years of service. In the case of disability as a consequence of an industrial accident or occupational disease, the accrual of pensionable years of service continues up to a maximum of 100%.

The amount of annual pension accruals depends on the following five factors: the percentage rate of accrual, the contribution threshold, the pensionable income, the qualifying amount of the pay and the part-time factor. The pensionable income is made up of the regular pay, regular bonuses and pensionable variable bonuses from the preceding calendar year. The qualifying amount affects the rate at which the pension product is accrued. Pension contributions are deducted based on that part of the income over and above the contribution threshold (state old-age pension (AOW) contributions are already deducted from the first part of the income below the contribution threshold) and paid in by employers. The contribution threshold for pension contribution is not necessarily the same as the pension base for the accrual of new pension rights; the latter is income-dependent whereas the contribution threshold is the same for everyone. Under the Pension Agreement, employers bear the cost of 70% of the contributions (retirement and surviving dependants' pensions and incapacity benefit (AOP), with 30% deducted from employees' pay. Different percentages apply in the case of contributions for military personnel and for purchasing conditional pensions.

Within the framework of the pension regulations, the pensionable nature of certain variable income components is subject to agreement on an individual basis or at the collective level. Some income components are not pensionable under the law.

The pensionable salary ceiling effective 1 January 2019 is €107,593 for those in full-time employment (the amount is adjusted by the government each year).

ABP wants to earn the best possible returns on plan assets while investing the pension contributions in a socially responsible manner. The investment policy is aimed at achieving a sufficient return over the long term to permit annual indexation of pensions and accumulated pension rights while maintaining both an affordable level of contributions and an acceptable level of risk.

Any annual increase results in an increase in both pensions and pension rights and hence in an increase in the unconditional obligations incumbent on the pension fund. ABP assesses each year whether an increase is possible, the ambition being an inflation-indexed rise based on the CPI. An indexed increase is only awarded if the pension fund's financial position allows. Catch-up increases to make up for less than full indexation in the past are, however, still part of the indexation ambition. If the fund’s financial position is insufficient, pension cuts would have to be implemented as a last resort.

The pension products
The pension products comprise retirement benefit (OP), surviving dependants' benefit (NP) (this concerns partner pensions (PP) and orphans' pensions), incapacity benefit (AAOP, disability benefits and redeployment benefits), ANW compensation, sector-specific schemes and individual voluntary top-up plans.

Retirement pension (OP)
The pension scheme providing retirement benefit is an average-pay plan. Pension rights, based on pensionable income, are built up incrementally for each year of service, conferring entitlement to a pension for life. Flexible pension rights accrued prior to 2006 have been converted into retirement pension rights on an actuarially neutral basis.

When the time comes to take their pension, participants can choose - within certain bandwidths - to take early retirement or to defer retirement, possibly in conjunction with continued part-time working, and to swap pension entitlement (e.g. between OP and PP) as well as to draw a higher or lower pension. Participants also have the option on leaving their job of topping up their pension pot or continuing to pay into the scheme on a voluntary basis.

Dependents' benefits
Starting in 2018, the accrual of partner's pension will be based on capital funding equal to 70% of the old-age pension regardless of the moment of death. This removes the difference in partner's pension before and after 67 years of age. There may also be a right to orphans' pension in the event of death of a participant. Orphans' pension payment ceases when a child reaches the age of 25.

Incapacity pension (AAOP) and non-contributory accrual in the event of incapacity for work (PVAO)
While a participant is in receipt of benefit under the AAOP scheme there is entitlement to PVAO, pension rights continue to be accrued up to a maximum of 50% (except in the case of industrial accidents or occupational diseases) on a contribution-free basis. The calculation to determine the size of the AAOP is based on the daily wage under WIA instead of the pensionable income.

Purchase of conditional pension
When the voluntary early retirement scheme and pre-pension were abolished, employers and employees were given a chance to agree on fringe benefits concerning additional pension accruals for past years of service in 2006 and 2007. The option of purchasing additional pension rights on a conditional basis was included in the scheme in 2006 in respect of periods prior to 2006 during which the amount of pension that had been built up was less than the amount permitted under tax rules. This means that the accrued rights are conditional and only become vested on January 1st, 2023 or on retirement prior to that date. The scheme applies exclusively to participants who have been in uninterrupted employment since December 31, 2005, and who were born on or after January 1st, 1950 and did not qualify for flexible and early retirement benefits (FPU) on 1 January 2006.

Voluntary products

The pension rules contain provisions offering various ways of voluntarily accruing extra OP/NP entitlement or continuing to pay into the OP/NP scheme after retirement.

Net pension

If the income is higher than the maximum pensionable salary (the ceiling is subject to annual review by the government; it has been set at €107,593 effective January 1st, 2019) participation in the net pension scheme is possible. The net pension scheme is a defined-contribution plan to provide a supplementary pension. The amount of this supplementary pension will depend on the amount contributed, the return on the accrued capital and the annuity rate (mainly determined by the variable mark-up and interest rate) at the time of taking the pension. Contributions are payable out of net pay and the scheme is voluntary.

Pension swapping options

The pension scheme provides various options for swapping pension entitlement. When the retirement pension (OP) becomes payable, for instance, it is possible to forego retirement benefit for an increased partner pension and vice versa. An exchange of pension entitlement between OP (accrued until 2018) and PP is also possible when a pension fund member ceases to be an active participant (other than on retirement or death).

Value transfer

If a participant takes a job with an employer that is not affiliated to ABP, the pension that has been accrued with ABP can be transferred to a different pension fund. That person will then not be paid a pension by ABP at a later date but by the pension fund to which the value of the accrued pension rights has been transferred. The same process is also possible in reverse. If a participant in a different pension fund joins an employer affiliated to ABP, the person concerned can take the accrued pension with them to ABP. The current conditions for value transfers are available on ABP's website.

Pension scheme for military personnel

Professional military personnel have their own pension scheme, which is administered by ABP. Employees with the status of professional military personnel, former professional military personnel who are entitled to a disability pension and former professional military personnel entitled to a severance payment or unemployment benefit are members of this sector-specific scheme. Civilian personnel working for the Ministry of Defense are members of the average-pay scheme operated by ABP.

The military unions and the Ministry of Defense, the social partners, reached an agreement on July 30, 2019 on a new military pension scheme. It concerns a defense-specific average salary scheme, which will be introduced retroactively from 1 January 2019. A higher accrual percentage applies from 1 January 2019. The professional military personnel also build up pension over a larger part of the salary. The pension built up until 1 January 2019 remains unchanged. In the average salary scheme, the pension is calculated on the basis of the average income. This means an improvement for most military personnel. For a small group of military personnel, with a strongly rising career at a later age, disadvantage can arise. This group is compensated for this by the employer. The new scheme also includes a number of other important changes. For example, more allowances become pensionable, the survivor's pension changes and the retirement age becomes the same as the state pension age. In a number of situations, the retirement age remains 65 years.

According to the agreements in the Pension Agreement, employers account for 70% of the premium and 30% of the premium is withheld from the employees' income. The premium of the 50% pensionability of the VVHO allowance and of the 50% pension accrual during the payback period is borne by the employer.

Accounting policies - general

Stichting Pensioenfonds ABP, established at Heerlen and entered in the register kept by the Chamber of Commerce under number 41074000, prepared these financial statements according to financial reporting policies generally accepted in the Netherlands and the statutory provisions concerning annual accounts contained in Part 9, Book 2, of the Netherlands Civil Code and the Dutch Accounting Standards. These financial statements have been prepared on a going-concern basis.

In the balance sheet, the pension liabilities and the matching investments are mainly of a long-term nature. The investment-related liabilities are also long-term in nature, but based on the guidelines they are presented separately in the balance sheet. The other balance sheet items are presented as other assets and other liabilities, with the balancing item constituting the pension fund capital.

All income and expenses are recognised in the period to which they relate. Movements in the pension fund capital relate exclusively to the balance of income and expenses. The Items in the statement of income and expenses are largely a function of the accounting policies in respect of the investments and the provisions for pension liabilities used in the preparation of the balance sheet.

The accounting policies used in preparing the company financial statements and the consolidated financial statements are the same. Amounts are in millions of euros unless otherwise stated. These financial statements relate to the financial year 2019, which ended on the balance sheet date December 31, 2019.

Basis of valuation and determination of results

Netting

A financial asset and a financial liability are only set off against each other and presented as a net amount in the balance sheet where there is a statutory or contractual right of set-off and simultaneous settlement and it is also the intention to settle the items on a net basis. Interest income and interest expense connected with financial assets and financial liabilities presented as net amounts are likewise recognized on a net basis.

Estimates

Preparing the financial statements involves using estimates and assumptions which can affect the reported assets, liabilities, income, and expenses. This is particularly the case with respect to the calculation of the provisions for pension liabilities and the valuation of unlisted investments. It may subsequently transpire that the reported amounts differ from the actual amounts.

Recognition

Unless otherwise stated, assets and liabilities are carried at fair value. An asset is recognized in the balance sheet when it is probable that the future economic benefits of the asset will flow to the pension fund and the amount of the asset can be measured reliably. Assets that do not comply with this are not recognized in the balance sheet, but are classified as off-balance sheet assets. A liability is recognized in the balance sheet when it is probable that an outflow of resources embodying economic benefits will result from the settlement of a present obligation and the amount at which the settlement will take place can be measured reliably. Obligations that do not comply with this are not included in the balance sheet, but are classified as off-balance sheet obligations.

Income is recognized in the statement of income and expenses when an increase in future economic benefits related to an increase in an asset or a decrease in a liability has arisen that can be measured reliably. Expenses are recognized in the statement of income and expenses when a decrease in future economic benefits related to a decrease in an asset or an increase in a liability has arisen that can be measured reliably. Income and expenses are allocated to the period to which they relate.

If a transaction results in the transfer of virtually all or all future economic benefits and all or virtually all risks in relation to an asset or liability to a third party, this asset or liability is no longer recognized on the balance sheet. Furthermore, assets and liabilities are no longer recognized on the balance sheet from the moment the conditions of probability of future economic benefit and reliability of the valuations are no longer met.

Changes in accounting estimates

In July 2019, ABP started to communicate more actively about the right to disability pension in the event of (partial) invalidity, as a result of which the expected inflow into disability will increase. The calculation method of the IBNR has been adjusted to this, as a result of which the provision has increased by € 0.8 billion. In addition, the increase in the state pension age was changed in 2019 (bill 'temporization increase age of state pension age', and Statistics Netherlands published a new mortality forecast in December 2019. Based on this, the statutory state retirement age has been determined and the expected further rise in the state pension age after 2025 is based. This leads to a decrease in the provision for pension liabilities by € 0.9 billion.

A further explanation is included in the explanation to the item provision for pension liabilities.

Foreign currency translation

The year-end balances of assets and liabilities denominated in currencies other than the euro are translated into euros at the rates prevailing on the balance sheet date. The rates used for translation purposes are the 4 P.m. London time World Market fixing rates on the last day of trading for the year as published by Reuters. The resultant translation differences are included in investment results. Income and expenses in foreign currencies are translated into euros at the rates prevailing on the transaction date. Differences between the transaction rate and the settlement rate are included in investment results as well.

Basis of valuation of assets and liabilities

Investments

General

Investments are carried at fair value. Depending on the availability of objective data, the following valuation methods, in order of priority, are used for measuring the carrying amount. This is done using a graduated approach. The next valuation method is only employed if and when a higher-ranking method proves inapplicable.

The same methods are used for assets on which the pension fund bears the risk as for those which are carried at the risk of participants.

Mark-to-market

In normal circumstances, the value of the investments is based on prices obtained from independent providers of price information. This concerns not only quoted market prices but also other prices posted by independent providers on a daily basis.

Broker quotes

In the absence of quoted market prices and prices obtained from independent providers of price information or if the prices are considered to be unrealistic in view of market circumstances, measurement of the fair value is based on prices quoted by a minimum of three different brokers.

Mark-to-model

In the absence of quoted market prices and prices from independent providers of price information, or if the prices are considered to be unrealistic in view of market circumstances, and broker quotes are not obtainable either, the fair value is approximated, using valuation models developed by the administrative organisation, allowing for risks of insolvency and illiquidity by testing against basic, stress and extreme stress scenarios.

The administrative organization's valuation models, including their assumptions, are regularly evaluated by an external specialist at least once a year.

The valuation models are based on generally accepted principles. Taking account of market parameters such as credit rating mark-ups, the process involves working with the best estimates relating to expected future cash flows, which are then discounted at rates obtained from appropriate yield curves.

To estimate volatilities and correlations, information in the public domain is used. Reference bonds are used to estimate credit risk. Interbank interest rates and published yield curves for swaps and futures markets are the basis of the yield curves used.

The administrative organization's valuation models are used particularly for interest rate swaps, private placements, and mortgage portfolios. For the interest rate swaps, discount curves are created based interest rates obtained from providers of price information, which are then used to discount the future cash flows. Where cash collateral is received, the risks are reduced and a lower interest rate curve is used. The cash flows for the fixed, long interest rate component are taken as being the contract cash flows and the cash flows for the variable, short-term component are arrived at using market-derived forward rates. For private placements, yield curves from providers of price information are also used, applying a variable spread depending on the sector of the borrower and also allowing for a market-derived inflation curve. The mortgage portfolios use a yield curve based on consumer rates with markdowns for the compensation for lapsed optionality and the compensation for mortgage issuing and servicing that are included in the consumer rates.

External estimates

In the absence of mark-to-market, broker quote and mark-to-model information, the fair value is measured by reference to periodical estimates of fair values for the investments concerned provided by external sources. Within external estimates there is a subdivision into investments with and investments without external independent review.

Internal estimates

If no reliable information is available which can be used as input for the administrative organisation's valuation models, the fair value is determined on the basis of a best estimate. Where possible, these are externally reviewed, particularly with regard to the assumptions used.

The above graduated approach with respect to the valuation methods is applied for all asset classes.

Presentation of net current assets

Investments are valued including associated assets, cash balances, and liabilities, where these are not available for use for purposes other than investment transactions. After initial recognition, the receivables and payables are carried at amortized cost. The short term to maturity means that the carrying amount corresponds closely to the face value less any provisions deemed necessary for bad debts in the case of receivables.

More specific details of the way in which carrying amounts are measured for each asset class are given below.

Real estate investments

Investments in real estate are carried at fair value, where possible derived from quoted market prices. In the absence of quoted prices, the net asset value is used. Equity interests in real estate funds are recognized at the net asset value.

Equities

Investments in shares, convertible bonds, and private equity are carried at fair value, based on quoted market prices where available.

Fixed-income investments

Bonds, including index-linked bonds, are carried at fair value measured, where available, on the basis of quoted market prices, and adjusted for accrued interest.

Mortgage loans are carried at fair value, derived from a model involving a variable spread for the risk of early repayment, credit risk and liquidity risk. Savings-based mortgages are shown net of the accumulated savings.

Investments in private placements are carried at fair value based on a model, adjusted as necessary to take account of market information, plus a variable spread for the liquidity risks and counterparty risk as well as being adjusted for accrued interest. The fair value of private placements is determined at by calculating the net present value of the contracted cash flows from these loans using market interest rates appropriate to the remaining terms to maturity. Real estate finance lease loans are measured, applying variable spreads for liquidity risk and credit risk.

Derivatives

Derivative positions are measured without netting at fair value. For certain instruments, such as over-the-counter derivatives, valuation models based on certain assumptions are used, e.g. with respect to credit risk and yield curves.

Other investments

Other investments are investments which cannot be allocated to any of the other investment categories. They mainly concern commodities and absolute-return strategies. These investments are carried at fair value, measured at quoted market prices wherever possible.

Other assets

Participating interests are lasting investments in the share capital of entities in which ABP has the power to participate in the financial and operating policy decisions. These entities, like joint ventures, are carried at net asset value. Other equity investments are presented in the asset class to which they relate.

Buildings for use by the company and other tangible assets are carried at the lower of cost and value in use less straight-line depreciation calculated over the estimated useful lives of the assets concerned.

After initial recognition, other assets are carried at amortised cost. The short term to maturity means that the carrying amount corresponds closely to the face value less any provisions deemed necessary for bad debts in the case of receivables.

Cash is carried at face value.

Pension fund capital

Apart from providing a source of funding to cover unexpected deficits, the pension fund capital can also be drawn on to fund possible future indexation rounds. The law requires pension funds to have capital amounting as a minimum to around 5% of the provision for pension liabilities. This is to be seen as a mandatory reserve. If the pension fund capital falls below that level, the deficit has to be made up within the statutory period.

Specific reserves concern elements of the pension fund's capital earmarked by the Board of Trustees for specific future purposes. The specific reserves are therefore not included in the calculation of the funding ratio.

Provision for pension liabilities

The provision for pension liabilities has a long-term nature. The provision for pension liabilities where the fund bears the risk is made up of the provisions based on average-pay of service for retirement and surviving dependants' pensions and disability/incapacity pension (AAOP). In view of the minor amounts involved, the provision for ABP nettopensioen and the provision for ABP ExtraPensioen are included in the provision for pension liabilities, despite the fact that the participants bear the risk of these products.

The provision for pension liabilities is equal to the net present value of the expected future pensions payable. Increases and reductions in the accrued pension rights and pensions payable are accounted for as soon as the decision has been taken. The provision for pension liabilities has been calculated on the basis of the nominal interest rate term structure published by DNB.

The actuarial assumptions (mortality rates, transfer probabilities, partner frequencies, promotion indices etc.) are updated every three years in principle and subjected to interim evaluation. The actuarial assumptions for the provision for ABP privatization transitional rights (OPA) are updated annually. Future life expectancy projections, as used in calculating the amount of the provision for pension liabilities, were arrived at using the mortality forecast tables produced by the Dutch Actuarial Association (Dutch acronym: AG).

The following actuarial assumptions and methods are used in calculating the amount of the provision for pension liabilities relating to retirement and surviving dependants' pensions, and incapacity pensions (AAOP):

- the nominal interest rate term structure published by DNB to calculate the net present value of the pension liabilities. Wherever the terms market interest rate or current nominal market interest rate are used, they refer to the current nominal interest rate term structure;
- the most recent AG prognosis tables;
- the probabilities of change of circumstances - death (of participants and their dependants), incapacity, dismissal because they have left employment, or dismissal because of receiving retaining pay are derived from gender and age-related tables based on actual data for the pension fund's own participants. The mortality tables take account of the expected future life expectancy trends. Other factors used are partner frequencies on death and promotion indicators;
- the assumption that participants and their dependents were born on 1 July when determining their age;
- parameters relating to such things as the average rate of pension accrual per year of service and the average age difference between partners at the time of death;
- also taken into account are decisions taken by the Board of Trustees up to the end of the reporting period relating to changes, such as indexation awards, coming into effect on 1 January of the following year;
- foreseeable future changes to the pensionable age are also taken into account;
- a cost supplement for future administration costs (pension award and disbursement costs).
- separate gender-based and age-based correction factors experience mortality, chance of disability/incapacity, and man-to-woman ratio for the net pension scheme based on the population.

Provision for retirement and surviving dependants' pensions

The retirement pension in the case of death after the age of 65 is fully funded. The surviving dependents’ pension in the case of death before the age of 65, for the years of service before July 1st, 1999, and after January 1st, 2018, is also fully funded. The surviving dependents’ pension in the case of death before the age of 65, for the years of service between July 1st, 1999, and January 1st, 2018, is insurance-based. For the surviving dependents' pension, the 'standard partner' method is used, based on an average age difference between the participant and his partner.

Provision for incapacity pensions (AAOP)

The AAOP scheme supplements the benefits payable under the old Disablement Insurance Act (WAO) and, with effect from 2006, under the new Work and Income (Ability to Work) Act (WIA). This scheme provides an incapacity pension supplementing the state benefit under the WIA. Both plans are entirely insurance-based, i.e. the provision relates only to pensions already in payment, including incurred but not yet reported (IBNR) claims for incapacity pensions.

Provision for ABP nettopensioen
The provision for ABP nettopensioen (ABP net pension) is equal to the net present value of the plan assets converted from the contributions made by participants individually and at their own risk with the object of supplementing their pensions. Utilization of the provision involves conversion into a different pension product and is only permitted on retirement, on ceasing active participation or on death.

The value of the contributions to the ABP nettopensioen scheme converted into plan assets includes the return on plan assets counted in the total of the investments, with a matching liability included in the provision for pension liabilities. The equal amount of liability to the members of the ABP net pension scheme is, as a counterpart, included in the provision for pension liabilities

Provision for ABP ExtraPensioen
The provision for ABP ExtraPensioen (AEP) is equal to the net present value of the plan assets converted from the contributions made by participants individually and at their own risk with the object of supplementing their pensions. Utilization of the provision involves conversion into a different pension product and is only permitted on retirement, on ceasing active participation or on death.

The value of the contributions to the AEP scheme converted into plan assets includes the return on plan assets counted in the total of the investments, with a matching liability included in the provision for pension liabilities. ABP guarantees that participants will get back at least the amount of their contributions when the savings are used. This includes the investment returns on the converted contributions at the time of calculation.

Investment-related liabilities
The repayment obligation in respect of short-term borrowing is included at fair value. After initial recognition, this item is carried at amortized cost. As long as there is no premium or discount, this more or less corresponds to the face value.

The basis of valuation for the derivatives with a negative fair value is the same as that for the derivatives with a positive fair value. Short positions and cash collateral received are carried at fair value.

Payables and other liabilities
Payables and other liabilities are measured at fair value. After initial recognition the payables and other liabilities are carried at amortized cost. The short term to maturity means that the carrying amount corresponds closely to the face value.

Basis of determination of results
General
Items in the statement of income and expenses are largely a function of the accounting policies in respect of the investments and the provision for pension liabilities applied in the preparation of the balance sheet. Both realized and unrealized results are accounted for directly in the fund result.

Pension contributions (net)
Contributions are attributed to the period to which they relate. The amounts of the contributions are determined on the basis of information supplied by employers. An estimate is made on the basis of extrapolation if the necessary information has not been received from employers. The amount allowed to cover the costs of collection is accounted for in the pension payments and pension administration costs.

Investment results (net)
Investment results, after deduction of asset management costs, are attributed to the period to which they relate. Direct

and indirect results and costs relating to investments (whether already invoiced or still to be invoiced) are presented separately. The direct results include interest, dividends and similar income. Dividends are recognised when they are made payable. Capital gains and losses are indirect investment results and are attributed to the period in which they occur. The recognized changes in the carrying amounts reflect both realized and unrealized gains and losses.

Pensions

Pensions are attributed to the period to which they relate.

Movements in provision for pension liabilities

Pension accruals

Pension accruals are attributed to the period in which the accrual of pension rights takes place. An exception to this is the assumed continuation of active service for the purposes of pension accrual in the case of incapacity and death. The cost of this future accrual of pension rights is recognized immediately in the year in which the participant becomes unable to work or dies.

Indexation

The amount of the annual indexation increase is recognized in the statement of income and expenses if the Board of Trustees has taken its decision on or before the balance sheet date.

Added interest

The interest cost added is calculated on the basis of the nominal interest rate for a period of one year included in the interest rate term structure published by DNB for interbank swaps at the close of the preceding year. The interest is calculated on the opening balance and the movements during the year.

Utilized for pensions and pension administration costs

The amount Utilized out of the provision for pension liabilities for pensions and pension administration costs is credited to the statement of income and expenses in the period for which provision for pensions and pension administration costs was made in the calculation of the provision.

Change in market interest rate

The effect which the transition from using the interest rate term structure as at the close of the preceding year shifted by one year to the interest rate term structure at the close of the year under review has on the provision for pension liabilities was calculated at the end of the reporting period and included in the statement of income and expenses.

Change in actuarial assumptions

The effect which the change in actuarial assumptions has on the provision for pension liabilities is determined at the close of the reporting period and included in the statement of income and expenses.

Change in respect of value transfers

Changes in respect of transfers of pension rights are attributed to the period to which they relate.

Other movements in provision for pension liabilities

Other movements in provisions for liabilities are attributed to the period to which they relate.

Collection cost supplements in pension contributions

The collection cost supplements in pension contributions are attributed to the period to which they relate.

Value transfers

Value transfers into and out of the fund are included at face value and attributed to the period in which they are made.

Pension administration costs (net)
The net costs of pension administration are attributed to the period to which they relate.

Interest charges on investment-related liabilities
Interest charges on investment-related liabilities are attributed to the period to which they relate.

Other income and expenses
Other income and expenses are recognized in the period to which they relate.

Basis of the cash flow statement
The statement of cash flows has been prepared using the direct method. Cash flows are attributed to the cash-generating activities concerned. Only the cash of ABP (and consolidated entities) is now included in the opening and closing cash balances for the cash flow statement. Cash balances held by the CISs are not included.

Receipts and expenditures in foreign currencies connected with investment activities are translated into euros at transaction date exchange rates. Differences between the transaction rate and the settlement rate are included in investment results (net). The policy with respect to investments outside the eurozone is the same.

All receipts and expenditures connected with pension activities are in euros so there are no exchange differences associated with these activities.

Administration
ABP has largely outsourced the administration of the pension scheme to APG Groep NV, APG Rechtenbeheer, and APG Asset Management under long-term contracts. The main tasks performed by the administrative organization on behalf of the fund are pension administration, asset management, communication, and support services for the Board of Trustees.

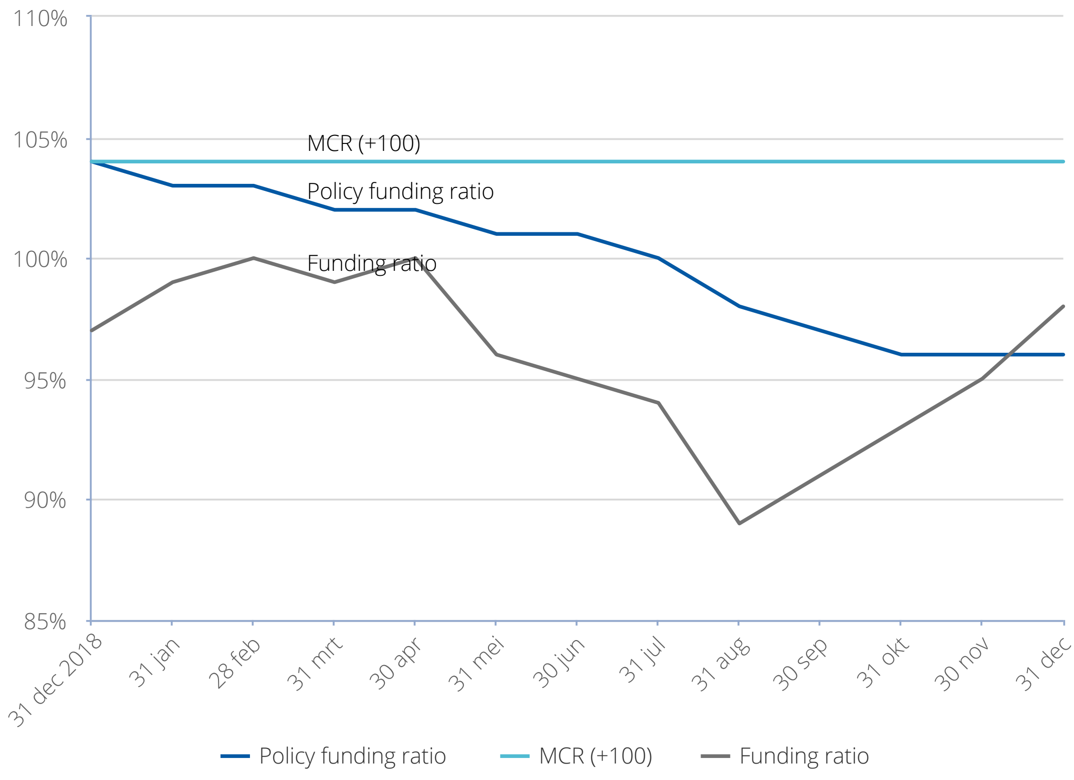
Risk paragraph

The Risk Management section of the report of the Board of Trustees describes the risk policy together with the setup and operation of the internal risk management and the control systems in place. This section contains quantified disclosures and covers the development in the funding ratio, the discount rate, the minimum capital requirement, the capital requirement and the consequent funding deficit at year-end 2019. We then go on to discuss the solvency test method and outcomes and the recovery plan that has been submitted. Finally we describe the composition of the derivatives portfolio in view of the importance of derivatives as a risk management tool.

Development in the policy funding ratio and the discount rate in 2019

Two graphs are presented below. The first graph shows the development in the funding ratio and the policy funding ratio in 2019 in relation to the minimum capital requirement. The development in the discount rate is presented in the second graph.

Funding ratio development



Policy funding ratio

The policy funding ratio is the average of the monthly funding ratios over the preceding 12 months. Because of averaging, its trend is more stable than that of the funding ratio. The policy funding ratio plays an important role in the contributions, indexation, and recovery policy. At year-end 2019, the policy funding ratio was 95.8% (2018: 103.8%)

Real funding ratio

A real funding ratio of 100% would mean that ABP's capital was sufficient to permit full index-linked increases in pensions on a permanent basis. To arrive at this funding ratio, the lowest figure that would permanently permit full index-linked increases is determined. The real funding ratio is defined as the policy funding ratio divided by the indexation funding ratio, the funding ratio at which full indexation on the basis of price inflation is possible. Based on price inflation as the index linking ambition, the real funding ratio at year-end 2019 was 77.5% (2018: 84.9%). In accordance with the FTK (Financial Assessment Framework) Decree, the new parameters for inflationary expectations and the maximum return assumptions allowed were used for the calculation.

Deficit relative to the minimum capital requirement

The position relative to the minimum capital requirement is determined based on a general reserve, which is calculated relative to the policy funding ratio. During the reporting period, the funding ratio rose from 97.1% to 97.8%. There is a lag in impact of the change of the funding ratio on the development in the policy funding ratio. This is because the policy funding ratio equals the average of the funding ratios over the past 12 months. Both the funding ratio and the policy funding ratio were below their minimum required levels at year-end 2019. The following table provides insight into the deficit relative to the minimum capital requirement.

Amount of deficit relative to minimum capital requirement in € millions	31-12-2019	31-12-2019
Calculated general reserve (relative to policy funding ratio)	-20,244	-4.2%
Less: Minimum capital requirement	19,964	4.2%
Deficit relative to calculated general reserve	**-40,208**	**-8.4%**

The minimum capital requirement is calculated in accordance with Section 11 of the Financial Assessment Framework Decree and works out at 4.2% of the liabilities, or €20.0 billion at year-end 2019. At the end of 2019 there was a deficit in terms of the minimum capital requirement. There is a deficit situation because the general reserve is calculated relative to the policy funding ratio, and this calculated general reserve stands at -€20.2 billion. The general reserve at year-end 2019 is a negative €10.7 billion, and as such it is also below the minimum capital requirement.

Recovery plan
At the end of 2019 the policy funding ratio was below the required funding ratio of the strategic portfolio. ABP was therefore required to submit a recovery plan before April 1, 2020. The recovery plan indicated that, on the basis of the assumptions used, the policy funding ratio could grow to the level of the capital requirement on time. No supplementary measures were required in 2019.

Solvency test
Pension funds are subject to the Financial Assessment Framework (FTK), which forms part of the Pensions Act, and are supervised by DNB. The Financial Assessment Framework contains a solvency test to be used to determine what funding ratio a pension fund needs to have in order still to have a funding ratio of 100% following a combination of shocks laid down in the Financial Assessment Framework. Meeting this figure satisfies the required funding ratio standard. Pursuant to the Financial Assessment Framework, the magnitude of the defined shocks is such as is likely to occur with a frequency of once every 40 years or a probability of 2.5% per annum. The capital requirement standard is reasonably constant over time and hovered around 127% during the year. The fluctuation is largely caused by changes in the market interest rate.

The risk factors defined by DNB are:
- S1 Interest rate risk
- S2 Equities and alternative investments risk
- S3 Currency risk
- S4 Commodity risk
- S5 Credit risk
- S6 Underwriting risk
- S7 Liquidity risk
- S8 Concentration risk
- S9 Operational risk
- S10 Active risk

In order to calculate the capital requirement, the stipulated shocks associated with risk factors S1 to S6 plus S10 are first determined. These are then combined using the 'square root formula' to produce a combined shock affecting the funding ratio. The square root formula allows for the fact that the shocks do not necessarily occur simultaneously and the combined shock is less than the sum of the individual shocks (diversification effect). The standard for the capital requirement is defined such that application of the combined shock results in a funding ratio of 100%. The outcome fluctuates over time as it depends on the market conditions (such as interest rate and credit spreads). Portfolio re-balancing in combination with risk restrictions, however, means that the funding ratio remains in the region of that for the strategic portfolio. In the standard model, the liquidity risk (S7), the concentration risk (S8) and the operational risk (S9) are all taken as being zero. Under existing policy the view is that they do not necessitate a supplementary capital requirement.

Equity position relative to capital requirement

The solvency test shows that, at year-end 2019, there was a deficit relative to the statutory requirement, since the actual capital was less than the capital requirement. The following table presents the results of the standard test on the strategic portfolio, measured at year-end 2019. The starting point for determining the shocks is the situation in which the funding ratio satisfies the capital requirement standard.

Amount of deficit relative to capital requirement in € millions and as percentage of the provisions	31-12-2019	31-12-2019	31-12-2018	31-12-2018
Risk				
S1 Interest rate risk	13,262	2.8%	19,842	4.8%
S2 Equities and alternative investments risk	101,432	21.3%	89,837	21.9%
S3 Currency risk	36,614	7.7%	31,324	7.6%
S4 Commodity risk	10,521	2.2%	8,010	1.9%
S5 Credit risk	21,327	4.5%	17,779	4.3%
S6 Underwriting risk	15,195	3.2%	12,823	3.1%
S10 Active risk	12,417	2.6%	11,155	2.8%
Subtotal of all risks	**210,768**	**44.3%**	190,770	46.4%
Less: Diversification effect	-83,406	-17.5%	-74,926	-18.2%
Capital requirement	**127,362**	**26.8%**	**115,844**	**28.2%**
Less: Calculated general reserve (relative to policy funding ratio)	-20,244	-4.3%	15,653	3.8%
Deficit relative to calculated general reserve	**-147,606**	**-31.1%**	**-100,191**	**-24.4%**

Expressed as a percentage of the technical provisions, the capital requirement has fallen since last year to 26.8% of the liabilities. The capital requirement at year-end 2019 (€127.4 billion) was calculated using the average norm portfolio for 2020. The most important component of the capital requirement is the equities and alternative investments risk, followed by the currency risk.

(S1) Interest rate risk

The interest rate risk derives from the interest rate sensitivity of assets and liabilities and is an important element for mismatch risk. Mismatch risk is understood as the difference between the interest rate sensitivity of the investments and that of the liabilities. As the interest rate rises and falls, it affects the assets and the liabilities, and hence the funding ratio.

The interest rate risk S1 has become smaller and smaller over the years because the magnitude of the applied interest rate shock is a fixed proportion of the interest rate at various points on the yield curve and therefore diminishes as interest rates fall. In practice too, the interest rate risk will be limited when interest rates are low, since rates cannot fall far below zero. In the S-test the interest rate curve at which the liabilities are discounted is pushed up and down by a percentage that depends on maturity. The principle behind the calculation of the interest rate risk is that the worst possible impact on the pension fund capital should be taken. Generally that means a fall in interest rates. To give an idea of the magnitude of the shock, we will take a look at some examples of the shocks to be considered (at various time horizons). The five-year interest rate, for instance, receives a 33% downward shock, the 10-year interest rate a 25% downward shock and the very long interest rates a 24% downward shock. A shock of the same magnitude in percentage points is then applied to the market interest rate curves used in measuring the swaps and the fixed-income investments.

Over half of the interest rate sensitivity of the investments stems from the fixed-income investments, with the remainder depending on the interest rate derivatives. The interest rate sensitivity is expressed by what is termed the 'duration'. The duration is roughly equal to the average weighted maturity of all cash flows (interest and repayments of principal) relating to the fixed-income investments and interest rate derivatives. The duration can be interpreted as follows: if the market interest rate falls by 1 percentage point, there will be a percentage increase in the value of the portfolio equal to the duration of the portfolio.

Duration 2019	Years	Market value (in € mln)	impact +1% (in € mln)	impact -1% (in € mln)	2018 in years
Duration of assets (excluding interest rate swaps)	3.1	442,602	-11,292	13,516	3.1
Duration of assets (including interest rate swaps	5.0	465,286	-19,375	23,368	5.1
Duration of liabilities	19.4	476,330	-80,234	107,237	18.4

The duration of the assets was calculated using the EONIA market interest rate term structure. Since the statutory UFR rate curve determines the value of the liabilities, the duration of the liabilities is also determined based on this curve.

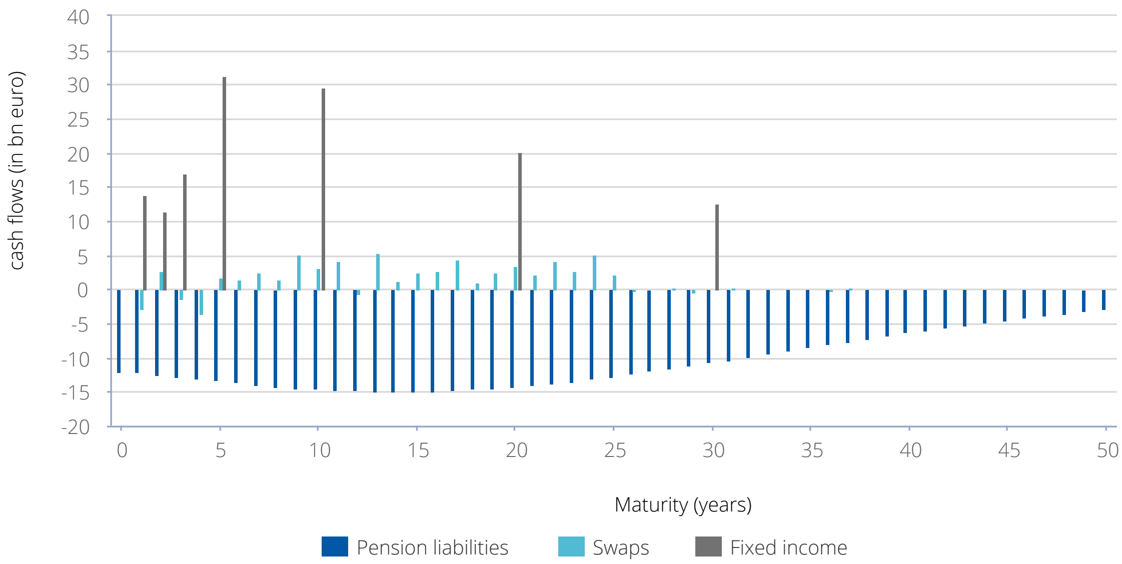
The duration for the overall portfolio, excluding interest rate swaps, is 3.1 years. The interest rate effect on other assets is disregarded for this purpose. Extending the duration of the assets (using interest rate swaps) brings the interest rate profile more in line with the interest rates sensitivity of the liabilities, with the result that a change in the interest rate has less impact on the funding ratio. The duration for the whole of the investment portfolio, including interest rate swaps, at year-end 2019 was 5.0 years.

The duration of the liabilities based on the UFR interest rate curve was 19.4 years. To facilitate comparison with the duration of the assets, the duration of the liabilities was also determined based on the EONIA rate at year-end 2019. The duration of the liabilities based on the EONIA interest rate curve was 20.7 years. The interest hedging percentage based on the duration according to the EONIA rate curve is around 24% (namely 5.0/20.7)*.

The following figure shows in dark blue cash flows of nominal pension liabilities and in light blue those of the swap portfolio. The set of seven gray cash flows represents the portfolio of fixed income securities. The individual cash flows of this portfolio were combined into seven maturity buckets to facilitate a simplified representation. The combined cash flows provide the same value change for S1 as the total of the individual cash flows. Furthermore, the figure illustrates the extent to which ABP has hedged its interest rate risk and the extent to which the hedging is evenly distributed over different time horizons.

**Regular application of the interest rate hedging model reduces the estimate of the contribution to interest rate hedging of a number of types of bonds including high-yield and inflation-linked). As a result at Jan. 1, 2020 interest rate hedging estimate is 2 pp lower than before (22%). The impact of this model adjustment is supplemented with the purchase of interest rate swaps. As a result the interest rate hedging will be steered back toward the strategic hedging percentage of 25%.*

Nominal cash flows by maturity



(S2) Variable yield securities risk

To manage the price risks on investments in equities and alternatives, ABP applies a policy of maximum diversification across geographical regions, asset classes, and sectors. Information on this is contained in the notes to the company balance sheet. Equities and alternative investments make up 60% of available assets, including the category commodities for 5%. In the context of S2 commodities do not form part of the equities and alternative investments risk. This means that a price drop of 10% affecting equities and alternative investments roughly translates into a fall in the funding ratio of almost 6 percentage points. The solvency test assumes a shock of 30% for equities in developed markets, 40% for equities in emerging markets and 25% for unlisted real estate. For unlisted equity and alternative investments (private equity, hedge funds, and infrastructure), the applied shock is 40%. The risks associated with unlisted equity and alternative investments are thus included in the equities and alternative investments risk (S2). Any related unhedged currency risks are included under the heading of currency risk (S3).

(S3) Foreign exchange risk

ABP is exposed to currency risk inasmuch as investments are also made in international assets denominated in foreign currencies in connection with spreading the risk whereas the pensions are payable in euro. The currency risk was mitigated in 2019 by partially hedging major foreign currency positions. In the S-test, a 20% shock is applied to the remaining post-hedging exposure to foreign currencies in developed markets vis-à-vis the euro. The shock in the case of the remaining unhedged exposure to foreign currencies in emerging markets vis-a-vis the euro is 35%.

The fair value of the currency hedging derivatives is presented in the last table in the section on derivatives. The following table provides an analysis of the investments before and after currency hedging.

Analysis of actual capital held by currency as at year-end 2019 (€ mln)	Before currency hedge	Currency hedge	After currency hedge
Currency			
Euro	162,703	135,710	298,413
US dollar	191,550	-111,158	80,392
Sterling	15,599	-8,230	7,369
Australian dollar	7,287	-3,492	3,795
Swiss franc	4,661	-2,621	2,040
Hong Kong dollar	5,342	0	5,342
Canadian dollar	4,957	-2,352	2,605
Yen	11,911	-6,515	5,396
Other	60,336	-69	60,267
Total 2019	**464,346**	**1,273**	**465,619**
Total 2018	399,633	-662	398,971

At year-end 2019, strategic hedging of the currency risk on equities and alternative investments in U.S. dollar, Swiss franc, Japanese yen, Canadian and Australian dollar and sterling was 50%. In contrast, the currency risk of the fixed-income investments is fully hedged. A currency hedge effectively converts an investment in a foreign currency into an investment in euro.

(S4) Commodities risk

The fair value of commodities amounted to 5% and consisted largely of commodity derivatives. There is minimal active risk by virtue of the existence of active mandates. In the S-test, the market value of the commodities is subjected to a shock of 35%.

(S5) Credit risk

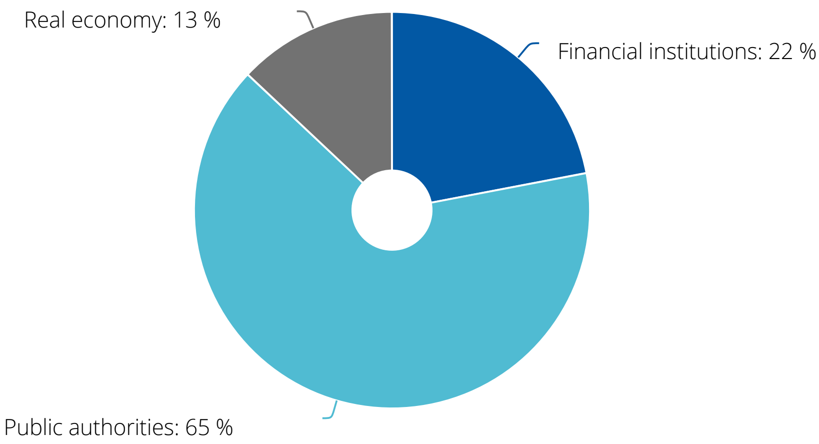
The investment portfolio involves a credit risk exposure. Credit risk refers to the risk that a company is no longer able to meet its payment obligations or that its financial situation deteriorates. The rating profile of the portfolio serves as an important indicator for the portfolio quality. A proportion of the credit risk is hedged by means of credit default swaps. For the purposes of the S-test, the portfolio of fixed-income investments is divided into five rating classes: AAA, AA, A, BBB, and BB or below. The AAA rating class is broken down further into European AAA government paper and other AAA. In the FTK stress scenario, a shock is applied to the credit spread. The size of this shock varies from 0 bps for European AAA government paper and 60 bps for other AAA to 530 bps for paper rated BB or below.

The creditworthiness of investments is generally measured by credit ratings. A high credit rating means that a borrower is very sound and a loan to that borrower will be repaid with a high degree of certainty. Credit ratings range from the highest AAA (highly creditworthy) to the lowest, D.
The diversification of investments in fixed income securities is such that 73% (2018: 74%) are rated A or higher.

Rating profile of the total portfolio of fixed-income investments (%)	AAA	AA	A	BBB	<= BB	No Rating	Total
2019	33%	29%	11%	17%	9%	1%	100%
2018	35%	28%	11%	16%	10%	0%	100%

The following pie chart gives an analysis of the portfolio according to class of debtor.

portfolio analyzed by debtor



(S6) Underwriting risks

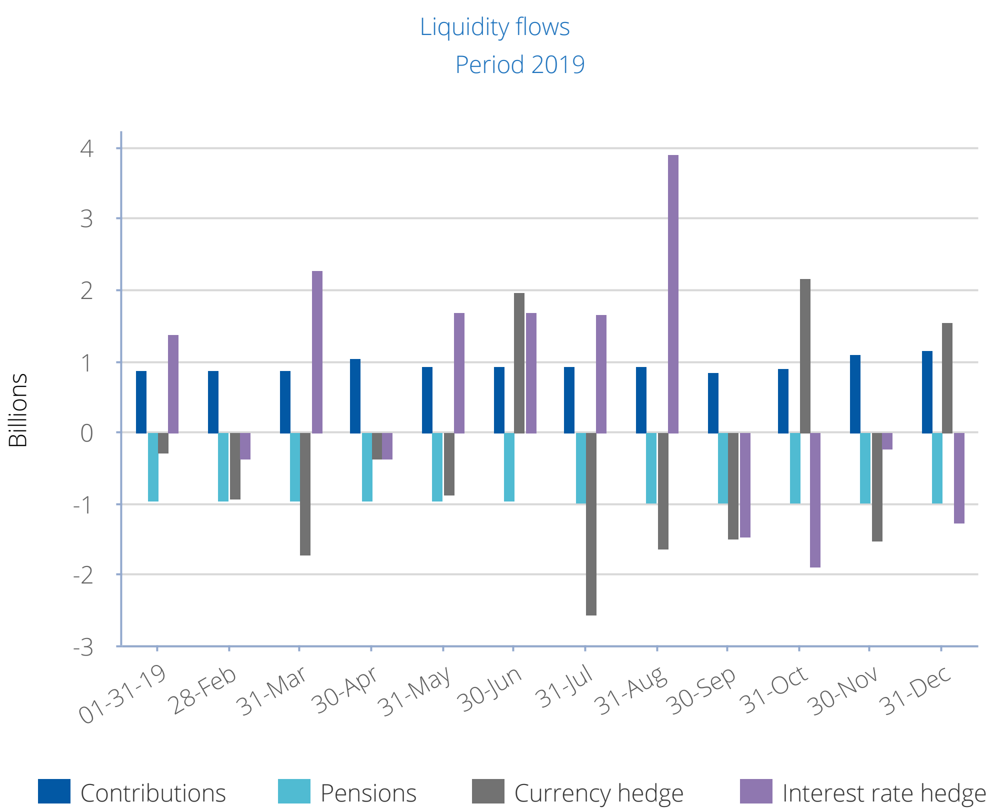
Retirement and surviving dependents' pensions are payable for life. In calculating the amount of the provision for pension liabilities, a pension fund is legally obliged to take account of identifiable future life expectancy trends. This is done on the basis of the 2018 AG projections table, which is adjusted using correction factors specific to the pension fund, as determined by the 2014-2016 Actuarial Assumptions Study, so as to arrive at a mortality table specific to ABP. In addition to mortality rates, ABP's specific actuarial assumptions take into account transfer probabilities, partner frequencies and estimates of disability among other factors. If the mortality trend follows the AG projections, a man aged 66 at the end of 2019 can expect to live until he is 87.3 and a woman aged 66 can expect to live until she is 89.4. The shock applied to the provision for pension liabilities associated with the underwriting risk is 3.19%.

(S7) Liquidity risk

The liquidity risk is the risk that the fund will have insufficient cash to meet its current payment liabilities, including pension payments and provision of cash collateral in connection with derivative positions. In normal circumstances, ABP's liquidity risk is minimal, not least because much of the investment is in readily marketable assets. There was no liquidity deficit in 2019.

Investing in illiquid asset classes does involve the risk that the fund does not have so much flexibility when it comes to re-balancing the investment portfolio. Forced selling of illiquid assets at short notice is generally only possible at a poor price. To avoid such a situation, the re-balancing policy takes account of the reduced flexibility with regard to the illiquid investment categories.

The following graph presents the monthly cash flows from the interest rate hedge, the currency hedge, the contributions, and the pension payments in 2019. Liquidity issues can arise if the negative cash flows become excessive. As we can see, the currency hedging positions demanded the highest level of liquidity in 2019.



(S8) Concentration risk

Concentration risk arises when a large proportion of the invested capital is concentrated with one party or in one asset category. In such a case, the risks are greater than if the portfolio is well diversified. In the standard model the concentration risk is taken as being zero. Also, on the basis of the policy pursued, it has been determined that there is no elevated risk for which an additional allowance is necessary.

(S9) Operational risk

Operational risk is the risk of errors not being picked up quickly enough as a result of the incorrect operation of the ABP organization. The Pensions Act permits the operational risk to be accorded zero value, provided an elevated risk is not present. This condition was satisfied in 2019. This statement is based on the reports from the administrative organization which are used by the Board of Trustees to monitor all aspects of the administrative operations.

(S10) Active risk

The optimum asset mix is determined using the asset and liability management (ALM) approach. Each asset class is then populated with suitable names. In doing so, managers are permitted to diverge from the benchmark within the predetermined maximum tracking errors, which leads to an active risk. The tracking errors for the various asset classes are measured using risk systems and constantly monitored to determine whether they remain within the set limits. The impact of the active risk on the required funding ratio is +0.16 pp.

Risk restrictions

In order to permit indexation of pensions, it is essential to accept an investment risk. This means deliberately accepting risk exposure commensurate with the pension fund's risk appetite with the object of realizing the indexation ambition in the long term. To limit the investment risks, risk restrictions are used in the mandates, coupled with constant monitoring of the risk exposure. Specific risk restrictions apply both to the entire portfolio and to certain components within it. Examples are a maximum permitted amount of active risk or a maximum allocation to a certain counterparty. Risks can also be mitigated by making use of derivatives in addition to these restrictions and ensuring diversification of the investments.

Derivatives

ABP uses derivatives to reduce risks or to make rapid tactical changes in the asset mix. Derivatives are financial instruments whose value partly depends on one or more underlying financial instruments. Derivatives can be traded on an organized public exchange or directly with players in the financial sector. In the latter case, the contracts are described as 'over-the-counter' (OTC) derivatives. ABP uses both types of instrument. For derivatives, a form of collateral usually has to be deposited with the counterparty when assuming a position in derivatives. This provides a kind of cushion for the fluctuations in the value and quoted price of the derivative position. The deposited collateral (initial margin) is an amount of cash (or suitable securities) that is deposited with the counterparty and which serves as a guarantee for the settlement of any liabilities which arise if the value of derivatives fluctuates. Payment of additional margin or repayment of margin in principle takes place on a daily basis, depending on changes in the position. The major part of the use of derivatives is connected with hedging currency and interest rate risks. A proportion of the investment portfolio is denominated in foreign currencies (the greater part in U.S. dollars). In order to mitigate the risks of exchange rate movements and safeguard the cash flows in euros, a proportion of the currency risk was hedged. Derivatives are also used to bring the interest rate sensitivity of the investments more into line with the interest rate sensitivity of the future liabilities. This is achieved by extending the duration (weighted average maturity of all cash flows) of the fixed-income investments.

A small proportion of the derivatives portfolio is used to provide an effective means of creating positions in certain assets or modifying aspects of certain investment portfolios.

The following table shows the fair value of the derivatives (swaps, futures, options and currency forwards) and short positions attributable to the various asset classes together with the associated asset management overlay effect. At year-end 2019, this asset management overlay effect amounted to €13.7 billion (2018: €3.4 billion). As can be seen in the table, with the help of derivatives and short positions investments in fixed income securities and other investments were increased and those in equities reduced.

Balance sheet before and after attributing fair value of derivatives (in € mln)	Balance sheet at fair value	Attributed fair value of derivatives	Balance sheet after attributing fair value of derivatives	Asset management overlay effect	Balance sheet after asset management overlay effect	Balance sheet after asset management overlay effect
					31-12-2019	31-12-2018
Real estate	63,530	-	63,530	-	63,530	52,171
Equities	192,405	-244	192,161	-13,701	178,460	152,841
Fixed-income investments	176,459	20,760	197,219	6,572	203,791	181,204
Derivatives: positive positions	43,601	-43,601	-	-	-	-
Other investments	53,534	1,841	55,375	7,129	62,504	44,663
Other assets	1,944	-	1,944	-	1,944	1,888
Total assets	**531,473**	**-21,244**	**510,229**	**-**	**510,229**	**432,767**
Pension fund capital	-9,651	-	-9,651	-	-9,651	-11,012
Pension liabilities	476,330	-	476,330	-	476,330	411,008
Investment-related liabilities	62,866	-21,244	41,622	-	41,622	31,483
incl. derivatives and short positions	*40,450*	*-21,244*	*19,206*	-	*19,206*	*115*
Other liabilities	1,928	-	1,928	-	1,928	1,288
Total capital and liabilities	**531,473**	**-21,244**	**510,229**	**-**	**510,229**	**432,767**

The following table gives an analysis of the different types of derivatives. The underlying values for the futures and TBAs (to be announced) are based on net exposure (net amount of the long and short exposure). The underlying values of the other derivatives are based on the notionals concerned, with all position totals stated in absolute terms (summation of long and short exposure). The two largest items are the derivatives used to mitigate the currency risk (forwards) and the interest rate risk (interest rate swaps).

Analysis of derivatives by type (in € mln)	Receivables underlying value	Receivables fair value	Payables underlying value	Payables fair value
Currency derivatives				
Forwards	65,480	1,797	167,249	-680
Cross Currency Swap	71			-5
Interest rate derivatives				
Interest Rate Swaps	179,835	39,381	150,716	-17,416
Inflation-linked swaps	8,790	1,266	5,987	-2,446
Fixed-income futures	6,883	52	9,653	-59
TBAs	343	4	1,779	-4
Other derivatives				
Credit Default Swaps	5,257	13	323	-226
Other futures	20,414	1,088	16,271	-408
Total derivatives as at year-end 2019		**43,601**		**-21,244**
Total derivatives as at year-end 2018		31,428		-18,924

Short positions

A short position is a position in which an obligation to deliver securities at a future date is assumed without actually possessing them when the obligation is assumed, the counterparty's risk being mitigated by furnishing collateral. The analysis of the short positions is presented in the following table.

Analysis of short positions by type (in € mln)	Liability
Short positions - bonds	190
Short positions - other investments	82
Total short positions as at year-end 2019	**272**
Total short positions as at year-end 2018	115

Notes to the company balance sheet

(amounts in millions of euros unless otherwise stated)

General

The actual capital held can be derived from the company balance sheet by deducting the items of investment-related liabilities, payables and other liabilities and specific reserves from the total assets. The funding ratio can be derived by dividing the actual capital held by the provision for pension liabilities. The policy funding ratio forms the basis for prudential supervision. The policy funding ratio is the average of the monthly funding ratios over the preceding 12 months. The following table presents the calculation of the funding ratio at year-end of the year under review:

	31-12-2019	31-12-2018
Total assets	531,473	451,691
Investment-related liabilities	-62,866	-50,407
Other liabilities	-1,928	-1,288
Specific reserves	-1,060	-1,025
Actual capital held	465,619	398,971
Provision for pension liabilities	476,330	411,008
Funding ratio	97.8%	97.1%
Policy funding ratio	95.8%	103.8%

ASSETS

Investments (1)

The movements in the investments were as follows:

	Real estate	Equities	Fixed-income investments	Derivatives	Other investments	Total 2019	Total 2018
Opening balance of investments	52,171	155,621	162,154	31,428	48,429	449,803	452,775
Granted/bought	3,748	9,353	76,294	-	2,794	92,189	38,704
Repaid/sold	-1,858	-12,502	-72,919	-	-1,719	-88,998	-43,608
Change in value*	8,484	40,122	10,460	-	3,510	62,576	-6,299
Other movements	985	-189	470	12,173	520	13,959	8,231
Closing balance of investments	**63,530**	**192,405**	**176,459**	**43,601**	**53,534**	**529,529**	**449,803**
Of which:							
- listed						343,914	286,388
- unlisted						185,615	163,415

** Including movements up to the time of disposal*

Definition

Investments concern real estate, equities, fixed-income investments, derivatives and other investments, including associated receivables, cash and payables. The assets can be held either directly or indirectly by participating in collective investment schemes (CISs) managed by the administrative organization.

Other movements includes the movements in the derivative positions and the movements in the receivables, cash and payables associated with the investments.

The closing balance of the investments amounting to € 529.5 billion (2018: € 449.8 billion) includes:

	31-12-2019	31-12-2018
Receivables, prepayments and accrued income	443	178
Cash collateral paid	793	921
Short-term lending (including CIS short-term lending)	31,117	25,832
Current account bank balances	885	859
Payables, accruals and deferred income (including debit balances on bank accounts)	-592	-590
Net assets included in current assets	**32,646**	**27,200**

The current account bank balances include amounts invested on the money market as call money. An amount of € 390 million (2018: € 79.5 million) of the cash is not freely available. This concerns balances to be held on margin accounts in connection with futures.

The liabilities included in the investments consist of debit balances on bank accounts totalling € 0.1 billion (2018: € 0.5 billion).

Also included in the investments are:
- Investments held at the risk of participants in the ABP nettopensioen and ABP ExtraPensioen schemes, totalling € 0.3 billion (2018: € 0.3 billion).
- Investments connected with the pre-financing of the VPL scheme, totaling to € 1.4 billion (2018: € 0.8 billion). The assets concerned are managed by ABP for the account and risk of third parties. The movement during the year is made up of the contributions received, amounting to € 566 million (2018: € 280 million), and a return of € 0 (2018: € 3.8 million).

ABP did not lend any investments.

Measurement
To arrive at a meaningful presentation of the carrying amounts of the units held in the collective investment schemes (CISs), the amounts concerned are presented according to the underlying asset classes where possible and where this produces a more accurate view. The amounts of the derivative positions with positive and negative value included in the indirect investments, together with the short-term borrowings are presented separately in the balance sheet, as required by the pension fund accounting standard (DAS 610). The analysis of the investments is based on the underlying assets, even where they are held in CISs managed by the administrative organization.

The fair value per asset class according to measurement method used can be analyzed as follows (in %)

	Real estate	Equities	Fixed-income investments	Derivatives: positive	Investment related liabilities	Other investments	31-12-2019	31-12-2018
Mark-to-market	43	86	97	8	72	54	75	75
Broker quotes	-	-	-	-	-	-	-	-
Mark-to-model	-	-	2	92	28	-	6	6
External estimates	57	14	1	-	-	46	19	19
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

The categorization in the above table is based on the measurement methods referred to in the accounting policies. The fact that 92% of the derivatives fall into the mark-to-model category stems from the fact that quoted market prices are not available. This is the case with over-the-counter derivatives, for example, even though it is possible to measure the value of these instruments objectively. Of the external estimates, 78% is based on an independent valuation.

Allocation of the investments to the appropriate measurement method is made on the following basis:
- the net current assets relating to an asset class, i.e. deposits, repos, receivables, payables, cash and investments in money market instruments are included in the mark-to-market category.
- private equity investments and investments in hedge funds are allocated to the category of external estimates. This also applies in the case of hedge fund investments where the figure given by an external manager is used for the carrying amount. Swaps are included in the 'mark-to-market' category where prices are obtained from independent providers of price information. Where daily prices are not available and the carrying amount is calculated on the basis of a model, swaps are allocated to 'mark-to-model'.
- currency forwards are treated as mark-to-model. Mortgage-backed securities and asset-backed securities are included on the basis of broker quotes or external estimates if prices are not available from independent providers of price information. If the measurement is based on quotes from fewer than three brokers, an investment is considered to be measured using external estimates. The mortgage portfolios are included as 'mark-to-model'.

The value of the investment portfolio is therefore largely based on data from independent sources. Only a small proportion of the portfolio's value is measured using internal models.

Under international accounting standards (IFRS), it is customary to apply a fair value hierarchy to the investments involving the following three levels:
- level 1, direct quoted market prices. This concerns investments with a quoted price in an active market for similar assets or liabilities:
- level 2, derived market prices. This concerns investments where valuation relies on directly observable market inputs other than level 1 inputs:
- level 3, valuation models and techniques. This concerns investments where valuation relies on a measurement method in which a significant proportion of the inputs used is not based on observable market data.

The above valuation matrix is combined below with the IFRS fair value hierarchy (presented in %).

	Direct quoted market prices	Derived market prices	Valuation models and techniques	Total
Mark-to-market	98	2	-	100
Broker quotes	-	-	-	0
Mark-to-model	-	100	-	100
External estimates	-	11	89	100
Total 2019	**74**	**9**	**17**	**100**
Total 2018	73	10	17	100

Allocation of the investments to the appropriate level is made on the following basis:
- allocation is made not at collective investment scheme level but according to the assets in the CIS. Where investments are included in an investment fund, the whole fund is also allocated to a level:
- it is not only the investments that are allocated but also the receivables, payables and cash:
- the following investments, for which there are quoted prices, are allocated to level 1: equities, bonds, options, futures,

money market instruments and cash:
- the following investments are allocated to level 2: investments priced using Markit or a similar provider of price information, investments priced using at least three broker quotes and investments measured using a model operated by the asset manager which employs observable market data. Also included in level 2 are time deposits, repos, receivables and payables, currency forwards, listed option lookalikes, futures and so on. A collective investment scheme is also treated as level 2 if the units in the scheme can be sold back to the scheme at least once a quarter at the reported price:
- allocated to level 3 of those investments not allocated to level 1 or 2. This mainly concerns closed-end funds in illiquid investments where the units cannot be sold back to the fund before maturity.

Analyses

The following tables present an analysis of the investments by sector, by region and by currency (in € mln) for the various asset classes. The currency table does not include the item derivatives. They are presented in a separate table together with the derivatives with a negative fair value and the short positions.

Investments by category	Real estate	Equities	Fixed-income investments	Derivatives: positive	Other investments	31-12-2019	31-12-2018
Basic materials	12	10,033	979	144	1,463	12,631	10,919
Mortgages etc.	-	-	22,287	4	-	22,291	17,745
Real estate	42,254	4,769	771	-	293	48,087	39,725
Utilities	458	4,829	3,324	-	-	8,611	8,715
Telecommunications	1,195	5,521	3,848	-	-	10,564	9,248
Healthcare	240	19,018	3,173	-	16	22,447	19,546
Luxury goods	1,021	24,576	2,663	-	9	28,269	23,469
Energy	5,198	8,469	1,967	756	1,654	18,044	16,133
Manufacturing	11,502	17,632	2,835	-	-	31,969	23,925
Financial institutions	1,115	43,612	16,957	42,541	48,198	152,423	130,749
Convenience goods	-	15,239	1,305	103	662	17,309	14,635
Information technology	-	38,609	1,517	-	-	40,126	29,133
Public authorities	535	98	114,833	53	1,239	116,758	105,861
Total investments	**63,530**	**192,405**	**176,459**	**43,601**	**53,534**	**529,529**	**449,803**

Investments by region	Real estate	Equities	Fixed-income investments	Derivatives: positive	Other investments	31-12-2019	31-12-2018
Netherlands	5,007	4,118	12,405	1,630	19,004	42,164	33,382
Rest of EMU	14,916	16,109	76,771	9,083	6,061	122,940	105,384
Rest of Europe	11,472	22,550	18,264	32,292	2,211	86,789	72,220
North America	18,914	96,573	54,386	581	24,043	194,497	167,959
Asia/Pacific	13,068	47,077	7,695	14	1,767	69,621	58,297
Other	153	5,978	6,938	1	448	13,518	12,561
Total investments	**63,530**	**192,405**	**176,459**	**43,601**	**53,534**	**529,529**	**449,803**

The section 'Investment composition' of the report of the Board of Trustees contains a further explanation of the investments by category and region.

Investments by currency, excluding derivatives	Real estate	Equities	Fixed-income investments	Other investments	31-12-2019	31-12-2018
Euro	22,559	22,658	96,496	12,779	154,492	135,121
US dollar	20,495	94,508	57,164	37,256	209,423	179,755
Sterling	6,207	8,235	8,977	1,338	24,757	23,090
Australian dollar	3,053	3,268	1,086	1,008	8,415	7,150
Swiss franc	250	4,490	74	107	4,921	4,049
Hong Kong dollar	3,949	1,366	0	177	5,492	4,330
Canadian dollar	255	3,934	1,085	297	5,571	4,688
Yen	1,007	10,682	412	365	12,466	10,285
Other	5,755	43,264	11,165	207	60,391	49,907
Total investments	**63,530**	**192,405**	**176,459**	**53,534**	**485,928**	**418,375**

Derivatives and short positions by currency	Derivatives: positive	Derivatives: negative	Short positions	31-12-2019	31-12-2018
Euro	178,822	-9,450	-81	169,291	165,922
US dollar	-135,235	22,523	-191	-112,903	-121,991
Sterling	4,078	-21,204	-	-17,126	-17,485
Australian dollar	1,844	-6,394	-	-4,550	-3,691
Swiss franc	-804	-2,005	-	-2,809	-2,205
Hong Kong dollar	-149	73	-	-76	-67
Canadian dollar	873	-3,817	-	-2,944	-2,220
Yen	-6,801	-99	-	-6,900	-6,159
Other	973	-871	-	102	285
Total investments in derivatives and short positions	**43,601**	**-21,244**	**-272**	**22,085**	**12,389**

The analysis of the derivative positions into positive and negative by currency is affected by currency hedging positions. The presented figures represent a snapshot of these positions. A forward currency contract is a contract to buy or sell a given amount of a currency at an agreed exchange rate on an agreed future date. Buying leads to an increase in the currency position and selling leads to a decrease. Both positions are shown in the above table, the final balances depending in part on exchange rate movements since the signing of the contract.

Notes on the individual asset classes

The real estate investments are made up of investments in:

Real estate investments	31-12-2019	31-12-2018
Residential property	13,012	8,010
Offices	5,406	3,903
Retail property	13,395	15,939
Industrial buildings	8,563	6,993
Hotels	2,201	2,521
Infrastructure	15,691	11,394
Other	5,262	3,411
Total real estate investments	**63,530**	**52,171**

An amount of € 3.9 billion of the real estate investments relates to investments in ABP's own name (2018: € 4.7 billion) and an amount of € 59.7 billion relates to investments made through collective investment schemes managed by the administrative organization (2018: € 47.5 billion).

Other includes the other real estate investment assets and liabilities, totalling € 0.7 billion (2018: € 1.0 billion).

The equity investments are made up of investments in:

Equities	31-12-2019	31-12-2018
Developed markets	125,995	100,430
Emerging markets	39,692	33,657
Private equity	26,166	21,198
Other	552	336
Total investments in equities	**192,405**	**155,621**

An amount of € 3.3 billion of the investments in equities relates to investments in ABP's own name (2018: € 3.9 billion) and an amount of € 189.1 billion relates to investments made through collective investment schemes managed by the administrative organisation (2018: € 151,7 billion).

The private equity investments mainly concern shares in unlisted companies, including venture capital. An amount of € 21.4 billion of the private equity investments relates to indirect investments (2018: € 17.8 billion) and an amount of € 4.8 billion relates to direct investments (2018 € 3.4 billion).

The fixed-income investments concern:

Fixed-income investments	31-12-2019	31-12-2018
Bonds	121,649	92,031
High-yield credits	15,978	15,379
Index-linked bonds	17,870	32,627
Private loans	327	299
Mortgage loans	18,543	18,037
Other assets and liabilities	2,092	3,781
Total fixed-income investments	**176,459**	**162,154**

An amount of € 90.2 billion of the fixed-income investments relates to investments in ABP's own name (2018: € 42.1 billion) and an amount of € 86.3 billion relates to investments made through collective investment schemes managed by the administrative organization (2018: € 120.1 billion).

The short position relating to the investments in ABP’s own name was € 190.0 million at year-end 2018 (2018: 36.0 million). The balance at year-end 2019 is included in the balance sheet under the heading of investment-related liabilities.

The analysis of the fixed-income investments according to interest rate (coupon) is as follows:

Fixed-income investments analyzed by interest rate	31-12-2019	31-12-2018
< 2%	65,702	62,066
2%-3%	30,430	27,085
3%-4%	26,855	25,059
4%-5%	28,147	23,840
> 5%	25,325	24,104
Total fixed-income investments	**176,459**	**162,154**

Based on the contractual repayment dates, the remaining term to maturity of the investments in fixed-income securities can be analyzed as follows:

Fixed-income investments analyzed by maturity	31-12-2019	31-12-2018
Shorter than one year	7,677	9,740
Between one year and five years	39,648	36,508
Longer than five years	129,134	115,906
Total fixed-income investments	**176,459**	**162,154**

The soundness of the fixed-income investments is commonly reflected in a credit rating. The fixed-income investment credit rating analysis is as follows:

Fixed-income investment rating analysis	AAA	AA	A	BBB	<= BB	No rating	Total
2019	33%	29%	11%	17%	9%	1%	100%
2018	35%	28%	11%	16%	10%	0%	100%

As the above analysis shows, 73% (2018: 74%) of the fixed-income investments had a rating of A or higher.

To provide an insight into the cash flows relating to the fixed-income investments, the duration is commonly used. The duration is the average weighted maturity of all cash flows (interest and repayments of principal) relating to the fixed-income products. The duration of the fixed-income investments amounts to approximately 8 years (2018: approximately 7 years).

The analysis of the derivatives with a positive fair value is as follows:

Derivatives	31-12-2019	31-12-2018
Currency derivatives		
Forward currency contracts	1,797	692
Interest rate derivatives		
Interest Rate Swaps	39,381	29,346
Inflation linked swaps	1,266	1,009
Fixed-income futures	52	159
TBAs (to be announced)	4	23
Other derivatives		
Credit default swaps	13	3
Other futures	1,088	196
Total derivatives with positive fair value	**43,601**	**31,428**

The Dutch Accounting Standards require negative positions in derivatives to be presented on the liabilities side of the balance sheet.

The fair value of the derivatives depends heavily on the levels of market prices, exchange rates and interest rates as at year-end compared with the corresponding prices and rates when the derivative positions were contracted.

Other investments	31-12-2019	31-12-2018
	53,534	**48,429**

An amount of € 20.3 billion of the other investments relates to investments in ABP's own name (2018: €15.6 billion) and an amount of € 33.2 billion relates to investments through collective investment schemes managed by the administrative organization (2018: € 32.8 billion).

Other investments mainly concerns investments in hedge fund strategies, totalling € 20.8 billion (2018: € 20.6 billion). This item also includes investments in commodities, amounting to € 3.4 billion (2018: € 5.7 billion). The carrying amount of the other assets and other liabilities relating to investments that are included in other investments was € 29.3 billion (2018: € 22.1 billion).

The short position relating to the direct investments, amounting to € 0.1 billion at year-end 2019 (2018: € 0.1 billion) is included in the balance sheet under the heading of investment-related liabilities.

Other assets (2)

	31-12-2019	31-12-2018
Participating interests	512	757
Tangible assets	67	72
Receivables, prepayments and accrued income	1,157	1,040
Cash	208	19
Total other assets	**1,944**	**1,888**

Cash includes current account bank balances. The entire amount of the cash is at ABP's disposal. No other forms of security have been provided.

Participating interests relates to the interest in APG Groep NV. The movements in participating interests were as follows:

Participating interests	Total 2019	Total 2018
Opening balance	757	803
Change in value	105	88
Dividends paid	-350	-134
Closing balance	**512**	**757**

The tangible assets are made up of:

Tangible assets	31-12-2019	31-12-2018
Total buildings and fixtures	**67**	**72**

Buildings and fixtures refers to buildings with an estimated useful life of 30 years as well as fixtures and fittings with an estimated useful life of 15 years.

The receivables, prepayments and accrued income are made up of:

Receivables, prepayments and accrued income	31-12-2019	31-12-2018
Receivables from employers	892	760
Receivables in respect of value transfers	181	175
Receivables from participants	3	6
Other receivables	81	99
Total receivables, prepayments and accrued income	**1,157**	**1,040**

The receivables do not include falling due after more than one year (2018: nil).

CAPITAL AND LIABILITIES
Pension fund capital (3)

	Specific reserve: underwriting losses	Specific reserve: future changes to the pension scheme	Specific reserve: purchase of conditional pension	General reserve	Total
Opening balance 2018	-	-	709	17,186	17,895
Added from result	1	-	315	-	316
Utilized	-	-	-	-29,223	-29,223
Closing balance 2018	1	-	1,024	-12,037	-11,012
Opening balance 2019	1	-	1,024	-12,037	-11,012
Added from result	-	45	36	1,326	1,407
Utilized	-1	-45	-	-	-46
Closing balance 2019	**0**	**0**	**1,060**	**-10,711**	**-9,651**

The pension fund capital is made up of the specific reserves and general reserve. Apart from providing a source of funding to cover unexpected deficits, the general reserve can also be drawn on to fund future indexation rounds. Under the Financial Assessment Framework (FTK) rules, pension funds have to maintain a certain level of capital depending on the level of the various risks to which they are exposed. As at year-end 2019, the capital requirement amounted to €127.4 billion, or 26.7% of the provision for pension liabilities. The law also requires a pension fund to maintain a level of capital in excess of the minimum capital requirement. For ABP, the standard requirement is a minimum capital requirement amounting to 4.2% of the provision for pension liabilities (2018: 4.2%). At year-end 2019, the minimum capital requirement is €20.0 billion. The risk paragraph includes a detailed explanation of ABP's position in relation to the capital requirement and the minimum capital requirement.

An updated recovery plan was submitted on March 30, 2020, showing that the level of the required capital would be attained within the stipulated timeframe. As a consequence, no supplementary measures are needed for 2020.

As at year-end 2019, the following specific reserves had been formed:
- at the end of 2019 the specific reserve for underwriting losses for ABP is nil (2018: €1 million). In 2019 only a withdrawel of this specific reserve has occurred.
- in 2019 the specific reserve for future changes to the pension scheme was formed from the surplus of the contributions for the temporary basic scheme for military personnel. In 2019, this specific reserve was then utilized for the financing of the pension accrual of the military personnel.
- the specific reserve for purchase of conditional pension was €1.060 million (2017: €1.024 million). Utilization of the specific reserve for conditional additional pension purchase depends on the actual retirement decisions of participants able to avail themselves of these arrangements. In 2019, €36 million was added.

These specific reserves do not count in the calculation of the funding ratio.

RESULTS APPROPRIATION
The annual report was adopted by the Board of Trustees of Stichting Pensioenfonds ABP on 30 April 2020 on the basis of the positive recommendation of the Supervisory Board.

It is proposed that €35 million of the result be added to the specific reserves and that the remainder, amounting €1.3 billion, to be added to the general reserve.

Provision for pension liabilities (4)

Pension schemes	OP/NP	AOP	Risk Participants	Total 2019	Total 2018
Opening balance	409,486	1,414	108	411,008	391,652
Add:					
- pension accruals	13,337	147	-	13,484	12,517
- change in market interest rate	64,068	262	-	64,330	16,175
- result on actuarial assumptions	-28	1,104	-	1,076	447
Total additions	77,377	1,513	-	78,890	29,139
Less:					
- utilized for pension	-11,503	-161	-	-11,664	-11,185
- utilized for expenses	-75	-	-	-75	-82
- added interest	-964	-3	-	-967	-1,019
- change in respect of value transfers	-72	-	-	-72	536
- change in actuarial assumptions	-556	-104	-	-660	1,990
- other movements	-133	3	-	-130	-23
Total deductions	-13,303	-265	-	-13,568	-9,783
Closing balance	**473,560**	**2,662**	**108**	**476,330**	**411,008**
- of which, proprietary risk				476,222	410,900
- of which, participants' risk				108	108

The provision for pension liabilities is calculated on the basis of the nominal interest rate term structure published by DNB, using the ultimate forward rate (UFR) method. A substitute interest rate of 0.74% (2018: 1.39%) has been derived from the yield curve.

The provision for pension liabilities includes the effect of the transitional arrangements at the time of privatization of ABP (OPA), the latter being part of the conversion operation designed to produce a neutral effect on all existing and future pension rights in connection with the privatization when the ABP Act became the ABP pension scheme. The annual update of the actuarial assumptions on which the provision for ABP (OPA) privatization transitional rights is based, using the pension fund's own observations over the period 2018-2019, led to a increase in the provision for pension liabilities of €0.3 billion (2018: €0.8 billion).

An adjustment of the AOW pension scheme was made in June 2019, causing the age to rise slowly. In December, the expected future growth of the state pension age was adjusted based on the CBS forecast. This has led to adjusting the AKP odds. In addition, the Incapacity pension opportunities have changed. This is due to the more active communication policy of the Incapacity pension that has taken place since July. As a result of the change in this basis, the provision for pension liabilities decreases €0.9 billion.

'The provision for participants' risk concerns ABP ExtraPensioen €0.1 billion (2018: €0.1 billion) and ABP nettopensioen €8 million (2018: €6 million). The amount of the liabilities to participants in the net pension scheme is equal to the value of the assets invested on their behalf. The amount of €0.1 billion (2018: €0.1 billion) relating to the ABP ExtraPensioen scheme presented as the provision for the participants' risk relates to the return on the contributions. The contributions in the ABP ExtraPensioen scheme are presented in the provision for the fund's risk. At year-end 2019, this provision was at €0.1 billion (2018: €0.1 billion).

The closing balance of the provision for pension liabilities can be analyzed by category of participant as follows:

Provision for pension liabilities	OP/NP	AOP	Participants' risk	31-12-2019	31-12-2018
Participants	236,679	-	108	236,787	199,757
Former participants	40,715	-	-	40,715	32,810
Pensioners	196,166	2,662	-	198,828	178,441
Total provision for pension liabilities	**473,560**	**2,662**	**108**	**476,330**	**411,008**

The share of the scheme for professional military personnel in the liabilities for retirement benefit/ surviving dependents' benefit (OP/NP) pension liabilities of €476 billion was €12.7 billion (2018: €10.5 billion).

The amount related to the increase in the provision to cover the costs of future awards and benefit payments amounts to €2.5 billion (2018: €2.1 billion). Collection costs are covered by supplements in the contributions.

In view of the financial position as at October 31, 2019, the Board of Trustees fixed the indexation factor applicable with effect from 2020 at 0%. This applies both to pensions already in payment, to deferred pensions, and to pensions being built up by active participants. Price inflation over the period September 1st, 2017, to August 31, 2018, amounted to 2.84% (reference date August 31, 2019).

The amount of the provision for pension liabilities purchased for pensioners is accounted for in the OP/NP category. The rights to retirement benefit to be purchased do not accrue until they have been funded. If a part-pension is taken on retirement, rights are purchased pro rata.

The incapacity/disability pension (AOP) includes the disability pension relating to the Disablement Insurance Act (WAO) and the incapacity pension based on the Work and Income (Ability to Work) Act (WIA). This therefore concerns all invalidity pensions (IP), redeployment benefits (HTP) and ABP incapacity pensions (AAOP).

For an explanation of the movements in the provision for pension liabilities, reference is made to the notes to the company statement of income and expenses.

Investments-related liabilities (5)

	31-12-2019	31-12-2018
Cash collateral received	22,144	15,986
Short positions	272	115
Short-term borrowing	19,206	15,382
Derivatives	21,244	18,924
Total investment-related liabilities	**62,866**	**50,407**

Cash collateral received relates to the margin received in connection with derivatives transactions.

The short positions can be analyzed as follows:

Short positions	31-12-2019	31-12-2018
Fixed income investments	190	37
Other investments	82	78
Total short positions	**272**	**115**

The short-term borrowing, totalling € 19.2 billion (2018: € 15.4 billion), includes € 0.7 billion (2018: € 0.2 billion) in respect of repos, relating to bonds and index-linked bonds. A fee is charged for entering into these repurchase agreements. Cash deposits are temporarily obtained to cover the risk of non-return, which are invested according to strict rules with the object of generating additional returns.

The negative derivative positions can be analyzed as follows:

Derivatives with negative fair value	31-12-2019	31-12-2018
Currency derivatives		
Forward currency contracts	680	1,230
Cross currency swaps	5	-
Interest rate derivatives		
Interest Rate Swaps	17,416	12,710
Inflation linked swaps	2,446	2,221
Fixed-income futures	59	77
TBAs	4	20
Other derivatives		
Credit default swaps	226	32
Other futures	408	2,634
Total derivatives with negative fair value	**21,244**	**18,924**

The Dutch Accounting Standards require negative positions in derivatives to be presented on the liabilities side of the balance sheet. The fair value of the derivatives mostly depends on the levels of market prices, exchange rates and interest rates as at year-end compared with the corresponding prices and rates when the derivative positions were contracted. For further explanation, see the note on derivatives with positive value.

Other liabilities (6)

	31-12-2019	31-12-2018
Payables in respect of pensions	311	315
Liability in respect of purchased conditional pensions	1369	803
Other payables	249	170
Total other liabilities	**1,929**	**1,288**

The payables and other liabilities include, as part of the other payables, items totaling € 62 million (2018: € 19 million) falling due after more than one year.

Of the payables in respect of pensions, an amount of € 303 million (2018: € 312 million) relates to tax and social security contributions payable.

Other payables includes an amount of € 44 million (2018: € 3 million) relating to a liability owed to Defence. This liability results from ABP's administration of the capital-covered pension scheme for military personnel. The amount accrued through the contributions is not yet sufficient to fulfil the military pension liability. As a result, a receivable (contributions deficit) has arisen of ABP on Defence. To fund this contributions deficit, Defence is providing ABP with long-term loans. Therefore, this funding structure agreed by Defence and ABP consist of receivables from Defence totaling € 15 million (2018: € 55 million) due to a contributions deficit on the one hand, and payables to Defence totaling € 59 million (2018: € 58 million) in the form of long-term loans. Of the loans, an amount of € 59 million will fall due after 5 years or more. The interest rates on the loans range between 0.47% and 0.73% (2018: 0.47% and 0.73%). The parties have agreed that the fees chargeable by ABP to Defence on the receivables from the contributions deficit shall be equal to the interest charged on the loans that make up the liability.

The liability in respect of purchased conditional pensions, amounting to € 1,369 million (2018: € 803 million), concerns the amount owed to the social partners in respect of the pre-financing received and the return on the related investments. The pre-financing concerns the distribution of the contributions over several years leading up to the VPL peak in 2022. The entire liability in respect of purchased conditional pensions is long-term in nature. The movement during the year is made up of:

Development of liability in respect of purchased conditional pensions	31-12-2019	31-12-2018
As at January 1st	803	519
Contributions received	566	280
Return	0	4
As at December 31	**1369**	**803**

OFF BALANCE ASSETS AND LIABILITIES

Committed investments

The assets and liabilities not shown on the face of the balance sheet concern commitments relating to equity investment in investment subsidiaries and collective investment schemes managed by the administrative organization.

As at balance sheet date, commitments totalling € 8.3 billion (2018: € 6.6 billion) had been entered into in respect of real estate investments.

Commitments have been entered into relating to private equity investments to make payments on capital when called. As at balance sheet date, these amounted to € 16.7 billion (2018: € 15.7 billion).

No securities were issued as collateral (2018: € 0.4 billion) and € 0.2 billion were received as collateral (2018: nil).

Securities totalling € 0.8 billion (2018: € 0.5 billion) have been furnished as initial margin. Furthermore, securities totaling € 1.2 billion (2018: € 1.4 billion) were received and securities totaling € 0.7 billion (2018: € 0.2 billion) were furnished in connection with repo transactions. € 0.4 billion (2018: € 0.1 billion) of cash was provided as an initial margin related to derivatives.

A credit arrangement totalling € 0.8 billion (2018: € 0.8 billion) has been contracted with ABN-AMRO Bank NV. Additionally, there is an intraday facility of € 0.5 billion (2018: € 0.5 billion) also contracted with ABN-AMRO and an intraday facility of € 0.4 billion (2018: € 0.4 billion) contracted with ING Bank. As at year-end 2019, these facilities had not been drawn on. No collateral security has been provided in connection with these arrangements/facilities.

As at balance sheet date, commitments totaling € 1.1 billion (2018: € 1.8 billion) had been entered into in respect of other investments.

Other liabilities

A long-term contract has been concluded with the administrative organization APG Groep NV for services comprising support for the Board of Trustees, pension administration and communication and asset management in the context of the administration of the pension schemes. APG Groep NV has in turn contracted the activities to its subsidiaries APG Rechtenbeheer NV and APG Asset Management NV.

A tax group has been formed for value added tax. The tax group comprises ABP, APG Groep and a number of first and second-generation subsidiaries of APG Groep NV. Within a tax group, the individual companies bear joint and several liability for each other's tax liabilities.

Notes to the company statement of income and expenses

(amounts in millions of euros unless otherwise stated)

INCOME

Pension contributions (net) (7)

Contributions by category	OP/NP	AAOP	Total 2019	Total 2018
Employers' contributions	7,975	106	8,081	7,654
Employees' contributions	3,019	46	3,065	2,723
Total contributions (gross)	**10,994**	**152**	**11,146**	**10,377**
Less: collection cost supplements in contributions			-105	-110
Net contributions			**11,041**	**10,267**
Contribution rates (in %):	24.9	0.5		

Contributions from affiliated employers and employees are analyzed by category above, together with the contribution rates. They concern the damped cost-covering level of contributions plus any mark-ups or mark-downs in connection with a recovery plan, for example, or discounts on the level of contributions.

The gross amount of contributions in 2019 was approximately 7% higher than in 2018. The main explanation for this is the increase in contributions for the regular OP/NP scheme. The OP/NP contribution rate increased by 1.0 percentage point compared to 2018. This is mainly the result of the new 2014-2016 accounting policy, the one-off premium for the shift of the PP tipping point and the increase in the premium surcharge from 1.0 percentage point to 2.0 percentage point.

The collection cost supplements in pension contributions serve to cover the costs of collecting the contributions. In 2019, the collection cost supplement for the OP/NP scheme amounts to 0.25% of the OP/NP contribution base (2018: 0.25%).

The number of affiliated employers as at year-end 2019 was 3,593 (2017: 3,643). They are responsible for actual payment of the entire amount of the contributions, i.e. including employees' contributions. The total contributions represent the actual level of contributions agreed by the pension fund during the year plus an estimate of the contributions to be agreed for the year under review and the finalized difference in estimates compared to the preceding year. The pension fund did not grant any contribution discounts within the meaning of the Pensions Act in 2019.

The Pensions Act requires disclosure of the actual contributions, the damped cost-covering contributions and the undamped cost-covering contributions. The undamped contributions are calculated on the basis of the nominal interest rate term structure published by DNB, which corresponds to an average nominal discount rate at the start of the year of 1.39% (2018: 1.48%).

The composition of the contributions above is as follows:

Composition of contributions:	Actual	Damped. cost-covering contributions	Undamped. cost-covering contributions
a. portion for vested liabilities	4,613	4,613	12,563
b. pension administration cost markup	105	105	105
c. solvency margin markup	1,287	1,287	3,505
d. portion for contingent liabilities (indexation)	1,388	1,388	-
e. markups/markdowns on the damped, cost-covering contributions	2,758	-	-
Total amount of contributions 2019	**10,151**	**7,393**	**16,173**
Total amount of contributions 2018	8,934	7,136	14,676

As the table shows, the actual level of contributions in 2019 was higher than the damped cost-covering level of contributions but lower than the undamped cost-covering contribution level.

The actual contribution amounts disclosed in the table differ from the income statement item contributions (net). The difference is explained in more detail in the table below:

Alignment of contributions:	Total 2019	Total 2018
Pension contributions (net)	11,041	10,267
Actual contributions	10,151	8,934
Difference	**890**	**1,333**
Regarding:		
VPL purchase contributions	746	1,004
Collection cost supplements in contributions	-105	-110
Other	249	439

In 2019, the item 'other' mainly concerns the declarations for Inkoop Max (approx € 250.0 million). This is to finance the purchase of conditional rights from the Inkoop Max scheme for the police sector. Inkoop Max is not part of the real contribution because it is an employer-based scheme administered by ABP.
A comparison of the different elements in the overall level of contributions illustrates the effect of damping, inclusion of expected investment returns (with the damped approach) or exclusion of any additional returns (with the undamped approach).

The minimum amount of contributions receivable is equal to the damped cost-covering contribution level plus the recovery supplements. The actual amount of received contributions was equal to this.

The vested liabilities element (a) in the case of both the actual and the damped cost-covering contributions is based on the expected long-term return on plan assets, equivalent to an interest rate of 5.5%.

The pension administration cost element in the contributions (b) relates to that part of the contribution amounts added to cover collection costs. Allowances to cover disbursement costs and the costs of awarding pensions are included in the vested liabilities component (a).

The solvency margin mark-up in the contributions (c) is based on the required funding ratio given the strategic asset mix as at the start of 2019. The solvency margin mark-up amounts to 27.9% of the contribution element relating to vested liabilities (a).

The element to cover contingent liabilities (including indexation) (d) is the difference between an estimate of the expected long-term real return on plan assets, of 3.5%, and the total of components (a)-(c).

In this integrated approach, contribution element (d) for contingent liabilities (indexation etc.) is the balancing item. The lower the nominal market interest rate, the more expensive the vested liabilities become and the lower the funding available for the contingent liabilities.

The element to cover markups or markdowns of the damped, cost-covering contributions (e) is the difference between the contributions based on the expected real investment return of 3.5% and the revised principle for the real investment return of 2.8% that was used when determining the 2019 contributions.

Investment results (net) (8)

	Real estate	Equities	Fixed-income investments	Derivatives	Other investments	2019	2018
Direct results	679	728	4,503	1,709	391	8,010	7,532
Indirect results	8,594	40,118	10,395	-2,518	3,295	59,884	-15,966
Asset management costs	-136	-194	-100	-2	-56	-488	-421
Total investment results (net)	**9,136**	**40,652**	**14,799**	**-811**	**3,630**	**67,406**	**-8,855**

The direct results represent the face value of interest income and dividends. The pension fund is exempt from dividend tax. The indirect results reflect the actual change in the fair value of the investments, including results on exchange. The expenses concern the sum of the invoiced costs of the proprietary investments, the asset management costs invoiced by the administrative organization, and costs associated with the Board of Trustees. In allocating the costs to the various asset classes, costs that are not directly attributable have been allocated in proportion to the invested capital. Only invoiced expenses are recognized in the financial statements. Costs that are not invoiced are netted off in the investment results. The chapter Administrative expenses in the report by the Board of Trustees contains disclosures regarding the total amount of these costs.

Transaction costs have been netted off with the investment results in the financial statements. The total amount of transaction costs for the year was € 392 million (2018: € 397 million). A more detailed breakdown of the transaction costs is included in the section on administration costs in the Trustees' report.

The result on derivatives is analyzed below by type of contract.

Result derivatives	2019	2018
Interest rate derivatives	6,847	1,654
Currency derivatives	-5,998	-8,662
Other derivatives	-1,658	-79
Total result on derivatives	**-809**	**-7,087**

EXPENSES

Pensions (9)

Pensions by type	Total 2019	Total 2018
OP/NP	-11,426	-10,956
AOP	-171	-154
Number of recipients as at year-end:		
OP/NP	865,743	845,864
AOP	44,728	40,665

Pensions comprises the retirement and surviving dependants' pensions (OP/NP), incapacity/disability pensions (AOP), i.e. AAOP, IP and HPT.

Total movements in provision for pension liabilities (10)

	Total 2019	Total 2018
Pension accruals	-13,484	-12,517
Added interest	967	1,019
Utilized for pensions	11,664	11,185
Result on actuarial assumptions	-1,076	-447
Utilized for pension administration costs	75	82
Change in market interest rate	-64,330	-16,175
Change in actuarial assumptions	660	-1,990
Change in respect of value transfers	72	-536
Other movements in provision for pension liabilities	130	23
Total movements in provision for pension liabilities	**-65,322**	**-19,356**

The movements in the provision for pension liabilities are disclosed below at individual component level.

PENSION ACCRUALS

This item reflects the effect of one year's additional service, or notional service in the case of those qualifying for incapacity benefit, and mortalities on the pension liabilities calculated on a nominal interest rate basis.

ADDED INTEREST

The value of the pension liabilities also increases annually with the accrual of interest, in addition to the actual pension accruals and any annual increment. The interest cost for the year is calculated using the 1-year interest rate from the term structure of nominal interest rates, which was -0.24% (2018: -0.26%).

The negative rate for the 1-year interest rates from the nominal interest rate term structure as at year-end means that the pension fund's liabilities are reduced, the 'interest cost' in effect becoming income.

UTILIZED FOR PENSIONS

The provision for pension liabilities is calculated actuarially i.e. taking account of the result on actuarial assumptions, to arrive at the present value of the expected future pension payments. Each year, the actuarially calculated amount of the provision is utilized to fund the actual pension payments for that year.

RESULT ON ACTUARIAL ASSUMPTIONS

The result on actuarial assumptions is negative. This can be attributed in particular to the fact that the number of participants unable to work increased more than expected. This is the result of the newly initiated more active approach policy. As a result, the increase in the provision for non-contributory continuation in the event of disability and for disability pension exceeds the premiums received. The other effects are small.

UTILIZED FOR PENSION ADMINISTRATION COSTS

The pension administration costs, made up of pension award and disbursement costs, are met out of the provisions. The relevant supplements as determined in the 2014-2016 Assumptions Review were still applied to withdrawals in 2019. Thus the OP/NP disbursement cost supplement amounted to 0.30% and the pension award cost supplement was 0.35% of the provision for pension liabilities. For the disability/incapacity pension schemes, the collection cost supplement amounted to 0% and a disbursement supplement of 2.3%. In the 2014-2016 Assumptions Review, the cost premiums were determined on the basis of a new cost accounting system. With this system, separate collection costs for AAOP have been canceled and are instead part of the OP/NP collection surcharge.

The relevant supplements as determined in the 2011-2013 Assumptions Review were still applied to withdrawals in 2018. The OP/NP disbursement cost supplement amounted to 0.60% and the pension award cost supplement was 0.10% of the provision for pension liabilities. For the disability/incapacity pension schemes, the collection cost supplement amounted to 0.05% and a disbursement supplement of 3.35%.

CHANGE IN MARKET INTEREST RATE

The interest rate term structure published by DNB as at year-end 2019 corresponds to a nominal interest rate of 0.74%. As at year-end 2019, the interest rate term structure corresponded to a nominal interest rate of 1.39%. The change in the interest rate term structure led to a decrease in the provision for pension liabilities overall.

CHANGE IN ACTUARIAL ASSUMPTIONS

The change in actuarial assumptions concerns the financial effects of:

- the annual update of the actuarial assumptions on which the provision for ABP (OPA) privatization transitional rights is based, using the pension fund's own observations. This led to an increase in the provision for pension liabilities of € 0.3 billion.
- The update of the AOW pension scheme 2019 and its incorporation into the AKP odds, led to a decrease in the provision for pension liabilities of € 0.9 billion.

CHANGE IN RESPECT OF VALUE TRANSFERS

Change in respect of value transfers	2019	2018
Value transfers out	275	213
Value transfers in	-203	-749
Total change in respect of value transfers	**72**	**-536**

OTHER MOVEMENTS IN PROVISION FOR PENSION LIABILITIES

The Ministry of Defense pension scheme was changed in 2019. The transition has been made from the final-pay scheme to an average-pay scheme for military personnel. In addition, the item other movements is due to corrections. On balance, the provision for pension liabilities decreased by € 0.1 billion.

Collection cost supplements in pension contributions (11)

	2019	2018
	105	110

The amount included in pension contributions serves to cover the costs of collecting the contributions. The collection cost supplement for the OP/NP scheme amounts to 0.25% of the OP/NP contribution base (2018: 0.25%). The collection cost supplement for AAOP amounts has expired (2018: 0.05%)

Value transfers (12)

	2019	2018
Value transfers In	261	820
Value transfers out	-92	-303
Total net value transfers	**169**	**517**

Compared to 2018, both the value transfers in and the value transfers out have increased. Value transfers in and out were executed all throughout the year 2018. As of August 1, 2019, ABP's funding ratio did not allow individual value transfers (in and out).

Pension administration costs (net) (13)

	2019	2018
Salaries (including social security charges)	-7	-8
Pension charges	-1	-1
Other staff costs	-2	-1
Depreciation	-5	-5
Third-party services, pension administration	-129	-134
Third-party services, asset management	-380	-362
Third-party services, other	-27	-18
Other operating expenses	-7	-8
Subtotal	**-558**	**-537**
Less: income from work on behalf of third parties	23	15
Less: attributed to asset management costs	394	377
Pension administration costs (net)	**-141**	**-145**

Salaries and pension costs include the amounts paid to the Executive Board Office in 2019. Other operating expenses mainly relates to premises costs and regulatory costs.

in €

Executive Office management			2019	2018
	Salary	Staff pension and other pension charges	Total	Total
NJM Beuken	215,946	52,561	268,507	255,858
RLS Verjans	206,473	47,631	254,104	244,455

Payroll and other pension charges includes the social security employers' contributions.

The average number of staff of the pension fund was:

Average numbers of employees	2019	2018
Full-time equivalents	42	42
Individual employees	43	43

The staff are members of the ABP pension scheme. As an employer, ABP does not have any obligation to make supplementary contributions in the event of deficits beyond paying the amount of the annual contributions to the pension fund. It is therefore sufficient to recognize the annual contributions as pension charges.

Notes to the company cash flow statement

(amounts in millions of euros unless otherwise stated)

The closing balance of funds can be analyzed as follows:

	31-12-2019	31-12-2018
Investments	886	859
Other assets	208	19
Total cash	**1,094**	**878**

Cash flow from pension activities

The contribution receipts in the cash flow statement are made up of ordinary pension contributions totalling € 10,580 million and the contributions in respect of the amount of € 566 million payable for the purchase of conditional pension rights, as accounted for in the payables and other liabilities.

The increase in the contributions received in 2019 is mainly attributable to the increase in the OP/NP contribution in 2019.

The increase in pensions paid is due to the increase in the number of pensioners.

Cash flow from investment activities

Included in the cash flow statement are cash flows from the returns on direct investments together with gains and losses on exchange on bank balances.

The other movements in the cash flows from investment activities comprise several effects. Including movements in the balance sheet item negative bank balances, currency effects and review methodology in the investment pools.

Other notes
Actuarial analysis

in millions of euros	2019	2018
Result on contributions		
Pension contributions (net) (7)	11,041	10,267
Pension accruals (10)	-13,484	-12,517
Subtotal	**-2,443**	**-2,250**
Results on interest		
Investment results (net) (8)	67,406	-8,855
Interest charges on investment-related liabilities	-299	-315
Added interest (10)	967	1,019
Change in market interest rate (10)	-64,330	-16,175
Subtotal	**3,744**	**-24,326**
Result on pensions		
Pensions (9)	-11,597	-11,110
Utilized for pensions out of the provision for pension liabilities (10)	11,664	11,185
Subtotal	**67**	**75**
Result on expenses		
Pension administration costs (net) (13)	-141	-145
Utilized to cover pension administration costs out of the provision for pension liabilities (10)	75	82
Collection cost supplements in pension contributions (11)	105	110
Subtotal	**39**	**47**
Other results		
Result on actuarial assumptions (10)	-1,076	-447
Other income and expenses	0	-20
Value transfers (12)	169	517
Change in provision for pension liabilities in respect of value transfers (10)	72	-536
Change in actuarial assumptions (10)	660	-1,990
Other movements in provision for pension liabilities (10)	129	23
Subtotal	**-46**	**-2,453**
Total result = net gains and losses	**1,361**	**-28,907**

Remuneration

The remuneration policy uses fixed remuneration. The time invested in the (board) position at ABP is a determining factor. The chair will receive a fixed stipend based on an agreement to provide services. This stipend is based on the number of days the chair is active on behalf of the Board of Trustees. This stipend is €130,000 per year based on a four-day working week.

Board Members receive a fixed stipend of €90,000 per annum. They may claim a supplement of €10,000 if their board membership requires more time than average. This is the case for both vice chairmen of the Board of Trustees and the chairman of the investment committee, for instance. No social security contributions are payable on the fees and there is no accrual of pension rights associated with them. The remuneration of external committee members has not changed for any individual committee members in 2019.

Any increase to the Trustees' remuneration depends on the indexation factor applied to pensions already in payment. Pensions were not increased at all in 2019 and therefore no increase was made in the remuneration of members of the Board of Trustees either. No bonuses, loans, advances or guarantees have been granted to members of the Board of Trustees.

in €

Board of Trustees	2019	2018
CM Wortmann-Kool (chairman)	130,000	130,000
M Doornekamp	90,000	90,000
C van Eykelenburg	90,000	90,000
P Fey *	90,000	90,000
WH van Houwelingen (to 1-9-2018)	-	62,762
GAC Leegwater	90,000	90,000
JN van Lunteren	15,000	90,000
J Meijer *	100,000	100,000
CM Mulders-Volkers	90,000	90,000
K Nauta	75,000	-
L Sibbing	75,000	-
PA Stork	90,000	90,000
XJ den Uyl	90,000	90,000
A van Vliet	90,000	90,000
JPCM van Zijl	100,000	100,000
Total remuneration of the Board of Trustees	**1,215,000**	**1,202,762**

** fees paid to the appointing bodies*

in €

Members of fund bodies (including external members)	2019	2018
Appeals Committee	36,674	35,451
Board Committee on Investment Policy	35,000	35,000
Accountability Body	186,588	208,764
Supervisory Board	130,000	130,000
Total remuneration of members of fund bodies (including external members)	**388,262**	**409,215**

The fund bodies in the table above predominantly include members who are not members of the Board of Trustees. Members of the Board of Trustees only participate in the Appeals Committee.

Payroll and other pension charges includes the social security employers' contributions.

Transactions with related parties
Transactions with related parties are conducted on market terms and conditions.

List of collective investment schemes managed by the administrative organization

A large proportion of the invested assets is held in collective investment schemes, in which ABP invests, managed by the administrative organization. This involves the following CISs.

APG Strategic Real Estate Pool
APG Tactical Real Estate Pool
APG Infrastructure Pool 2011
APG Infrastructure Pool 2012
APG Infrastructure Pool 2014
APG Infrastructure Pool 2016
APG Infrastructure Pool 2017 II
APG Infrastructure Pool 2017
APG Private Equity Pool 2009
APG Private Equity Pool 2010
APG Private Equity Pool 2012
APG Private Equity Pool 2013
APG Private Equity Pool 2014-2015
APG Private Equity Pool 2016-2017
APG Commodities Pool
APG Absolute Return Strategies Pool
APG Hedge Funds Pool
APG Developed Markets Equity Pool
APG Emerging Markets Equity Pool
APG Emerging Market Dept Pool
APG Developed Markets Equity Minimum Volatility Pool
APG Opportunities Pool 2012
APG Credits Pool
APG Index Linked Bonds Pool
APG Euro Plus Treasuries Pool
APG Alternative Inflation Pool
APG FGR Long Duration Treasury Pool

Consolidated financial statements

Consolidated balance sheet

after appropriation of result (in € million)

	31-12-2019	31-12-2018
ASSETS		
- real estate	62,947	51,464
- equities	191,810	155,326
- fixed-income investments	176,151	163,795
- derivatives	43,601	31,451
- other investments	39,766	38,786
Investments (1)	**514,275**	440,822
Other assets (2)	2,212	1,884
Total assets	**516,487**	**442,706**
CAPITAL AND LIABILITIES		
Group equity (3)	-9,595	-10,926
Provision for pension liabilities (4)	476,330	411,008
Provision for insurance liabilities (5)	0	2,867
- cash collateral received	22,144	15,986
- short positions	272	36
- short-term borrowing	3,916	3,249
- derivatives	21,244	18,933
Investment-related liabilities (6)	**47,576**	38,204
Payables and other liabilities (7)	2,176	1,553
Total capital and liabilities	**516,487**	**442,706**

Consolidated statement of income and expenses

in € million

	2019	2018
INCOME		
Contributions (net) (8)	11,135	10,537
-investment results (gross)	67,986	-8,397
-less: asset management costs	-404	-336
Investment results (net) (9)	**67,582**	-8,733
Total income	**78,717**	**1,804**
EXPENSES		
Pensions and other benefits (10)	-11,680	-11,369
Total movements in provision for pension liabilities (11)	-65,322	-19,356
Collection cost supplements in pension contributions	105	110
Movements in provision for insurance liabilities (12)	-80	54
Value transfers (13)	169	517
Pension and insured benefit administration costs (net) (14)	-173	-242
Interest charges on investment-related liabilities	-375	-405
Other income and expenses	-	-20
Total expenses	**-77,356**	**-30,711**
BALANCE OF INCOME AND EXPENSES	**1,361**	**-28,907**
Total direct movements in the pension fund capital	**-30**	**-294**
COMPREHENSIVE RESULT	**1,331**	**-29,201**

Consolidated cash flow statement

in € million

	2019	2018
OPENING BALANCE OF CASH	**1,352**	**2,038**
MOVEMENTS		
Cash flows from pension and insurance activities:		
- contributions received	11,240	10,928
- value transfer payments received (13)	261	820
- pensions and other benefits paid (10)	-11,680	-11,369
- value transfer payments made (13)	-92	-303
- operating expenses paid (14)	-172	-242
Cash flow from pension and insurance activities	**-443**	**-166**
Cash flows from investment activities:		
- repayments and sales of investments (1)	88,895	47,509
- advances and purchases of investments (1)	-92,160	-40,484
- direct investment income	7,779	7,630
- indirect realized results from derivatives and results on exchange	-9,688	-7,559
- investment expenses paid (9)	-404	-336
- cash collateral received	6,157	-6,073
- other movements	199	-1,207
Cash flow from investment activities	**778**	**-520**
CLOSING BALANCE OF CASH (15)	**1,687**	**1,352**

Notes - general

Accounting policies - general

The accounting policies for the consolidated financial statements are the same as those for the company financial statements and are binding on group companies and other consolidated entities.

Below are the policies regarding the basis of consolidation and of valuation and determination of results relating to the additional items on the face of the balance sheet and the statement of income and expenses that are the effect of consolidation.

Accounting policies for consolidation

In the consolidated financial statements, equity investments, other than as pension fund assets, in entities where control can be exercised over management decisions and financial policy are fully consolidated. Intercompany transactions and corresponding financial obligations are eliminated. Consolidating these entities on the above basis looks beyond the legal form of the interest and provides a direct view of the overall financial position of the group. Joint ventures are treated as equity investments.

A list of directly held equity investments and the more important other equity investments included in the consolidation can be found in the section headed Other notes.

The assets of the investors in the CISs are accounted for in the applicable investment categories. The amounts of the derivative positions with positive and negative value included in the indirect investments, together with the short-term borrowings, short positions and amounts owed in connection with collateral security received are presented separately in the balance sheet, as required by the pension fund accounting standard (DAS 610.211).

Accounting policies of valuation of assets and liabilities

Other assets

The intangible assets included in other assets and liabilities are carried at cost less straight-line amortization, taking account of any impairment losses. The amortization period is based on the expected economic payback period. In the event of acquisition of a company, all identifiable assets and liabilities of the acquired company are recognized in the balance sheet at their fair value on the date of acquisition. Goodwill arising on acquisition is measured on initial recognition as the difference between the purchase price and the fair value of the identifiable assets and liabilities.

Positions in derivatives held by subsidiaries (and their subsidiaries) not entered into as investments are stated at cost, using the hedge accounting method.

Other liabilities

The provision for deferred tax included in the provisions relates to the deferred tax liabilities resulting from temporary differences between the reported amounts of assets and liabilities and their tax bases. Calculation takes account of tax rates applicable in future years that have already been enacted. Recognition is at face value.

The other provisions are carried at the net present value of the expected future expenses, taking account of the relevant actuarial assumptions. The discount rate used is based on the year-end interest rate on investment-grade Dutch corporate bonds with a maturity matching the remaining term of the provisions. Where the expected term of the provisions is longer than 15 years, the discount rate is based on long-term government bonds.

Basis of determination of results

Movements in provision for insurance liabilities

UTILIZED FOR BENEFIT PAYMENTS AND EXPENSES

The amount utilized out of the provision for insurance liabilities to cover insured benefits and insurance scheme administration costs is credited to the statement of income and expenses in the period for which provision for the benefits and costs concerned was made in the calculation of that provision.

CHANGE IN ACTUARIAL ASSUMPTIONS

The effect which the change in actuarial assumptions has on the provision for insurance liabilities is determined at the close of the reporting period and included in the statement of income and expenses.

Risk paragraph

The notes to the company financial statements discuss the risks to which ABP is exposed as a pension fund. The consolidated financial statements also include the financial positions of the entities within the group that are fully consolidated. Essentially this means the administrative organization, the actual investment pools, and APG Liquiditeitenbeheer BV (hereafter: APG LB).

Supplementing the risk management discussed in connection with the company financial statements, the general explanation is given below regarding the consolidation of APG LB, the effect of the consolidation on the balance sheet and the associated risk profile, and the specific risks to which APG LB are exposed.

General

From December 2017, CIS (Collective Investment Schemes) surpluses or deficits are held or supplemented by APG LB using these deposits. APG LB will allocate these surpluses or deficits to the pension funds.

The shares of APG LB are held by the CISs custodians. Since ABP has control, indirectly, of APG LB, they must be included in the consolidation. Consolidation involves eliminating the positions held directly by ABP and the positions held indirectly, via the CISs, by APG LB.

The collective investment schemes are not separate entities; they are investment pools in which participants enjoy rights in proportion to their investment. Individual participants do not exercise any control and cannot influence decisions affecting the assets of another participant. Each participant is free to leave the scheme according to the rules laid down in the CIS documentation. The assets of the investors in the CISs are accounted for in the applicable investment categories. The amounts of the derivative positions with positive and negative value included in the indirect investments, together with the short-term borrowings, short positions and amounts owed in connection with collateral security received are presented separately in the balance sheet, as required by the pension fund accounting standard (DAS 610.211).

Effect on the balance sheet and the associated risk profile

In 2019, the effect of the consolidation on the balance sheet and the associated risk profile is mainly produced by APG LB. The consolidation of APG LB creates an increase in the items investments and investment-related liabilities.

Compared with the company balance sheet, the consolidation of APG LB does not produce a materially different risk profile. After all, its task is to place any CIS surpluses or deficits with APG LB or have them supplement these using deposits. APG LB allocates these deposits to ABP and the other participating pension funds. APG LB only conducts transactions with participating CISs and pension funds.

Insurance operations

Sale of the insurance operations

In 2017, APG Groep N.V., in which ABP has a 92.6% stake, drafted a formal plan to sell its insurance subsidiary Loyalis N.V. In late 2018 APG Group signed an agreement with the buyer, a.s.r., which included the terms for the sale. The agreed sale price is €450 million. The request for approval has been submitted to supervisory authority DNB. The sale was completed in 2019. The carrying amount of Loyalis' assets and liabilities, which will be transferred to the buyer, as at balance sheet date are €3.5 billion and €3.1 billion.

As a result of the sale of Loyalis N.V. as of 1 May 2019, the statement of income and expenditure for 2019 has only included 4 months in the consolidation compared to a full year in 2018.

Notes to the consolidated balance sheet

(amounts in millions of euros unless otherwise stated)

ASSETS

Investments (1)

	Real estate	Equities	Fixed-income investments	Derivatives	Other investments	Total 2019	Total 2018
Opening balance of investments	51,464	155,326	163,795	31,451	38,786	440,822	477,289
Granted/bought	3,748	9,353	76,294	-	2,797	92,192	40,484
Repaid/sold	-1,858	-12,515	-73,001	-	-1,720	-89,094	-47,509
Change in value*	8,484	40,148	10,520	-	3,538	62,690	-6,262
Other movements	1,109	-502	-1,457	12,150	-3,635	7,665	-23,180
Closing balance of investments	**62,947**	**191,810**	**176,151**	**43,601**	**39,766**	**514,275**	**440,822**
Of which							
- proprietary risk						-	2,911
- policyholders' risk						-	292

** Including gains and losses up to the time of disposal*

Investments are presented including associated receivables, cash balances and liabilities/payables. Assets can be held either directly or indirectly by participating in collective investment schemes established by the administrative organization.

Other movements includes the movements in the derivative positions and the movements in the receivables, cash, and payables associated with the investments.

The assets of the investors in the CISs are accounted for in the applicable investment categories. The amounts of the derivative positions with positive and negative value included in the indirect investments, together with the short-term borrowings, short positions and amounts owed in connection with collateral security received are presented separately in the balance sheet, as required by the pension fund accounting standard (DAS 610.211).

The closing balance of the investments, totalling € 514.2 billion (2018: € 440.8 billion), can be analyzed as follows:

	31-12-2019	31-12-2018
Listed	343,914	289,031
Unlisted	170,361	151,791

The closing balance of the investments amounting to € 514.2 billion (2018: € 440.8 billion) includes:

	31-12-2019	31-12-2018
Receivables, prepayments and accrued income	443	200
Cash collateral paid	793	925
Short-term lending (including CIS short-term cash positions)	15,827	13,694
Current account bank balances	886	889
Payables, accruals and deferred income	-592	-606
Net assets included in current investments	**17,357**	**15,102**

Current account bank balances includes balances held on margin accounts in connection with futures positions. This concerns an amount of € 0.4 billion (2018: € 0.1 million), which is not freely available.

The payables, accruals, and deferred income included in the investments are mainly accounted for by debit balances on bank accounts totalling € 0.1 billion (2018: € 0.5 billion).

Investments connected with schemes where policyholders bear the risk form an integral part of the investments.

Analyses

The following tables present an analysis of the investments by sector, by region and by currency (in € million) for the various asset classes. The currency table does not include the item derivatives. They are presented in the separate table together with the derivatives with a negative fair value and the short positions.

Investments by category	Real estate	Equities	Fixed-income investments	Derivatives: positive	Other investments	31-12-2019	31-12-2018
Basic materials	12	10,033	979	144	1,463	12,631	10,933
Mortgages etc.	-	-	22,287	4	-	22,291	18,589
Real estate	42,254	4,769	771	-	293	48,087	39,884
Utilities	458	4,829	3,324	-	-	8,611	8,836
Telecommunications	1,195	5,521	3,848	-	-	10,564	9,271
Healthcare	240	19,018	3,173	-	16	22,447	19,561
Luxury goods	1,021	24,576	2,663	-	9	28,269	23,575
Energy	5,198	8,469	1,967	756	1,654	18,044	16,145
Manufacturing	11,502	17,632	2,835	-	-	31,969	23,968
Financial institutions	532	43,017	16,649	42,541	34,430	137,169	119,554
Convenience goods	-	15,239	1,305	103	662	17,309	14,695
Information technology	-	38,609	1,517	-	-	40,126	29,170
Public authorities	535	98	114,833	53	1,239	116,758	106,641
Total investments	**62,947**	**191,810**	**176,151**	**43,601**	**39,766**	**514,275**	**440,822**

Investments by region	Real estate	Equities	Fixed-income investments	Derivatives: positive	Other investments	31-12-2019	31-12-2018
Netherlands	4424	3523	12097	1630	5236	26,910	22,244
Rest of EMU	14916	16109	76771	9083	6061	122,940	106,995
Rest of Europe	11472	22550	18264	32292	2211	86,789	72,433
North America	18914	96573	54386	581	24043	194,497	168,151
Asia/Pacific	13068	47077	7695	14	1767	69,621	58,414
Other	153	5978	6938	1	448	13,518	12,585
Total investments	**62,947**	**191,810**	**176,151**	**43,601**	**39,766**	**514,275**	**440,822**

Investments by currency, excluding derivatives	Real estate	Equities	Fixed-income investments	Other investments	31-12-2019	31-12-2018
Euro	22,404	22,599	96,455	11,047	152,505	136,929
US dollar	20,490	94,005	56,913	25,533	196,941	169,556
Sterling	6,175	8,235	8,977	1,163	24,550	22,891
Australian dollar	2,988	3,268	1,082	1,017	8,355	7,128
Swiss franc	185	4,490	67	110	4,852	3,970
Hong Kong dollar	3,949	1,364	-	108	5,421	4,266
Canadian dollar	255	3,911	1,085	316	5,567	4,650
Yen	843	10,678	412	372	12,305	10,199
Other	5,658	43,260	11,160	100	60,178	49,782
Total	**62,947**	**191,810**	**176,151**	**39,766**	**470,674**	**409,371**

Derivatives and short positions by currency	Derivatives: positive	Derivatives: negative	Short positions	31-12-2019	31-12-2018
Euro	178,822	-9,450	-81	169,291	166,014
US dollar	-135,235	22,523	-191	-112,903	-121,991
Sterling	4,078	-21,204	-	-17,126	-17,485
Australian dollar	1,844	-6,394	-	-4,550	-3,691
Swiss franc	-804	-2,005	-	-2,809	-2,205
Hong Kong dollar	-149	73	-	-76	-67
Canadian dollar	873	-3,817	-	-2,944	-2,220
Yen	-6,801	-99	-	-6,900	-6,159
Other	973	-871	-	102	286
Total	**43,601**	**-21,244**	**-272**	**22,085**	**12,482**

The analysis of the derivative positions into positive and negative by currency is affected by currency hedging positions. The presented figures represent a snapshot of these positions. A forward currency contract is a contract to buy or sell a given amount of a currency at an agreed exchange rate on an agreed future date. Buying leads to an increase in the currency position and selling leads to a decrease. Both sides of the transaction are included in the above table. The ultimate positions shown depend partly on the exchange rate movements since contracts were concluded.

Notes on the individual asset classes

The real estate investments are made up of investments in:

Real estate investments	31-12-2019	31-12-2018
Residential property	13,012	8,162
Offices	5,406	3,903
Retail property	13,395	15,939
Industrial buildings	8,563	6,993
Hotels	2,201	2,521
Infrastructure	15,691	11,394
Other	4,679	2,552
Total real estate investments	**62,947**	**51,464**

Other includes the other investment-related assets and liabilities, totaling € 0,1 billion (2018: € 0.1 billion).

The equity investments are made up of investments in:

Equities	31-12-2019	31-12-2018
Developed markets	125,995	100,541
Emerging markets	39,692	33,669
Private equity	26,166	21,204
Other assets and liabilities	-43	-88
Total investments in equities	**191,810**	**155,326**

The private equity investments mainly concern shares in unlisted companies, including venture capital. An amount of € 4.8 billion of the private equity investments relates to indirect investments (2018: € 17.8 billion) and an amount of € 21.4 billion relates to direct investments (2018: € 3.4 billion).

The fixed-income investments concern:

Fixed-income investments	31-12-2019	31-12-2018
Bonds	121,649	94,521
High-yield credits	15,978	15,407
Index-linked bonds	17,870	32,627
Private loans	327	299
Mortgage loans	18,543	18,328
Other assets and liabilities	1,784	2,613
Total fixed income investments	**176,151**	**163,795**

The short position was € 190 million at year-end 2018 (2018: 36 million). The balance at year-end 2019 is included in the balance sheet under the heading of investment-related liabilities.

The analysis of the fixed-income investments according to interest rate (coupon) is as follows:

Fixed-income investments analyzed to interest rate	31-12-2019	31-12-2018
< 2%	65,394	63,648
2%-3%	30,430	26,759
3%-4%	26,855	25,241
4%-5%	28,147	23,976
> 5%	25,325	24,171
Total fixed-income investments	**176,151**	**163,795**

The remaining term to maturity of the investments in fixed-income investments on contractual repayment dates can be analyzed as follows:

Fixed-income investments analyzed by maturity	31-12-2019	31-12-2018
Shorter than one year	7,369	8,663
Between one year and five years	39,648	37,806
Longer than five years	129,134	117,326
Total fixed-income investments	**176,151**	**163,795**

The soundness of the fixed-income investments is commonly reflected in a credit rating.
The fixed-income investment credit rating analysis is as follows:

Fixed-income investment rating analysis	AAA	AA	A	BBB	<= BB	No rating	Total
2019	33%	29%	11%	17%	9%	1%	100%
2018	35%	29%	10%	16%	10%	-	100%

As the above analysis shows, 73% (2018: 74%) of the fixed-income investments had a rating of A or higher.
To provide an insight into the cash flows relating to the fixed-income investments, the duration is commonly used. The duration is the average weighted maturity of all cash flows (interest and repayments of principal) relating to the fixed-income products. The duration of the fixed-income investments amounts to approximately 8 years (2018: approximately 7 years).

The analysis of the derivatives with a positive fair value is as follows:

Derivatives	31-12-2019	31-12-2018
Currency derivatives		
Forward currency contracts	1,797	692
Cross-currency swaps	-	-
Interest rate derivatives		
Interest Rate Swaps	39,381	29,347
Inflation linked swaps	1,266	1009
Fixed-income futures	52	159
TBAs	4	23
Other derivatives		
Credit default swaps	13	3
Other swaps	-	23
Other futures	1,088	195
Total derivatives with positive fair value	**43,601**	**31,451**
Of which: relating to insurance operations	-	22

The Dutch Accounting Standards require negative positions in derivatives to be presented on the liabilities side of the balance sheet. The fair value of the derivatives depends heavily on the levels of market prices, exchange rates and interest rates as at year-end compared with the corresponding prices and rates when the derivative positions were contracted.

Other investments	31-12-2019	31-12-2018
	39,766	38,786

Other investments concerns investments in hedge fund strategies, totalling € 20.9 billion (2018: € 20.6 billion). This item also includes investments in commodities, amounting to € 3.3 billion (2018: € 5.7 billion). The carrying amount of the other assets and other liabilities relating to investments that are included in other investments was € 15.5 billion (2018: € 12.5 billion).

Other assets (2)

	31-12-2019	31-12-2018
Participating interests	1	2
Intangible assets	2	2
Tangible assets	94	106
Receivables, prepayments and accrued income	1,315	1,311
Cash	800	463
Total other assets	**2,212**	**1,884**

Cash includes time deposits amounting to € 215 million (2018: € 156 million) in addition to current account bank balances. An amount of € 7.2 million of the cash is not freely available (2018: € 4.5 million). No other forms of security have been provided.

The tangible assets are made up of:

Tangible assets	31-12-2019	31-12-2018
Buildings	67	72
Other	27	34
Total tangible assets	**94**	**106**

Buildings refers to buildings with an estimated useful life of 30 years as well as fixtures and fittings with an estimated useful life of 15 years. Other concerns office equipment and furniture, with an estimated useful life of between 5 and 10 years, and computers, with an estimated useful life of between 4 and 5 years.

The receivables, prepayments and accrued income are made up of:

Receivables, prepayments and accrued income	31-12-2019	31-12-2018
Receivables from employers	892	760
Receivables in respect of value transfers	181	175
Receivables from participants	3	6
Other receivables	239	370
Total receivables, prepayments and accrued income	**1,315**	**1,311**

The receivables do not include receivables falling due after more than one year (2018: nil).

CAPITAL AND LIABILITIES

Group equity (3)

	Pension fund capital	Minority interests	Total 2019	Total 2018
Opening balance	-11,012	86	-10,926	18,275
Fund result	1,361	-	1,361	-28,907
Change in minority interests	-	-30	-30	-294
Closing balance of group equity	**-9,651**	**56**	**-9,595**	**-10,926**

As a consequence of consolidation, group equity is € 56 million higher than the pension fund capital in the company balance sheet. The difference relates to the minority interests in entities that are participating interests.
Any dividend distributions by APG Groep NV take account of restrictions imposed by applicable legislation and regulations such as Solvency II and MiFiD (Markets In Financial Instruments Directive).

Provision for pension liabilities (4)

	31-12-2019	31-12-2018
Proprietary risk	476,222	410,900
Policyholders' risk	108	108
Total provision for pension liabilities	**476,330**	**411,008**

For additional disclosures relating to the provision for pension liabilities, reference is made to the notes to the company financial statements.

Provision for insurance liabilities (5)

	31-12-2019	31-12-2018
Life insurance involving proprietary risk	-	1,608
Non-life insurance involving proprietary risk	-	973
Subtotal of insurances involving proprietary risk	-	2,581
Life insurance involving policyholders' risk	-	286
Total provision for insurance liabilities	**-**	**2,867**

The provision for insurance liabilities concerns the most accurate possible estimate of the present value of the future liabilities of the insurance operations. These liabilities relate to both life insurance and non-life insurance. The reinsured part of the provision for non-life insurance is included in the other assets, with the total amount of the liabilities (gross) included in the provision for insurance liabilities.

Investment-related liabilities (6)

	31-12-2019	31-12-2018
Cash collateral received	22,144	15,986
Short positions	272	36
Short-term borrowing	3,916	3,249
Derivatives	21,244	18,933
Total investment-related liabilities	**47,576**	**38,204**

The cash collateral received relates to the margin received in connection with derivatives transactions.
The short-term borrowing, totalling € 3.9 billion (2018: € 3.2 billion), included € 0.7 billion of repos (2018: € 0.2 billion). A fee is charged for entering into these repurchase agreements. Cash deposits are temporarily obtained to cover the risk of non-return.

The Dutch Accounting Standards require negative positions in derivatives to be presented on the liabilities side of the balance sheet. The negative derivative positions can be analyzed as follows:

Derivatives with negative fair value	31-12-2019	31-12-2018
Currency derivatives		
Forward currency contracts	685	1,230
Interest rate derivatives		
Interest Rate Swaps	17,416	12,717
Inflation-linked swaps	2,446	2,221
Fixed-income futures	59	77
TBAs	4	20
Other derivatives		
Credit default swaps	226	32
Other futures	408	2,636
Total derivatives with negative fair value	**21,244**	**18,933**
Of which relating to insurance operations		9

Payables and other liabilities (7)

	31-12-2019	31-12-2018
Provisions	83	77
Long-term liabilities	11	11
Payables in respect of pensions	311	413
Other payables	1,771	1052
Total payables and other liabilities	**2,176**	**1,553**

The payables and other liabilities include, as part of the other payables, items totaling € 62 million (2018: € 20 million) falling due after more than one year. No security has been provided.

Provisions
The provisions mainly concern employee-related provisions and the provisions for deferred tax.

Long-term liabilities
Consolidation gives rise to a total of € 11 million (2018: € 11 million) in respect of long- term loans. This concerns long-term loans contracted from third parties by entities classed as participating interests. Of the closing balance an amount of € 10.9 million has a remaining term to maturity of more than five years (2018: € 10.9 million). The interest rate is 7.25% per annum (2018: 7.25% per annum). No security has been provided.

Payables in respect of pensions
Of the payables in respect of pensions, an amount of € 303 million (2018: €312 million) relates to tax and social security contributions payable.

Other payables
The items 'liability in respect of purchased conditional pensions' amounting to € 1.369 million (2018: € 803 million) and 'Payables to Defence' amounting to € 44 million (2018: € 3 million) recognized under Other payables are explained in the Notes to the company balance sheet in the Company financial statements.

OFF BALANCE ASSETS AND LIABILITIES

Committed investments

As at balance sheet date, commitments totalling € 8.3 billion (2018: € 6.6 billion) had been entered into in respect of real estate investments.

Commitments have been entered into relating to private equity investments to make payments on capital when called. As at balance sheet date, these amounted to € 16.7 billion (2018: € 15.7 billion).

No securities were issued as collateral (2018: € 0.4 billion) and € 0.2 billion were received as collateral (2018: nil).

Securities totalling € 0.8 billion (2018: € 0.5 billion) have been furnished as initial margin. Furthermore, securities totaling € 1.2 billion (2018: € 1.4 billion) were received and securities totaling € 0.7 billion (2018: € 0.2 billion) were furnished in connection with repo transactions. € 0.4 billion (2018: € 0.1 billion) of cash was provided as an initial margin related to derivatives.

A credit arrangement totalling € 0.8 billion (2018: € 0.8 billion) has been contracted with ABN-AMRO Bank NV. Additionally, there is an intraday facility of € 0.5 billion (2018: € 0.5 billion) also contracted with ABN-AMRO and an intraday facility of € 0.4 billion (2018: € 0.4 billion) contracted with ING Bank. As at year-end 2019, these facilities had not been drawn on. No collateral security has been provided in connection with these arrangements/facilities.

As at balance sheet date, commitments totalling € 1.7 billion (2018: € 1.8 billion) had been entered into in respect of other investments.

Other liabilities

Current rental contract commitments as at balance sheet date amounted to € 146.9 million (2018: € 115.4 million).

In connection with the establishment of and investment in the Brightlands Smart Services Campus in Heerlen in partnership with Maastricht University and the Province of Limburg, long-term contracts were entered into with two contractors in 2015 for the provision of business services to the group. The liabilities under these contracts amount to € 69.6 million (2018: € 80.4 million), of which € 10.8 million falls due within one year (2018: € 10.8 million), € 46.8 million falls due after one year and within five years (2018: € 57.6 million) and € 12.0 million falls due after five years (2018: € 24.0 million).

As at year-end 2017, ABP had committed itself to investing a total of € 4.1 million in computer hardware and software (2018: € 0.6 million).

Commitments as at balance sheet date under maintenance and other contracts amounted to € 27.4 million (2018: € 20.8 million), of which € 10.0 million (2018: € 9.5 million) was due within one year, with € 17.4 million falling due in later years (2018: € 11.3 million).

The liabilities in respect of ongoing vehicle leasing contracts amounted to € 7.1 million (2018: € 7.2 million), of which € 2.7 million (2018: € 3.1 million) is due within one year and € 4.4 million (2018: € 4.1 million) is due in the period between one and five years after the balance sheet date. Leasing costs of € 4.1 million (2018: € 5.2 million) were recognized in the year. The leasing liability has been calculated by the leasing company on the basis of depreciation plus allowances for fuel, insurance and servicing.

In 2018, a long-term contract was concluded for the purchase of business services. The liability from this contact amounts to € 2.9 million (2018: € 6.5 million), of which € 1.3 million (2018: € 2.0 million) is due within 1 year after the end of the financial year and € 1.6 million (2018: € 4.5 million) between 1 and 5 years.

A tax group has been formed for value added tax. The tax group comprises ABP, APG Groep and a number of first and second-generation subsidiaries of APG Groep NV. Within a tax group, the individual companies bear joint and several liability for each other's tax liabilities.

Notes to the consolidated statement of income and expenses

(amounts in millions of euros unless otherwise stated)

INCOME

Contributions (net) (8)

	Total 2019	Total 2018
Pension fund	11,041	10,267
Insurance operations	94	270
Total contributions (net)	**11,135**	**10,537**

Investment results (net) (9)

	Real estate	Equities	Fixed-income investments	Derivatives	Other investments	2019	2018
Direct results	672	728	4,503	1,709	167	7,779	7,630
Indirect results	8,599	40,204	10,469	-2,517	3,452	60,207	-16,027
Asset management costs	-107	-171	-80	-2	-44	-404	-336
Total investment results (net)	**9,164**	**40,761**	**14,892**	**-810**	**3,575**	**67,582**	**-8,733**
Of which							
- proprietary risk						-	47
- policyholders' risk						-	-1

EXPENSES

Pensions and other benefits (9)

	Total 2019	Total 2018
Pensions and other benefits – pension fund	-11,597	-11,110
Pensions and other benefits – insurance operations	-83	-259
Total pensions and other benefits	**-11,680**	**-11,369**

Pensions and other benefits comprises the retirement and surviving dependants' pensions (OP/NP), incapacity/disability pensions (AOP, i.e. AAOP, IP and HPT), and benefits payable under the life and non-life insurance policies.

Total movements in provision for pension liabilities (11)

	2019	2018
Movements	-65,322	-19,356

For an additional explanation of the movements in the provision for pension liabilities, reference is made to the notes to the company statement of income and expenses.

Movements in provision for insurance liabilities (12)

	2019	2018
Increase in provision for insurance liabilities	-76	-258
Added interest	-60	-40
Profit sharing / indexation	-	-5
Utilized for insured benefits	48	284
Utilized for costs	4	21
Other movements	4	52
Total movements in provision for insurance liabilities	**-80**	**54**

Value transfers (13)

	2019	2018
Value transfers	-169	517

Pension and insured benefit administration costs (net) (14)

	2019	2018
Salaries (including social security charges)	-338	-328
Pension charges	-29	-30
Other staff costs	-56	-40
Depreciation	-17	-21
Third-party services	-114	-136
Other operating expenses	-133	-206
Subtotal	**-687**	**-761**
Less: income from work on behalf of third parties	231	227
Less: attributed to asset management costs	283	292
Pension and insured benefit administration costs (net)	**-173**	**-242**

Other operating expenses mainly concerns ICT costs and premises costs relating to the administrative organization and the insurance operations.

The average number of staff was:

	2019	2018
ABP	43	43
Consolidated entities	2,939	3,137
(Of whom, employed outside the Netherlands)	194	170
The further analysis is:		
- management and corporate staff	389	366
- administrative units	2,242	2,276
- service units	351	538

The staff of the pension fund (ABP) and the staff of the administrative organization (APG) are members of the ABP pension scheme and the APG company pension fund, respectively. In the case of both schemes, the employer does not have any obligation to make supplementary contributions in the event of deficits beyond paying the amount of the annual contributions to the funds. It is therefore sufficient to recognize the annual contributions as pension charges.

The pension scheme of the APG company pension fund Stichting Personeelspensioenfonds APG (PPF APG) can be qualified as an average-pay scheme. Pensions and pension rights that have been awarded are only subject to indexation if the fund's financial position allows. PPF APG and the employers have signed an administration agreement which documents all rights and obligations. For more information, including the fund's financial position, please refer to PPF APG's website.

Post-balance-sheet events

Corona virus

Since early 2020, the spread of the coronavirus has caused significant disruption to society, both nationally and internationally. This also has consequences for ABP, its participants, the affiliated employers and our implementing organization. Financial markets have been severely affected by sharp falls in interest rates and rates up to the date of this report. Central banks and governments worldwide respond with extensive crisis measures and further support measures. As of the date of this annual report, the depth and duration of this crisis is still unknown.

The board continuously monitors developments and the (potential) impact on our pension fund. The main risks we face in this regard relate to the financial markets (including interest rates, share prices and spreads), insurance risk (including mortality and behavior of participants) and operational risk (continuity of business processes). The notes to the financial statements already contain a detailed explanation of the exposure to such risks; there are no indications that these disclosures are no longer valid. At the date of this report, it is too early to determine the structural impact of the coronavirus on our financial position and any longer-term assumptions. In the short term, we can conclude that our current funding ratio and the policy funding ratio as at 30 April 2020 show a significant decrease compared to year-end 2019. Together with the operator APG, the necessary measures have been successfully taken to guarantee the continuity of the business processes. From mid-March 2020, the employees of ABP and our operator will be able to provide almost the full range of services from home workplaces.

Notes to the consolidated cash flow statement

(amounts in millions of euros unless otherwise stated)

The closing balance of cash can be analysed as follows

	31-12-2019	31-12-2018
Investments	887	889
Other assets	800	463
Total cash	**1,687**	**1,352**

Cash flow from pension activities

The contribution receipts in the cash flow statement are made up of ordinary pension contributions totaling € 10,569 million, the contributions in respect of the amount of € 566 million payable for the purchase of conditional pension rights, as accounted for in the payables and other liabilities, and the collection cost supplements in the pension contributions totaling € 105 million.

The increase in the contributions received in 2018 is mainly attributable to the increase in the OP/NP contributions in 2019.

The increase in pensions paid is due to the increase in the number of pensioners.

Cash flow from investment activities

Included in the cash flow statement are cash flows from the returns on direct investments together with gains and losses on exchange on bank balances.

The other movements in the cash flow from investment activities comprise several effects. These included movements in the balance sheet posts cash collateral received and negative bank balances on the one hand, and currency effects and review methodology in the investment pools on the other.

Other notes

(amounts in millions of euros unless otherwise stated)

Segmentation overview

The segmentation overview will no longer be drawn up as of 1 January 2019.

Summary of the important equity investments included in the consolidation

The list below has been drafted based on the provisions of article 379 and 414 of Part 9, Book 2, of the Netherlands Civil Code (BW).

Entity	Seat	Held %	Core activity	processing in the financial statements
ABP Life Cycle Holding B.V.	Heerlen	100	Holding company	Investment
ABP Natural Resources Fund (US) LLC	Delaware (VS)	100	Commodities investment	Investment
AlpInvest Partners BM B.V.	Amsterdam	50	Private equity investment	Investment
AlpInvest Partners Clean Technology Investments B.V.	Amsterdam	50	Private equity investment	Investment
AlpInvest Partners CSI 2006 B.V.	Amsterdam	60	Private equity investment	Investment
AlpInvest Partners Primary Fund Inv. 2006 B.V.	Amsterdam	60	Private equity investment	Investment
AlpInvest Partners Primary Fund Inv. 2007 B.V.	Amsterdam	65	Private equity investment	Investment
AlpInvest Partners Primary Fund Inv. 2008 I B.V. (ABP)	Amsterdam	100	Private equity investment	Investment
AlpInvest Partners SL B.V.	Amsterdam	60	Private equity investment	Investment
APG Groep N.V.	Heerlen	92	Pension administration organization	Integral consolidation
- APG Rechtenbeheer N.V.	Heerlen	100	Administrative organization	Integral consolidation
• APG Service Partners B.V.	Heerlen	100	Administrative organization	Integral consolidation
- APG Asset Management N.V.	Amsterdam	100	Administrative organization	Integral consolidation
• APG Investments Asia Ltd.	Hong Kong	100	Administrative organization	Integral consolidation
•• APG Business Information Consultancy (Shanghai) Co., Ltd	Shanghai	100	Administrative organization	Integral consolidation
• APG Asset Management US Inc.	Delaware (VS)	100	Administrative organization	Integral consolidation
•• Fairfield Residential I, LLC	Delaware (VS)	100	Real estate investment	Integral consolidation
- APG Diensten B.V.	Amsterdam	100	Providing services to third parties	Integral consolidation
- Entis Holding B.V.	Amsterdam	70	Investment in a participating interest	Integral consolidation
• Entis B.V.	Utrecht	100	Consultancy in the field of information technology	Integral consolidation
APG Liquiditeitenbeheer B.V.	Amsterdam	-*	Cash management services	Integral consolidation
ASREF NY HOLDINGS LLC	Delaware (VS)	100	Holding company	Investment
Cargill Carbon A & C Holdings Ltd.	George Town	79	Commodities investment	Investment
Coventry Fund II Parallel Fund LLC	Delaware (VS)	100	Real estate investment	Investment
Drooge Vaate 1 N.V.	Amsterdam	100	Infrastructure investment	Investment

** The shares are held by Stichtingen Bewaarneming Fondsen voor Gemene Rekening, in which ABP has a significant participation.*

Entity	Seat	Held %	Core activity	processing in the financial statements
ECP II (Clean Energy Co-Invest) LP	Delaware (VS)	100	Innovation investment	Investment
Elkhorn Barges, Inc.	Delaware (VS)	60	Private equity investment	Investment
Externe Hypothecaire Beleggingen Heerlen B.V.	Heerlen	100	Holding company	Investment
Kaena Capital Opportunities Corp	Delaware (VS)	60	Private equity investment	Investment
Klavier Investments Holding B.V.	Heerlen	100	Asset investment	Investment
Limetree Investments Inc.	Delaware (VS)	100	Holding company	Investment
Lumbercy B.V.	Amsterdam	100	Real estate investment	Investment
Malapolski Investments Holding B.V.	Heerlen	100	Real estate investment	Investment
Nagillum II, LLC	Delaware (VS)	100	Real estate investment	Investment
Oiltree Investment Holding B.V.	Amsterdam	100	Asset investment	Investment
Parijs Kantoren Fonds B.V.	Amsterdam	100	Real estate investment	Investment
Parvenor S.à.r.l.	Luxembourg	100	Real estate investment	Investment
Physalis Investments Holding B.V.	Heerlen	100	Commodities investment	Investment
Platypus Investments LLC	Delaware (VS)	100	Real estate investment	Investment
Portfolio AC GP B.V.	Heerlen	100	Hedge funds investment	Investment
Restalux B.V.	Amsterdam	100	Real estate investment	Investment
Sappho Investments Holding B.V.	Heerlen	100	Asset investment	Investment
Timpani Investments Holding B.V.	Heerlen	100	Real estate investment	Investment
Tooronga Investments LLC	Delaware (VS)	100	Real estate investment	Investment
Tulip Dairy Land Pty Limited	Sydney	99	Commodities investment	Investment

A comprehensive list of equity investments has been filed at the Dutch Chamber of Commerce.

Disclosure of auditors' fees

The fees charged by ABP's external Independent auditors and its network are presented in the table below:

in millions of euros				
2019 auditors' fees	KPMG Accountants NV	Other parts of KPMG network	Total for KPMG network	Total for KPMG network 2018
Auditing of the financial statements	1.1	-	1.1	1.0
Other auditing and assurance or engagements	1.4	0.7	2.1	2.5
Tax consultancy	-	-	-	-
Other non-audit services	-	-	-	-
Total	**2.5**	**0.7**	**3.2**	**3.5**

The fees charged by ABP's external Independent auditors for auditing the 2019 financial statements amount to € 0.4 million (2018: € 0.4 million). The fees charged by APG Groep's external Independent auditors in connection with the client reports produced for ABP for 2019 amount to € 0.7 million (2018: € 0.6 million). These amounts are included in the table above.
In addition, APG Groep NV's external independent auditor's fee for audit services for other clients of APG Groep NV for 2019 is € 1.3 million (2018: € 1.4 million). These amounts are not included in the table above.

The above amounts are including VAT and the total fees for the year to which the financial statements relate regardless of whether the activities were actually completed during the reporting period.

Signature of the financial statements

Heerlen, 30 April 2020

Board of Trustees:

Ms CM Wortmann-Kool (Chairman)

Ms M Doornekamp

Mr C van Eykelenburg

Mr P Fey

Ms GAC Leegwater

Ms J Meijer

Ms CM Mulder-Volkers

Ms K Nauta

Mr L Sibbing

Mr PA Stork

Mr XJ den Uyl

Mr A van Vliet

Mr JPCM van Zijl

Supervisory Board:

Mr HAJ Hannen (Chairman)

Mr P de Groot

Ms NCG Loonen

Ms JFM van der Meer

Ms CE Roozemond

CHAPTER 4

Other information

Provisions of the Articles concerning profit appropriation

The Articles of association do not contain any provisions concerning the way in which the result should be appropriated.

Actuarial Statement

Instructions

Stichting Pensioenfonds ABP (ABP Pension Fund Foundation) of Heerlen, the Netherlands, instructed Aon Nederland cv to issue an actuarial statement as referred to in the Pension Act on the financial year 2019.

Independence

As certifying actuary I am independent of ABP Pension Fund Foundation, as required according to Section 148 of the Pension Act. I execute no other activities for the Pension Fund. Because Aon Nederland cv has a code of conduct, that has been approved by the supervisor, it is allowed that other actuaries or experts employed by Aon Nederland cv carry out other activities for the Pension Fund.

Data set

The data set that I based this audit on was provided and compiled under the responsibility of the Pension Fund's Board of Trustees. The review of the fund's technical provisions and the assessment of the fund's asset position was based on the financial data that form the basis of the annual financial statements.

Coordination Pension Fund's auditor

Based on the guidelines applied by me and the Pension Fund's auditor coordination has been taken place about the activities and the expectations of the controls for the financial year. For the review of the technical provisions and for the opinion of the asset position as a whole I have set the materiality to EUR 2,000,000,000. The Pension Fund's auditor and I have agreed to report observed differences above EUR 100,000,000. These agreements are documented and the results of my findings have been discussed with the Pension Fund's auditor.

I have used the basic administrative data that has been examined by the Pension Fund's auditor in the context of the control of the financial statements. The Pension Fund's auditor informed me of his findings regarding the reliability (material correctness and completeness) of the basic administrative data and the other starting points that are essential for my assessment.

Activities

In the process of carrying out these instructions, in accordance with my statutory responsibility as described in article 147 of the Pension Act, I audited compliance with Sections 126 through 140 of the Pension Act. The basic administrative data provided by the Pension Fund are of such a nature that I have accepted these data as a starting point of the calculations I assessed.

The following items were part of the activities of this instruction. Among others, I verified whether.

- the amounts for the technical provisions, the minimum capital requirement and the capital requirement as determined are sufficient; and
- I verified whether the cost-covering contribution meets the legal requirements;
- I verified whether the investment policy complies the prudent person rule.

Furthermore I assessed the Pension Fund's asset position. Thereby my opinion is based on the liabilities and assets present on the balance sheet date and also considering the Pension Fund's financial policy.

I performed my audit to the effect of obtaining reasonable assurance about the financial statements being free of material misstatements.

The activities described and the manner in which these were performed are in accordance with the standards and customs applicable within the Royal Actuarial Association, and in my opinion these form a reliable basis for my assessment.

Opinion

As a whole, the technical provisions are set to an adequate amount in accordance with the described calculation principles and starting points.

The pension fund capital on the balance sheet date is lower than the statutory minimum capital requirement.

Taking the above into consideration, I audited compliance with Sections 126 through 140 of the Pension Act, with the exception of Sections 131 (minimum capital requirement), 132 (capital requirement) and 133 (coverage by assets).

The Pension Fund's policy funding ratio on the balance sheet date is lower than the funding ratio corresponding with the minimum capital requirement. This situation exists for the fifth consecutive year-end. If the policy funding ratio remains below the minimum funding ratio on December 31, 2020, and the prevailing funding ratio as at December 31, 2020, is also below the minimum funding ratio, discount measures will have to be administered in 2021.

My opinion of the financial position of ABP Pension Fund Foundation is based on the liabilities and assets present on the balance sheet date. In my opinion, the asset position is poor, because the pension fund capital is lower than the minimum capital requirement.

In the context of my opinion I point out at the developments after balancesheet date as a result of the Coronacrisis, as explained by the pension fund in the annual report.

Based on current laws and regulations the risk of discount measures is substantial as the prevailing funding ratio is substantial lower than the minimum capital requirements.

Rotterdam, 30 April 2020

Drs. M. van de Velde AAG
associate of Aon Nederland cv

Independent auditor's report

KPMG

Independent auditor's report

To: the Board of Trustees and the Supervisory Board of Stichting Pensioenfonds ABP

Report on the accompanying financial statements 2019

Our opinion

In our opinion the accompanying financial statements give a true and fair view of the financial position of Stichting Pensioenfonds ABP at 31 December 2019 and of its result for 2019 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

What we examined

We have audited the financial statements for 2019 of Stichting Pensioenfonds ABP, based in Heerlen (referred to below as the 'Pension Fund').

The financial statements comprise:

1. the company balance sheet and the consolidated balance sheet as at 31 December 2019;
2. the company statement of income and expenses and the consolidated statement of income and expenses for 2019;
3. the cash flow statement for 2019; and
4. the notes comprising a summary of the accounting policies and other disclosures.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the 'Our responsibilities for the audit of the financial statements' section of our report.

We are independent of the Pension Fund in accordance with the 'Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten' (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA, Dutch Code of Ethics).

We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

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Audit approach

Summary

Materiality
— Materiality of EUR 2 billion — Approximately 0.4% of the total equity and provision for pension liabilities

Scope of the group audit
100% coverage

Our key audit matters
— Valuation of investments — Valuation of the provision for pension liabilities

Opinion
Unqualified

Materiality

Based on our professional judgement we determined the materiality for the financial statements as a whole at EUR 2 billion (2018: EUR 2 billion). The materiality is determined with reference to the total of equity and provision for pension liabilities as at 31 December 2019 (approximately 0.4%). We consider the total of equity and provision for pension liabilities as the most appropriate benchmark as it is a determining factor in calculating the policy funding ratio, which reflects the Pension Fund's financial position. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for qualitative reasons for the users of the financial statements.

We agreed with the Board of Trustees that misstatements in excess of EUR 100 million, which are identified during the audit, would be reported to them and to the Supervisory Board, as well as any smaller misstatements that in our view must be reported on qualitative grounds.

Scope of the audit

Group audit, including outsourcing of business processes to the administrative organization

The Pension Fund has outsourced the management of the investments and the administration of the pensions to, respectively, APG Asset Management N.V. and APG Rechtenbeheer N.V. (hereinafter referred to jointly as: 'the service organization'). The financial statements are prepared on the basis of information regarding the investments and the returns on investments provided by APG Asset Management N.V. and information regarding the provision for pension liabilities and amounts of pension contributions and payments and other financial items provided by APG Rechtenbeheer N.V.

Given our ultimate responsibility for the opinion we are responsible for obtaining an insight into the nature and significance of the services provided by the service organization and the effect they have on the internal control of the Pension Fund that is relevant to the audit. This is the basis on which we identify the risks of a material misstatement, set up our audit procedures and perform these in a manner which addresses those risks.

In conducting our audit we make use of the procedures and findings of other independent auditors relating to the internal controls of the service organization that are relevant to the Pension Fund, as included in the (Standard 3000A and 3402 type II) service reports specifically prepared for that purpose.

Our audit procedures consist of determining which internal controls can be expected as a minimum and discussing the control environment of the service organization with service organization representatives. Based on that we evaluate the internal controls described in the Standard 3000A and 3402 reports, the procedures to test their operating effectiveness during 2019 and the resultant findings, and discuss these with the other independent auditor. We also assess the Board of Trustees' evaluation of the quality of the outsourced business processes performed by the service organization.

Given our ultimate responsibility for the opinion on the financial statements, we are responsible for directing and supervising the audit procedures for the financial statements to be performed by the auditor of the service organization. We accordingly gave the auditor written instructions concerning the nature and scope of the procedures. The auditor conducted the audit, in accordance with our instructions, using a materiality of EUR 2 billion, and also paying particular attention to the key audit matters mentioned below.

The service organization's auditor reported his findings to us. We evaluated the reports, discussed the findings with the auditor, reviewed the auditor's audit file and carried out further audit procedures of our own, including activities regarding the control measures in place at the level of the Board of Trustees and the Executive Office.

The procedures mentioned above relating to the outsourced business processes and the additional procedures performed by us provide us with sufficient and appropriate audit information regarding the investments, investment flows and returns, pension fund participant details and pension rights, along with changes in the figures, resulting in the provision for pension liabilities, pension contributions and the pension payments made and changes in these figures.

Scope of our audit regarding fraud

In accordance with the Dutch Standards on Auditing we are responsible for obtaining reasonable (but not absolute) assurance that the financial statements taken as a whole are free from material misstatements due to fraud or errors.

As part of our risk assessment process we have evaluated events and circumstances that indicate an incentive or pressure to commit fraud or provide an opportunity to commit fraud ('fraud risk factors'), in order to identify fraud risks, if relevant.

We communicated the identified fraud risk throughout our audit team and remained alert to any indications of fraud throughout the audit. In accordance with the auditing standard we evaluated the fraud risk relating to management override of controls (presumed risk). The presumed risk of fraud regarding revenue recognition is not applicable, particularly since the possibilities for materially influencing revenue recognition are limited.

Our audit procedures include an evaluation of the design, implementation as well as the operating effectiveness of internal controls relevant to mitigating this risk, an evaluation of management bias and an identification of (administrative) journal entries with an increased risk of fraud. When identifying high-risk journal entries, we audit these by validating the source documentation.

In determining our audit procedures we make use of the Pension Fund's estimation and assessment regarding the internal policy on controlling the risk of fraud (prevention, detection and response), including the establishment of ethical standards in pursuit of a culture of openness and honesty.

As part of our evaluation we inspected the register of incidents.

We communicated our risk assessment and audit procedures to the Board of Trustees and the Supervisory Board. Our audit procedures differ from a specific forensic investigation, which is often of a more thorough nature.

Our audit procedures aimed at addressing risks of fraud did not lead to the identification of a key audit matter.

We point out that our audit is based on the procedures described in line with the applicable auditing standards and is not primarily designed to detect fraud.

Scope of our audit regarding non-compliance with laws and regulations

We have evaluated facts and circumstances in order to identify laws and regulations relevant to the Pension Fund. We identified laws and regulations that could reasonably be expected to have a material effect on the financial statements based on our risk assessment and sector experience, through discussion with the Board of Trustees and by evaluating the policies and implemented procedures regarding compliance with laws and regulations.

We discussed identified laws and regulations within our audit team and remained alert to any indications of non-compliance with laws and regulations throughout the audit. The potential effect of these laws and regulations varies considerably:

- The Pension Fund is subject to laws and regulations that directly affect the financial statements, including the Pensioenwet (Pension Act) and reporting standards (including laws and regulations specific to the Pension Fund). We established compliance with these laws and regulations as part of our audit procedures for the relevant elements in the financial statements.

- At the same time the Pension Fund is subject to various laws and regulations where the consequences of non-compliance could have an indirect effect on amounts recognized or disclosures provided in the financial statements, or both, for instance through the imposition of fines or claims. We identified the 'Wet verplichte deelneming in een bedrijfstakpensioenfonds' (Wet Bpf 2000, law on obligatory participation in a sectoral pension fund) and the 'Besluit financieel toetsingskader pensioenfondsen' (Bftp, decree on the financial assessment framework for pension funds) as legislation that might reasonably be expected to have an indirect material impact on the financial statements.

The Dutch Standards on Auditing limit our audit procedures regarding the identification of non-compliance with laws and regulations with an indirect effect, to inquiring of the Board of Trustees and inspecting correspondence with supervisory bodies and other legal correspondence. Through these procedures we did not identify any cases of actual or suspected non-compliance other than those previously identified by the Pension Fund.

We addressed the impact of known or suspected cases of non-compliance with laws and regulations in the audit procedures relating to the relevant elements as reported in the financial statements.

The procedures carried out to address risks of non-compliance with laws and regulations did not lead to the identification of a key audit matter in this auditor's report.

Our audit procedures differ from those of a specific forensic investigation into compliance with laws and regulations. The Board of Trustees is responsible for the preparation of the financial statements and for putting in place such internal controls as they deem necessary to enable the preparation of financial statements that are free of material misstatements, whether due to fraud or error, including compliance with laws and regulations.

The more distant non-compliance with indirect laws and regulations (irregularities) is from the events and transactions reflected in the financial statements, the less likely it will be that the inherently limited procedures required by auditing standards would identify it. In addition, as with any audit, there is a higher risk of non-detection of irregularities if these are the result of collusion, forgery, intentional inaccuracies, misrepresentations, or the override of internal controls.

Our key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements. We have communicated the key audit matters to the Board of Trustees and the Supervisory Board. The key audit matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of our audit of the financial statements as a whole. Our findings regarding the individual key matters should be seen in that context and not as separate opinions on these key matters.

Valuation of investments

Description

The investments of the Pension Fund constitute a significant item on its balance sheet. The investments of the Pension Fund amount to approximately 99.6% of the balance sheet total. Under the Pensions Act, the investments should be measured at fair market value. Note 1 to the financial statements reveals that for 74% of the Pension Fund's investments the valuation is based directly on quoted market prices, for 9% of the Fund's investments valuation is based on derived market prices, and for 17% it is based on valuation models and techniques. Determining the fair value of this last investment category is relatively complex and involves elements of subjective estimation.

Arriving at these estimates requires the Board of Trustees to form judgements to a large extent, making use of models. In view of the influence this has on the valuation of the investments, the balance of income and expenses, the amount of the pension fund capital and the policy funding ratio, we regard the valuation of investments as a key audit matter.

In the notes on pages 108 through 110, the Pension Fund describes the accounting policies used. Note 1 explains the valuation methods used and the important assumptions made in measuring this investment category.

Evaluating the accounting policies and confirming the accuracy and adequacy of the disclosures formed part of our procedures.

Our approach

We performed the following procedures:

- We evaluated the accounting policies used for measuring these investments and the more detailed description of the accounting policies contained in the 'Handboek Waarderingen' (Valuations Manual of ABP) for compliance with laws as well as with 'Richtlijnen voor de Jaarverslaggeving' (RJ, Dutch Accounting Standards Board guidelines).
- We verified the internal controls that are in place to ensure the reliability of the valuation of these investments.
- We verified that the notes to the financial statements contain adequate disclosures concerning the accounting policies and the degree of uncertainty with regard to the valuation of these investments.

The auditor of the service organization reported his findings relating to his audit of these investments to us. We evaluated the report, discussed the findings with the service organization's auditor and performed a review of the audit file of the auditor. We:

- used Standard 3402 type II reports (with an unqualified assurance report from the auditor), and analyzed these for scoping, any findings and the impact of these findings on the audit procedures;
- reconciled the report covering the investments with the financial administration and the financial statements;
- established that the investments based on quoted or derived market prices had been investigated with the help of a valuation specialist. The valuation specialist compared the recognized amounts with independently determined valuations based on obtained published market information obtained from independent sources;
- established that for investments where the valuation is based on net present value calculations and other appropriate valuation models and techniques, a selection of individually significant investments had been investigated with the help of a valuation specialist. In doing so we evaluated the suitability of the calculation models used, reconciled input data with data from objective sources, and tested the mathematical correctness of the figures. We scrutinized the source data, including market data; and
- established that investments where the valuation is based on estimated valuations supplied periodically by external parties, had been tested against recent financial statements audited by other independent auditors.

Our observation

We observed that the accounting policies and valuation methods used for the investments comply with the applicable reporting standards and are appropriate for determining a fair market value for these investments. We also found the notes to the investments to be adequate.

We believe the valuation of the investments has been determined in a balanced manner.

Valuation of the provision for pension liabilities

Description

The provision for pension liabilities forms a significant item on the Pension Fund's balance sheet and is measured at fair value (market value). Determining the fair value of the provision for pension liabilities involves a calculation in which the pension rights of participants are translated into expected future cash flows (benefit payments) using important estimates of life expectancy, cost levels and disability/incapacity frequency. The cash flows are then discounted to net present value at the market interest rate (derived from the interest rate term structure published by De Nederlandsche Bank).

Making the estimates requires extensive judgement by the Board of Trustees, using actuarial models, and the Board of Trustees also draws on the assistance of actuarial experts. In view of its complexity and its influence on the size of the provision for pension liabilities, the balance of income and expenses, equity and the policy funding ratio, we regard the valuation of the provision for pension liabilities as a key audit matter.

The Board of Trustees has included the valuation principles and assumptions for the provision for pension liabilities in the notes on pages 110 through 112. The sensitivity of the calculation of the provision for pension liabilities to estimates is discussed in the risk paragraph.

Our approach

In our audit we make use of the procedures of the certifying actuary appointed by the Pension Fund. Prior to the start of the audit and on its conclusion we agreed with the certifying actuary on the approach, the audit focus areas and the outcomes.

The service organization's auditor reported his findings to us concerning their audit of the provision for pension liabilities. We evaluated the report, discussed the findings with the auditor and performed a file review of the auditor's audit file.

We evaluated the methods of estimation and the assumptions used by the Board of Trustees. In doing so we evaluated that the method of estimation and the assumptions were consistent, prudent and up to date. We evaluated the way in which the Board of Trustees supported the assumptions used, by means of an assessment of their historical reliability and generally updated assumptions such as life expectancy. We discussed the estimation methods and assumptions used with the certifying actuary. We evaluated the actuarial declaration as included in the other information and the procedures in the file of the certifying actuary.

Our procedures also involved evaluating the outcome of the actuarial analysis of the balance of income and expenses in relation to previously made estimates and cash flow projections. For these procedures we made use of our own actuarial specialist. We also evaluated the accounting policies and the correctness and sufficiency of the notes to the financial statements.

Our observation

We consider that the valuation of the provision for pension liabilities has been determined in a balanced manner, and that the notes are adequate.

Report on the other information included in the annual report

In addition to the financial statements and our auditor’s report thereon, the annual report also contains other information.

Based on the following procedures performed, we conclude that the other information:

— is consistent with the financial statements and does not contain any material misstatements; and
— contains the information as required by Part 9 of Book 2 of the Dutch Civil Code.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements.

By performing these procedures, we comply with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard 720. The scope of the procedures performed is less than the scope of those performed in our audit of the financial statements.

In addition, we devoted explicit attention to the transparency surrounding the pension scheme administration costs. In the chapter headed 'Administrative expenses' of the report by the Board of Trustees, the Pension Fund provides an insight into the costs of pension administration, asset management and transaction costs, including an explanation of the assumptions and estimates made and an analysis of these costs.

Acting on our instructions, the service organization's auditor performed agreed-upon procedures relating to the administrative expenses and reported their findings to us. We evaluated the report, discussed the findings with the auditor and performed a file review of the auditor's file.

We also evaluated the reasonableness of the assumptions and estimates made by the Board of Trustees with respect to the administrative expenses on the basis of the principles and calculation methods approved by the 'Pensioenfederatie' (federation of Dutch pension funds).

The Board of Trustees is responsible for the preparation of the other information, including the other information pursuant to Part 9 of Book 2 of the Dutch Civil Code.

Statement regarding other legal and regulatory requirements

Engagement

We were engaged by the Board of Trustees on 18 June 2015 as auditors of the Pension Fund for the audit of financial year 2016 and have been the external auditors since then.

No prohibited services

We have not provided any prohibited services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding the statutory audit of public-interest entities.

Services rendered

In the period to which our statutory audit relates, in addition to this audit, we have provided the following services to the Pension Fund and its subsidiaries:

— other auditing and assurance engagements;

These activities also include those carried out by the independent auditor of APG Groep N.V.

Description of the responsibilities for the financial statements

Responsibilities of the Board of Trustees and the Supervisory Board for the financial statements

The Board of Trustees is responsible for the preparation and fair presentation of the financial statements in accordance with Part 9 of Book 2 of the Dutch Civil Code. Furthermore, the Board of Trustees is responsible for such internal control as the board determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to errors or fraud.

As part of the preparation of the financial statements, the Board of Trustees is responsible for assessing the Pension Fund's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, the Board of Trustees should prepare the financial statements using the going concern basis of accounting unless the board either intends to liquidate the Pension Fund or to cease operations, or has no realistic alternative but to do so. The Board of Trustees should disclose events and circumstances that may cast significant doubt on the Pension Fund's ability to continue as a going concern in the financial statements.

The Supervisory Board is responsible for overseeing the process of financial reporting of the Pension Fund.

Our responsibilities for the audit of the financial statements

Our objective is to plan and perform the audit assignment in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not have detected all material errors and fraud during our audit.

Misstatements can arise from fraud or errors and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

We have exercised professional judgement and have maintained professional scepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. Our audit included:

— identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures in response to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement arising from fraud is higher than that of such misstatement arising from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls;

— obtaining an understanding of internal controls relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Pension Fund's internal controls;

— evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Trustees;

— concluding on the appropriateness of management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Pension Fund's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements, or if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Pension Fund to cease to continue as a going concern;

- evaluating the overall presentation, structure and content of the financial statements, including the disclosures; and
- evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Given our ultimate sole responsibility for the opinion, we are also responsible for obtaining sufficient appropriate audit information regarding the financial information of the component parts or activities within the group. In that context we are also responsible for directing, supervising, and performing the group audit procedures.

We communicate with the Board of Trustees and the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identify during our audit. In this context we also deliver a statement to the Audit Committee pursuant to Article 11 of the EU Regulation on specific requirements regarding the statutory audit of public-interest entities. The information provided in this supplementary statement is consistent with our opinion in this auditor's report.

We determine the key audit matters for the financial statements based on a variety of issues we have discussed with the Board of Trustees and the Supervisory Board. These key audit matters are described in our auditor's report, unless prohibited to do so by legislation or regulations or in exceptional circumstances when it is in the interest of society not to include these points.

Utrecht, 30 April 2020

KPMG Accountants N.V.

W. Teeuwissen RA

ALL THE NAMES IN A LIST

Personalia

This section gives the names of the members of the Board of Trustees, together with details of the offices which they hold in addition to their membership of the Board of Trustees of Stichting Pensioenfonds ABP. Also included are the members of the executive committees, the Supervisory Board and the Accountability Body.

Board of Trustees

Ms C.M. Wortmann-Kool, 6-27-1959
Additional functions: Member of the Supervisory Board of Aegon NV, Member of the Supervisory Board of Het Kadaster, Chair of the Supervisory Board of Save the Children Nederland*, Member of the Prix Veuve Clicquot Businesswoman of the Year Prize Jury*, member of the AFM Capital Markets Advisory Committee

Ms M. Doornekamp, 7-24-1957
Additional functions: Member of the Executive Committee of Amsterdam Sinfonietta*, Chair of the Board of Trustees of Stichting Care Nederland*, Treasurer of Stichting Aandelen Remeha, member of the Board of Trustees of Stichting HaskoningDHV, vice-chair of membership at Eumedion*, Chair of the Supervisory Board of GGN Mastering Credit, Board Member for Stichting Het Geldersch Landschap (and associated foundations*), member of the Supervisory Board of Holmatro B.V. (until 12-15-2019)

Mr C. van Eykelenburg, 5-1-1952
Additional functions: Chair of the board of Willem Frederik Hermans Instituut*, member of the Supervisory Board of PriceWaterhouseCoopers Nederland BV

Mr P. Fey, 7-4-1965
Additional functions: Chair of CNV Overheid en Publieke Diensten, member of the Board of Trustees of CNV Connective, Vice-President of CESI*, chair of Vereniging van Katholieke Maatschappelijke Organisaties (VKMO)*

Ms G.A.C. Leegwater, 10-24-1971
Additional functions: member of the DNB investment committee, director of Stichting Verenigd Bezit, Scientific director of certified pension executive asset management ESAA, director of the GAK Foundation (from 1-1-2020)

Mr J.N. van Lunteren, 5-7-1945 (member of the Board until 3-1-2019)
Additional functions (during his membership of the Board): Independent organization consultant / PBLQ associate, Expert on Tax Administration at World Bank Washington D.C. USA, Chair of the Recommendations Committee of Stichting AGTP

Ms J. Meijer, 3-16-1955
Additional functions: Member of the Executive Committee of the Federation of Dutch Pension Funds, Member of the FNV Executive Committee, Chair of the ABP Appeals Committee, Chair of the COOP Pension Fund, Member of the ACOP Executive Committee

Ms C.M. Mulder-Volkers, 6-3-1966
Additional functions: Chair of the Supervisory Board of the Rijn- en Binnenvaart Pension Fund, non-executive director of Adelbert College in Wassenaar*, independent member of the PME Audit committee

Ms K. Nauta, 6-6-1983 (from 3-1-2019)
Additional functions: member of the Board for BPF Horeca en Catering pension fund, member of the Supervisory Board for Pensioenfonds Thales pension fund

Mr A.J.M. Sibbing, 4-5-1959 (from 3-7-2019)
Additional functions: chair of the Supervisory Board for Rabo PGGM PPI, member of the investment committee for pension fund for veterinarians, trustee/treasurer for Fonds Sluyterman van Loo, liquidator of Nederlandse Investeringsinstelling NV

* functions marked with an asterisk are unpaid

Mr P.A. Stork, 5-19-1967
Additional functions: Chair of the Audit Committee for Stichting Pensioenfonds IBM Nederland (from 1-1-2019 until 7-1-2019), Chair of the Investment Advice Committee indexation depot for CBR Pensioenfonds, Member of the Executive Committee for Stichting Bedrijfstak Pensioenfonds voor het Beroepsvervoer over de Weg, Professor of Financial Markets and Instruments at Vrije Universiteit Amsterdam

Mr X.J. den Uyl, 5-21-1953
Additional functions: Vice-chair of the Board of Trustees of the PWRI Pension Fund, Member of the Provincial Government of Noord-Holland (until 3-27-2019), Member of the Supervisory Board of the Dutch Meat Industry Pension Fund, Member of the SPN Supervisory Board, Member of the Executive Committee of Principles of Responsible Investment*

Mr A. van Vliet, 2-16-1967
Additional functions: Member of the Board of Het nederlandse pensioenfonds pension fund, member of the Board of Van Ravesteyn Fonds*, member of the Board for Stichting Pensioenfonds Hoogovens pension fund, member of the Supervisory Board of Havensteder (from 7-1-2019)

Mr J.P.C.M. van Zijl, 10-13-1952
Additional functions: Chair of World Skills Netherlands, Chair of Stichting Willem Drees-lezing*

* functions marked with an asterisk are unpaid

Audit Committee
Ms C.M. Mulder-Volkers (chair)
Ms M. Doornekamp
Mr P.J.H. Fey
Mr J.N. van Lunteren
Ms K. Nauta
Mr A. van Vliet

Board Committee on Pension Policy
Ms C.M. Wortmann-Kool (chair)
Mr C. van Eykelenburg
Mr P.J.H. Fey
Mr J.N. van Lunteren
Ms J. Meijer
Ms C.M. Mulder-Volkers
Ms K. Nauta
Mr A. van Vliet
Mr J.P.C.M. van Zijl

Board Committee on Investment Policy
Members of the Board of Trustees
Ms G.A.C. Leegwater
Ms M. Doornekamp
Mr C. van Eykelenburg
Ms J. Meijer
Mr A.J.M. Sibbing
Mr P.A. Stork
Mr X.J. den Uyl

External members
Mr P. Wennink, 5-30-1957
Ms T.J. Whitmarsh, 12-24-1956 (until 10-1-2019)

Board Committee on Risk and Balance Sheet
Mr X.J. den Uyl (chair)
Ms M. Doornekamp
Ms G.A.C. Leegwater
Mr A.J.M. Sibbing
Mr P.A. Stork
Mr J.P.C.M. van Zijl

Remuneration Committee
Ms C.M. Wortmann-Kool (chair)
Mr C. van Eykelenburg
Ms J. Meijer
Mr XJ den Uyl
Mr J.P.C.M. van Zijl

Appeals Committee
Members of the Board of Trustees
Ms J. Meijer (chair)

External members
Mr R. Barnhoorn, 8-6-1964
Mr H.C.J.L. Borghouts, 2-7-1943
Mr M. van Seventer, 7-15-1953
Ms E.S.M. van Zadelhoff, 3-2-1960

Accountability Body
Employers' Representatives
Mr J. Bankert, 6-27-1956
Mr R. Blankemeijer, 9-18-1966
Ms J.H. Boere, 7-3-1974
Mr J.E. van der Boon, 5-10-1960
Mr D.J. Diederix, 8-17-1952
Mr A. Guijt, 11-27-1959
Mr M. Hazenkamp, 7-29-1991
Mr A. Jonkman, 9-13-1959
Ms A. Molenaar-de Boer, 7-23-1962
Ms R.I.G. Nandkoemarsing, 4-10-1978
Mr P.H. Seesing, 2-21-1974
Mr R. Vermaat, 12-3-1983
Ms M.L.A. van der Wegen, 6-22-1963
Mr V.P. Wongsowinangoen, 8-31-1973

Active Participants' Representatives
Mr A.J. Boekestijn, 9-27-1959
Ms M. van den Bosch, 10-17-1978
Mr E.W.P. van Boven, 5-6-1957
Mr R.G.M. Bronswijk, 5-23-1963

Mr J.J. de Deken, 9-17-1963
Mr P.A. Eijkelenkamp, 4-27-1961
Ms S. Faes, 5-21-1988
Ms J.E.M. van Langeraad-Goes, 11-25-1969
Mr J.A. van Nie, 1-1-1956
Ms M-L van Muijen, 10-7-1963
Mr J. van Noortwijk, 3-26-1988
Ms I.M.M.A. Offermans, 4-25-1973
Ms M.N. Payton, 3-16-1985
Mr P. van der Spoel, 6-11-1966
Ms P.S. van Straten, 9-2-1980
Ms A.P. Tay, 7-22-1959
Mr M.R. Visser, 3-28-1980
Mr S.X. de Vrije, 7-6-1976

Pensioners' Representatives
Ms M.J.J. de Boer, 3-15-1950
Ms J.A.R.M. van Egmond, 4-17-1951
Ms V.M.C. van Geen, 11-4-1946
Mr W.F. Golta, 4-4-1946
Ms G. Gorter, 11-15-1953
Mr A. de Graaf, 8-4-1947
Mr B.M. Groen, 12-8-1952
Mr J. van Harmelen, 5-13-1944
Mr D.V. Hindriks, 11-8-1953
Mr J.G.A. Leijh, 3-13-1949
Mr B.M.S. van Praag, 2-28-1939
Mr J.D. Smit, 2-11-1951
Mr L. Weeren, 2-18-1952
Mr H.E.J.J. van Wijck, 12-25-1944

Supervisory Board
Mr H.A.J. Hannen, 2-8-1948 (chair)
Chair of the Board of Trustees Centraal Beheer APF

Mr P. de Groot, 10-12-1958
Independent consultant, director, and supervisor, Member of the Supervisory Boards of Syntrus Achmea Real Estate & Finance Hypotheekfondsen, Chair of the Supervisory Board of Pensioenfonds SABIC (until December 2019), Member of the Supervisory Board of the Nederlandsche Bank (until December 2019), Chair of the Supervisory Board of Pensioenfonds Delta Lloyd, Member of the Board of Pensioenfonds Architectenbureaus, Member of the Supervisory Board for Woningborg B.V., external member of the Audit & Risk Committee for Rabobank Pensioenfonds

Ms N.C.G. Loonen, 6-30-1972
Advisor for VERRA consulting, Member of the Supervisory Board of Rutgers, Member of the Copyright Supervisory Board, manager integrated Reporting a.i. Achmea (until September 2019)

Ms J.F.M. van der Meer, 4-15-1964
Independent Consultant for Itch Consultancy, external member of the Investment Advisory Committee for Stichting Pensioenfonds Chemours Nederland, Interim Chair of the Supervisory Board for Pensioenfonds Provisum (until June 2019), external member of the Audit Committee Bedrijfstakpensioenfonds voor de Banden- en Wielenbranche, member

of the Supervisory Board for Pensioenfonds KLM Cabinepersoneel (until October 2019), Chair of the Supervisory Board Algemeen Pensioenfonds KLM, board member of the Nature and Environment Watch Berkel en Rodenrijs

Ms C.E. Roozemond, 8-13-1955
Non-Executive Member of the Board of Trustees of the ABN AMRO company pension fund, chairman of BPFWaterbouw (until mid September 2019), board member BPF Horeca and Catering, member of the Supervisory Board of Goldschmeding stichting voor Mens, Werk en Economie

Key function holders

Actuarial function: M. Wiesemann 3-10-1959
Internal audit function: F.A. Toebosch 9-30-1968
Risk management function: A. Laghrich 9-19-1979

Executive Office

Ms N.J.M. Beuken, 9-16-1959, General Manager (until 1-1-2020)
Additional functions: Chair of the Supervisory Board for Pensioenfonds Vervoer over de Weg, Chair of the Supervisory Board of Rabobank Parkstad Limburg, non-executive member of the Board for Pensioenfonds Rabobank, member of the Board for Nationaal Pensioenregister, member of the Administration Board of De Pensioenfederatie

Mr R.L.S. Verjans, 3-19-1976, Operations Manager
Additional functions: Member of the Review Committee of the three KLM Pension Funds (General, Cabin, and Air) (until 1-4-2020), member of the Review Committee for Pensioenfonds AC Nielsen

Compliance Officer

Mr B.H.G. Damoiseaux, 24-11-1982

External Actuaries

Aon Nederland cv

External Independent Auditors

KPMG Accountants NV

Abbreviations and definitions

Abbreviations

AAOP	ABP arbeidsongeschiktheidspensioen - ABP incapacity pension
AEP	ABP ExtraPensioen
AFUP	Aanvullende flexibele uitkering politie - supplementary flexible benefit for police
AKP	ABP KeuzePensioen
AIFMD	Alternative Investment Fund Managers Directive
ALM	Asset liability management
AOP	The AAOP, HPT, and IP disability/incapacity pensions
APG	APG and subsidiaries
AOW	Algemene Ouderdomswet - General Old Age Pensions Act
CBS	Centraal Bureau voor de Statistiek - Statistics Netherlands
CEM	Cost Effectiveness Measurement
DNB	De Nederlandsche Bank - Dutch Central Bank
FGR	A collective Investment Scheme managed by the administrative organization
FP	Flexible pension
FPU	Regeling flexibel pensioen en uittreden - flexible and early-retirement benefits
HPT	Herplaatsingstoelage - Redeployment benefits
IP	Invaliditeitspensioen - Disability pension
ILB	Index Linked Bonds
nFTK	nieuw Financieel Toetsingskader - new Financial Assessment Framework
NP	Dependants' benefits
OP	Retirement benefit
OTC	Over the counter transaction
PP	Partnerpensioen - partner pension
SLA	Service level agreement
Repo	Repurchase order
TBA	To be announced
UPO	Uniform Pensioenoverzicht – Uniform Pension Statement
VPV	Provision for pension liabilities
VTN	Underwriting loss
VUT	Regeling vervroegd uittreden - Voluntary early-retirement scheme
VVP	Provision for insurance liabilities

Definitions	
ABP ExtraPensioen	The ABP pension product providing a supplementary pension - within the fiscal space for pension accruals - out of tax-free savings on which the participant bears the risk, with a guaranteed minimum fund of the amount saved and a return on the savings based on the return achieved by ABP
ABP KeuzePensioen	The ABP pension product offering the flexibility of converting the basic retirement pension and a partner pension and of taking a part-time pension plus the option of a high/low variant
ABP nettopensioen	The ABP pension product providing a supplementary pension out of tax-free savings on which the participant bears the risk, with the return on the savings based on the return achieved by ABP
Absolute return strategies	An investment strategy aimed at producing a positive return regardless of the market situation
Active risk	The risk due to the difference in the asset mix between an actual investment portfolio and a benchmark portfolio
Active participant	An existing or former employee having a right to a pension from a pension administrator under a pension agreement
Actual capital held	The balance of total assets less investment-related liabilities, other liabilities, and specific reserves (forming part of the pension fund capital)
Administrative organization	The company contracted by ABP to perform the administration of the pension scheme (pension administration, asset management, and support for the Board of Trustees), namely APG
Alternative Investment Fund Managers Directive	A European Directive introducing harmonized rules for managers of alternative investment funds - mandatory with effect from 22 July 2013
Amortized cost	The amount at which a financial asset or financial liability which is held to maturity is carried in the balance sheet, allowing for any discount or premium
Asset	Investment category
Asset Backed Securities (ABS)	Securitized debt instruments issued by financial institutions in the form of assets that have been converted into freely traded bonds
Asset liability management	Analysis of the interrelated trends in investments (assets) and liabilities for the purpose of verifying contribution, indexation and investment policy
Back-service	Increase of pension entitlements for previous years of service arising from an increase in the pension base
Basis point	100th of a percent (0,01%)
Benchmark	Standard against which the costs and performance of institutions in the same sector are compared
Broker quotes	Valuations provided by a professional intermediary trading in the securities concerned and using available market information
Cash collateral	Security received in the form of cash
Collateral fund	Fund holding furnished security obtained and provided (bonds or cash)
Commodities	Investments in assets such as grain and other foodstuffs. metals and raw materials generally
Compliance	Acting in accordance with internal and external rules and regulations including the requirements of the law and the integrity policy
Cost-covering contribution level	The actuarially calculated level of contributions needed to purchase vested liabilities plus markups to cover the costs of pension administration, maintaining the required reserves and, if applicable, to fund conditional indexation increases
Counterparty risk	The risk that a counterparty to a contract will not be able to meet its obligations vis-à-vis ABP
Cross currency swap	A contract to exchange interest flows in different currencies without exchange of the principal
Current value	The fair value as referred to in the Guidelines for Annual Reporting
Damped, cost-covering contribution level	The cost-covering level of contributions calculated on the basis of an expected real return on investments
Derivatives	Financial instruments based on an underlying instrument and used in the management of balance sheet and investment risks and to achieve the strategic asset mix
Discount rate	The interest rate published by DNB which is used to calculate the provision for pension liabilities.
Duration	The weighted average maturity of an investment taking account of the timing of cash flows
Equities and alternative investments	Investments in equities, private equity, commodities, and real estate
Exposure	The current value at risk of an asset or, in the case of derivatives, the value of the underlier
Fixed-income investments	Investments with a fixed maturity and an agreed interest and repayment schedule, such as private placements. bonds and mortgage loans

Definitions	
Former participants	An existing or former employee no longer accruing a pension agreement but who retains the right to a deferred pension from a pension administrator on ceasing to participate
Forward currency contracts	A forward currency contract is a contract to buy or sell a given amount of a currency at an agreed exchange rate on an agreed future date. The agreed exchange rate is made up of the spot rate plus a markup based on the interest rate differential between the two currencies concerned
Funding ratio	The extent to which defined benefit liabilities are covered by the actual capital hold
Future	A contract that can be traded on an exchange under which there is an obligation to deliver the underlying value at a future date for an agreed price
Future sustainable indexation funding ratio	A policy funding ratio level permitting fully indexed future increases on a sustainable basis in accordance with the ambition of matching price inflation, i.e. annual increases equal to the full amount of the actual rate of price inflation can be granted
Future consistent indexation	Applying indexation as a percentage of the realized price inflation ambition, so that the same price inflation percentage is also expected to be applied as indexation in the future
Generation Pact (Generatiepact)	Schemes allowing older employees to work less and receive partial financial compensation, creating room to hire younger employees
Group equity	Pension fund capital plus minority interests in investees
Hedge funds	An investment fund which, by pursuing a predetermined strategy, seeks to achieve a positive return irrespective of the market return. Hedge funds are often closed-end funds operating with borrowed capital and employing derivatives
High-yield	A description of an investment that generates a high level of returns but has a commensurately high risk profile
Indexation	In the case of pensions. adjustment of the promised benefits in line with the general rate of wage inflation year on year. For ABP, indexation is not automatic but strictly conditional
Index Linked Bonds	Bonds on which the coupon is adjusted for inflation
Inflation	An increase to the general level of prices in an economy
Initial margin	The amount which must be deposited to open a derivative position
Intraday facility	Short-term funding instruments settled within one day
Interest rate forward	A money market derivative that is used to fix interest expense or interest income by agreeing a specific rate over a certain period
ISAE 3402	International Standard for Assurance Engagements 3402
Mandatory reserve	A minimum reserve that is not available for distribution
Margin call	Payment of collateral to provide extra cover for positions which have been assumed
Mortgage Backed Securities (MBS)	Securitized debt instruments issued by mortgage lenders in the form of mortgages that have been converted into freely traded bonds
Nominal	When referring to an amount of money or a percentage. the face value. without allowing for future wage or price inflation
Normportfolio	A predetermined investment portfolio mix. with related benchmarks, against which the actual investment return is compared
Over the counter transaction	A transaction that is not conducted via an organized exchange but directly between two market participants
Overlay	The management of positions across all portfolios (e.g. currency exposure)
Pension fund capital	The remaining assets after deduction of the provision for pension liabilities, investment-related liabilities, and other liabilities
Pensioner	A person in receipt of a pension under a pension agreement
Policy funding ratio	The 12-month rolling average of the nominal funding ratios calculated using the discount rates published by DNB. The policy funding ratio provides the basis for policy decisions on the part of the Board of Trustees such as the setting of contribution rates. indexation percentage and so on

Definitions	
Private equity	Investment in the risk-bearing capital of an unlisted company
Provision for pension liabilities	The present value of all expected future pension payments to which active participants and former participants as well as pensioners are entitled. Also referred to as a technical provision
Provision for insurance liabilities	The present value of all expected future insurance liabilities under existing policies Also referred to as a technical provision
Rating (credit agency)	Measure of the creditworthiness of a counterparty resulting from a credit assessment
Real estate funds	Investment schemes where the capital is invested in real estate
Real funding ratio	The funding ratio is the ratio between a pension fund's assets and pension liabilities – the real funding ratio takes account of inflation with respect to pension liabilities
Related party	A related party is a natural person or entity related to the entity which drafts its financial statements.
Real return	Nominal return adjusted for wage inflation
Repurchase order	A repurchase agreement. i.e. a contract to sell securities and buy them back at a specified time and price, In effect, it is a way of borrowing or lending stock for cash. with the stock serving as collateral
Shortposition	A position in which an obligation to deliver securities at a future date is assumed without actually possessing them when the obligation is assumed. the counterparty's risk being mitigated by furnishing collateral
Short-term borrowing/lending	A financial institutions short-term money market treasury operations
Spread	The difference in return between two securities
Swap	A derivative instrument involving the exchange of cash flows or risks
Swap rate	The rate at which loans with various maturities can be swapped on the money and capital market
Sustainable and responsible investment	A way of investing which fully integrates sustainability aspects and criteria for responsible investment into the investment decisions
TBA	To be announced - a forward on a mortgage-backed security (MBS)
Tracking error	The difference in return between a portfolio and its benchmark
Uniform Pension Statement	The pension statement format used by all pension funds to present pension payments on retirement, death or disablement
Volatility	The extent to which the value of a financial product fluctuates
Z-score	A measure of the difference between the actual return and the return on the predefined norm portfolio, net of expenses.