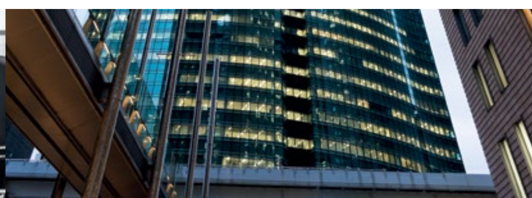
pggm.nl

Annual Responsible Investment Report

2016

PGGM

Voor een waardevolle toekomst



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Management Statement

As the administrator for investment funds and the asset manager for pension funds, PGGM Vermogensbeheer B.V. (PGGM) supports its clients in their task of providing a stable and high-quality pension for their participants, now and in the future. PGGM is convinced that contributing to a sustainable world helps create a valuable future for participants. Not only by fulfilling our clients' wider social responsibility or by complying with laws and regulations or other standards, but also by helping them in fulfilling their primary task. This is why we invest the pension assets of our clients in a responsible way.

This report renders account of the activities carried out in support of responsible investment in 2016. This concerns advisory, as well as implementation-related activities. The policies pursued by our clients and PGGM's responsible investment framework form the starting point for our activities. This framework seeks commonality within the PGGM investment funds (PGGM funds), while providing scope to meet clients' specific policy requirements through internal and external asset management. That means that the activities we describe in this report are not always applicable to all clients.

In compiling the Annual Responsible Investment Report 2016 we have in principle adhered to the international reporting principles of the Global Reporting Initiative (GRI). The 6 principles of the UN Principles for Responsible Investment (PRI) were also used as a reporting guideline (Appendix 5).

We have assessed the Annual Responsible Investment Report 2016 and declare that, to the best of our knowledge and belief, the information in this report presents a true and fair view of reality. The Annual Responsible Investment Report 2016 has been assessed and provided with an independent assurance report by KPMG Sustainability, an independent external auditor. The assurance report is attached in Appendix 6.

Zeist, 28 April 2017

Management of PGGM Vermogensbeheer B.V.

Eloy Lindeijer
Sylvia Butzke
Arjen Pasma
Bob Rädecker
Frank Roeters van Lennep

Statement of the Supervisory Board

The Supervisory Board of PGGM Vermogensbeheer B.V. was instituted in 2014. As supervisory directors, we supervised the preparation of the PGGM 2016 Annual Responsible Investment Report and declare that, to the best of our knowledge and belief, the information in this report presents a true and fair view of reality.

Zeist, 28 April 2017

Supervisory Board of PGGM Vermogensbeheer B.V.

Else Bos
Paul Boomkamp

Foreword

In the Outlook of last year's Annual Responsible Investment Report we indicated that we expected 2016 to be characterised by a number of transitions: the energy transition, the transition of the millennium objectives to the Sustainable Development Goals (SDGs) and the transition of responsible investment as a 'niche' to responsible investment as a common practice. These transitions were indeed initiated, although not at the same speed throughout. In these transitions the financial sector plays an important role.

Transparency is crucial in order to be able to make the right investment decisions. An authoritative initiative emerged from the Financial Stability Board that established the Task Force on Climate-related Financial Disclosures (TCFD) in December 2015. A year later, the TCFD published its provisional recommendations focused on improving insight into climate-related risks and opportunities for financial and non-financial institutions. As a member of TCFD, we consider it important for financial markets to become more efficient and better at factoring in the risks arising from climate change – and the measures taken to counteract climate change – in their company valuations. Insight into these risks can provide a major boost to the required energy transition, which also provides opportunities for long-term investors. We will therefore encourage the companies in which we invest to comply with the TCFD's recommendations. Naturally, we also want to set a good example ourselves in this respect.

In 2016, the Dutch financial sector published the 'Building Highways to SDG Investing' report in which it calls on financiers, supervisory authorities and government to collectively invest more in companies and projects that contribute to the SDGs. Together with APG, we have proposed a standard way of communicating about this under the header Sustainable Development Investing (SDI). How to measure impact is still undergoing significant development, whereby we have sought out cooperation with various parties, including colleague investors and universities in the Netherlands and abroad.

At the beginning of 2017, the Dutch government launched Invest-NL, an investment fund where companies can apply for venture capital and financing programmes. With this fund the Dutch government aims to leverage the use of public funds to generate an impetus to activate the use of private funds. We believe that such 'blended financing solutions' will increase the feasibility of investing in impact. In 2017, our aim is to further expand our investments in social solutions, where possible in cooperation with other investors, banks, government organisations and companies.

Almost ten year after the financial crisis, confidence in the pension sector continues to be low. This is partially due to the persistent low interest rates, which puts significant pressure on coverage ratios and makes indexation difficult. The low interest rates could also affect the ambitions relating to sustainable investing and investing with impact. This is understandable, the payment of a good pension has priority. However, we are convinced that positive financial results and sustainability go hand in hand. Companies that do not provide due consideration to the environment and society, are exposed to a variety of risks. By contrast, companies that take the consequences of, for example, climate change into account and that contribute to solving global problems, such as water scarcity, food security and access to healthcare, will be tapping into new sources of return. This is why we invest on the basis of a long-term perspective, in which sustainability is a permanent component of the risk-return equation.

Eloy Lindeijer
Chief Investment Management

Responsible Investment Overview 2016

AREAS OF FOCUS

Climate and Environment | Water | Food | Health | Human Rights | Corporate Governance | Stable Financial System

INSTRUMENTS

INVESTING IN SOLUTIONS

Mandate: at least € 20 billion invested in solutions by 2020[1]

€11.3 billion

Total: €11.3 billion[2]

New in 2016: €2.79 billion

Area of Focus	Euros Invested (millions)	Impact in 2015[3]
Climate and Environment	€3,860 (**€820** in 2016)	**3.8** **million MWh** of renewable energy produced. **4.0** million tonnes of CO_2 avoided.
Water	€867 (**€451** in 2016)	**38** **million m³** of water saved. **65 million m³** of wastewater treated
Food	€2,800 (**€629** in 2016)	**111,000** **tonnes/hectare** improvement in return. **640 million litres** of milk produced in developing countries.
Health	€3,690 (**€893** in 2016)	**530,000** people provided with access to good healthcare.
Other	€117 (**€0** in 2016)	Impact not measured.

1 Commissioned by our largest client.
2 For all clients, segregated as well as funds.
3 The impact is measured in relation to the investments as at year-end 2015. Of the € 8.9 billion invested in solutions , the impact of € 4.9 billion in investments is calculated. This represents 55% of the total investments in solutions. For the remaining 45%, there was insufficient data to measure the impact
4 Commissioned by our largest client.

ESG INTEGRATION

Mandate: CO_2 footprint of the investment portfolio halved by 2020.[4]

Baseline measurement of the equity portfolio as at 1-1-2015:
relative CO_2 footprint = 339 tonnes of CO_2 per million dollars of company turnover.

On 1-1-2016, **the relative CO_2 footprint = 326 tonnes of CO_2** per million dollars of company turnover

ENGAGEMENT

Dialogue with 323 companies and 23 market parties:
76 results achieved among companies
5 results achieved among market parties

VOTING

Voted at **3,657** shareholder meetings.
41,855 votes cast.

LEGAL PROCEEDINGS

€3 million in investment losses recovered.

EXCLUSIONS

Total: 113 companies and government bonds of **12 countries**
New in 2016: first company excluded after engagement concerning improvements in corporate governance did not yield any results.

1. Responsible Investment: Developments and Approach

As an asset manager for pension funds, we support our clients in fulfilling their primary task of providing a stable and good pension for their participants, now and in the future. Our clients attach great value to responsible investment. We support them in this regard, because we are convinced that financial and social returns go hand in hand.

As a long-term investor we have a long investment horizon; investments must continue to yield returns over time and enable our clients to pay good pensions. Companies that give due consideration to their surroundings can continue to be profitable in the future and provide positive investment returns over the long term. Moreover, these companies contribute to a sustainable, liveable world and as such to a valuable future for pension participants. This is why responsible investment forms an integral part of our investment approach. We take environmental, social and governance (ESG) factors into account in all of our investment decisions. Also, we critically assess our own behaviour, as well as that of the entities in which we invest or with which we work. Within our mandate we therefore look beyond financial returns alone and aim at making a tangible positive contribution to the sustainable development of the world at large.

Our beliefs:

- **Responsible investment pays off.** Sustainability has a positive influence on the risk-return profile of the investments and this influence will continue to increase in the future.
- **No good and stable return in the long term without sustainable development.** Global sustainable development is essential to be able to generate good and stable investment results for our clients over the long term.
- **Capital exerts a driving force.** By using the driving force of investments we can and must make a positive contribution to sustainable development.

Based on these beliefs, we will continue to innovate in order to deepen and improve our existing activities. This also means taking decisions in previously unexploited areas and being transparent about this. PGGM in this respect often deviates from the beaten track, which goes hand in hand with risks and opportunities for our performance and reputation. We make these decisions consciously based on these beliefs, on behalf of our clients and their participants. This is challenging and demands a clear focus and a major effort within the organisation. Ranging from the management team to risk managers, from advisors to investment strategists and portfolio managers: responsible investment touches the entire investment chain and everyone takes responsibility within the context of his/her position. Responsible investment forms part of our daily operations and sustainability is increasingly anchored within PGGM. The risks and opportunities associated with sustainability factors are taken into account in all investment processes and activities.

1.1 The development of responsible investment: from risk to impact

Thoughts on what constitutes responsible investment are evolving rapidly. Worldwide, policymakers, supervisory authorities and the financial sector are focusing on this topic and sustainable investment and the integration of ESG factors into the investment process increasingly appear to be standard practice. More and more investors consider it important that companies they invest in score well on sustainability-related topics.

This is related to the insight that responsible investment will ultimately lead to better investment returns: the consequences of climate change, the scarcity of raw materials and measures to counteract this are also going to affect the financial sector and pension investments. Economic developments that are socially and ecologically unsustainable will not be profitable financially either.[5]

Besides this insight in risks, financial institutions are becoming more aware of the opportunities offered by sustainable investment. This manifests itself in the investment portfolios of pension funds. Worldwide, a growth in impact investments is visible.[6] In addition, a growing number of pension funds are including sustainability in their investment beliefs. This is evident from the report Sustainable Investment in the Dutch Pension Sector, published by the Nederlandsche Bank N.V. (DNB) in the second half of 2016.[7] In this report DNB calls for greater cooperation within the sector in order to

5. De groene zaak (2016) Sustainable pension investment lab

further advance responsible investment. In addition, according to the Dutch Pension Federation, sectorial and cross-sectorial, national and international cooperation is essential.[8]

1.2 Cooperation and initiatives for the development of responsible investment

In 2016, a number of steps were taken nationally and internationally, relating to cooperation in responsible investment. We contributed to these initiatives with the objective of activating the financial sector and making responsible and sustainable investment mainstream.

In the Netherlands, we are working with various organisations, including The Dutch Pension Federation and the Sustainable Pension Investments Lab (SPIL). The SPIL, together with the involved parties, aims to analyse the challenges of responsible investment and aims to create a sustainable investment vision for Dutch pension funds.[9] The Federation of the Dutch Pensionfunds wishes to assist pension funds implementing responsible investment and published the Responsible Investing Service Document in 2016.[10] In addition, the Federation of the Dutch Pensionfunds is exploring the possibility of creating an international Corporate Social Responsibility (iCSR) agreement among pension funds, government, social organisations and social partners. At the beginning of 2017, the sector signed a letter of intent for the development of an iCSR agreement.

Sustainable Development Goals

One of the challenges in responsible investment is measuring the social impact of investments. How to select sustainability and impact indicators and make them comparable, and how to report in a clear and consistent way? Widely supported standards are needed to achieve objectivity and legitimacy. The transition from the millennium objectives to the Sustainable Development Goals (SDGs) of the United Nations (UN) at the end of 2015, has provided guidance to investors to develop such standards. The seventeen SDGs, to be achieved by 2030, describe the essence of today's global issues in a clear and simple way. As such they provide a reference for making focused investments in solutions to global issues: impact investments.

In 2016, we contributed to initiatives that should lead to a national SDG standard and strategy. As indicated earlier, at the end of 2016, the Dutch financial sector published the report Building Highways to SDG Investing (SDGI), in which the sector calls on government and supervisory authority DNB to closely work together in making it possible to contribute to the SDGs. By means of a collective effort we can bring the achievement of the development goals closer to reality. As a follow-up to the required actions identified in the report, we are chairing a working group SDG Impact Measurement under the auspices of the DNB Sustainable Financing Platform. The objective of the working group is to establish an impact measurement framework that Dutch financial institutions (pension funds, insurers and banks) and companies will agree on. The aim is to define a limited number of 'core indicators' for each SDG, that are relevant, credible and practicable.

1.3 Responsible investment: our own involvement

In addition to contributing to the development of responsible investment within the sector, PGGM, worked on increasing the sustainability of the investments of our clients and on increasing our impact.

1.3.1 Our contribution to the Sustainable Development Goals

To provide insight into the contribution made to the SDGs through the investments of our clients and to make this comparable with the investments of other investors, we worked together with pension administrator APG on standardising SDG impact investments: Sustainable Development Investments (SDIs). We developed a standard definition and approach to SDIs, that is, investments with competitive returns that make a substantial contribution to the SDGs. The SDI standard consists of various components, including the classification of solutions by global goal and selection criteria for each investment category. In September 2016 we published a statement on this subject. At the beginning of 2017, nine international investors had signed this statement. We will continue to work together on developing the SDI into an international standard for institutional investors.

1.3.2. Our contribution to social impact

Not only do we contribute to the standardisation of SDG impact investments, but we also invest intentionally in companies and projects that provide solutions to social issues. Mandated by one of our clients, we invest in solutions for climate change, water scarcity, healthcare and food security. The target we have been given is to invest € 20 billion in solutions by 2020. For these

6. Global Impact Investing Network (2016) Impact investing trends. Evidence of a growing industry. The parties analysed had an annual growth of 18%; from $25.4 billion in 2013 to $35.5 billion in 2015.
7. De Nederlandsche Bank (2016) Sustainable Investment in the Dutch Pension Sector
8. Federation of the Dutch Pensionfunds (2016) Contouren agenda verantwoord beleggen
9. De groene zaak (2016) Sustainable pension investment lab
10. Federation of the Dutch Pensionfunds (2016) Service Document on Responsible Investment

investments, we measure the financial return and the social impact.

At the end of 2016, a total of € 11.3 billion was invested in solutions relating to these four themes. In 2016, investments in solutions increased by € 2.79 billion. Part of the portfolio consists of investments in solutions by means of the new asset category: Investing in Solutions via Listed Equities. Examples of these investments and their social impact are provided elsewhere in this report (see Sections 2.3.1, 3.3.1, 4.3.1 and 5.3.1).

To continue expanding investments in solutions and to be able to better measure and report the impact of these investments, we continued to develop criteria for investing in solutions in 2016. In a Manual for in-house use, we describe these criteria, as well as how to identify investments in solutions, how to measure impact and how to report on this.[11] Furthermore, we have simplified impact assessment and measurement by using the Sinzer software package. This is a web-based platform that enables us to easily and cumulatively record investments and their impact. Our impact measurement methodology is still being improved. We depend on annual reports of the companies we invest in for impact data. They need to measure and monitor their impact. However, the data always lags by one year. This is why it is important to continue to develop standards and tools.

1.3.3 Our contribution to a circular economy

In conventional production processes, reserves of raw materials are being depleted and products are manufactured that after use are disposed of or incinerated as waste. We are burdening future generations with the results of our consumption: polluted soil, oceans and air. Due to the current linear system there will be fewer raw materials for future generations. The use of scarce materials may cause price shocks in sectors that are highly dependent on raw materials. This has a direct impact on the economy as a whole and on investors like ourselves.
We are convinced that the transition to a circular economy, focused on the reuse of products and raw materials, is critical for the planet as well as the economy. Therefore, we consider it important to contribute to this transition. Within the themes climate change, water scarcity, healthcare and food security, we look for circular solutions to invest in. Examples include water purification plants and forms of renewable energy. In addition, we research circularity in companies. In 2016, we requested circular assessments of several companies in the listed equities portfolio. The objective is to assess exposures to linear risks and to identify specific opportunities for embedding circularity into their earning models.

1.3.4 Our contribution to the Dutch economy

A strong and sustainable Dutch economy contributes to a valuable future for pension participants. This is why we consider it important to invest in the Netherlands.
At end 2016, € 20.8 billion of the capital of our clients was invested in the Netherlands. Approximately two-thirds of this is invested in government bonds. In addition, we invest in real estate and infrastructure, and have focused investments in sustainability. € 1 billion is invested in solutions for social issues in the Netherlands.
For instance, in 2016, we invested € 15 million in Alliander green bonds. The proceeds of these green bonds are used to finance investments in smart grids, sustainable buildings and heating networks. Through this investments we contribute to offset climate change.

The Netherlands Investment Institute (NLII) expanded its products with the launch of the Apollo Zorgvastgoedfonds (healthcare real estate fund), developed in cooperation with PGGM on behalf of one of our clients. The Apollo Zorgvastgoedfonds invests in protected living, nursing homes and first line healthcare centres. Due to changes in law and regulations, traditional financing is no longer sufficiently available. The Apollo Zorgvastgoedfonds fulfils a need for additional risk-bearing capital and in this way contributes to accelerating the required modernisation of healthcare real estate in the Netherlands.

1.4 Our approach: governance, instruments and areas of focus

1.4.1 Responsible investment governance

At the end of 2016, the total assets under management on behalf of our clients amounted to over € 205.8 billion. Of this amount, € 199.9 billion (97.1% of the total portfolio) fell within the PGGM funds and the segregated client mandates that are subject to the PGGM Responsible Investment Implementation Framework (see Appendix 1). Some externally managed client mandates are not subject to the Responsible Investment Implementation Framework. In this report we only report on responsible investment activities that are subject to the PGGM Responsible Investment Implementation Framework, i.e. over 97.1% of the managed capital.

Each client has its own policy with particular emphasis with regard to responsible investment. Within the PGGM funds, we search for commonality with our clients in the

11. To comply with the criteria of investments in solutions an investment must have an actual positive social impact on at least one of the four areas of focus eligible for investment. The investment's contribution to a solution must be substantial and the social impact must also be tangible: we require the company or the project to measure, manage and reporte on. For For For the real impact of the solution. For our criteria see the PGGM website.

implementation guidelines for responsible investment. We do this in Participant meetings, in which fund participants have the opportunity to decide on fund-specific subjects together with the PGGM fund manager. In 2016, the refinement of the PGGM fee protocol in liquid markets was one of the items on the agenda of these meetings. This refinement relates to the governance and structure of the result-dependent remuneration of external managers (Section 8.3.2).

To reach a sound collective decision, PGGM and our clients can obtain advice and discuss dilemmas concerning responsible investment with our advisory council, the Advisory Board Responsible Investment (ABRI). In 2016, six external members with various expertise served on the ABRI. More information about ABRI is available on our website. In 2016, the ABRI advised us on topics such as our climate vision and climate risks, terminating or initiating the exclusion of a number of companies and government bonds, cooperation and standardisation relating to impact investments, conduct of the financial sector, long-term investments and issues concerning our role and activities as an active shareholder.

1.4.2 Our instruments

The Responsible Investment Implementation Framework describes six instruments: exclusions, ESG Integration, engagement, voting, legal proceedings and investing in solutions. We use these instruments for the purpose of (1) contributing to solutions to social challenges by means of our investments; (2) encouraging companies to make sustainability improvements; and (3) excluding companies that carry out activities we do not support.

Figure 1 illustrates the triptych for Responsible Investment together with the associated instruments. On behalf of our clients we are increasingly focused on the middle and right-hand segment of the triptych. We are a long-term investor. Risks that can have a negative impact on the financial returns of our investments over the long term may arise from ESG-related factors. Consequently, balancing such risks is an integral part of the investment processes. Once material ESG risks have been identified, we take these into account in our investment decisions and we engage with selected companies in order to achieve improvements. Together with our clients, we can be faced with the decision whether to reinvest – possibly after intensive engagement – if we are unable to prepare a good risk analysis for a company in which we are a shareholder. In such situations, exclusion is always a last resort. PGGM and its clients expect an exclusion to make a positive contribution to the investment performance over the long term.[12] Our website contains extensive information about our Instruments for Responsible Investment.

PGGM's Instruments for Responsible Investment

NO
What we do not want

Direct exclusions
- Controversial weapons
- Tobacco

Exclusions after engagement on:
- Human rights and social circumstances
- Environment
- Corporate governance

Instrument:
Exclusions

CHANGE
What we want to improve

Making companies and markets more sustainable through ESG integration, active ownership and collaboration with financial service providers

Instruments:
- ESG integration (including ESG Index
- Engagement
- Voting
- Legal proceedings

YES
What we want to stimulate

Creating social returns in the area of:
- Climate and environment
- Water
- Health
- Food

Instrument:
Investing in solutions

Figure 1. Triptych with instruments for responsible investment

12. We apply the PGGM Implementation Guideline on Exclusion within the PGGM funds and the internally managed mandates. In case of liquid investments we do this using exclusion lists. In case of private investments, we incorporate the exclusion criteria as investment restrictions in the contracts with external parties. We apply the guideline to over 99 per cent of investments. This does not mean that the remaining 1 per cent contravenes the guideline, but we are unable to determine in all certainty that the guideline has been fully applied. This mainly concerns exchange-traded funds and index futures in the equity funds, and a number of remaining investments in the PGGM Fund of Hedge Funds.

1.4.3 Our areas of focus

We want to make a focused contribution to a sustainable world. This is why, in consultation with our clients, we have selected 7 social areas of focus for our responsible investment activities within the PGGM funds and the internally managed mandates. The areas of focus are as follows:

(1) Climate and Environment
(2) Water
(3) Food
(4) Health
(5) Human Rights
(6) Corporate Governance
(7) Stable Financial System

In the following chapters we describe for each area of focus why the theme is relevant and which contribution we made to this theme in 2016.

2. Climate and Environment

WHY THIS AREA OF FOCUS

SOCIAL RELEVANCE

Climate change is a global risk:
This century the average temperature will rise by
1.1. to 6.4 °C[13]

Paris Climate Agreement ambition: limit rise in temperature up to 2050 to
1.5°C
> Requires private financing

RELEVANCE TO PGGM AND ITS CLIENTS

Investment opportunities:
€10 billion per year
in investments are required for the Netherlands to achieve its climate objectives.[14]

Climate as financial risk:
- **> Impact on insurance liabilities**
- **> Unpredictable climate policy**
- **> Liability risk**
- **> Transition risk**

OIL

WHAT & HOW

WHAT WE DO

Investing in
Climate Solutions

OUR PERFORMANCE IN 2016

Total: **€ 3.86 billion**
New in 2016: **€ 820 million**

Invested in (i.a.):
> Renewable energy
> CO_2-efficient buildings and production

Results (i.a.):
3.8 million MWh
of renewable energy produced.

The **impact** of these investment over 2015 is equivalent to the average electricity use of **1,100,000** households per year.

ESG Integration

1-1-2016 the relative CO_2 footprint = **326 tonnes of CO_2** per million dollars of company turnover
Reduction in comparison to the 2015 benchmark: 13 tonnes of CO_2 per million dollars of company turnover.

Engagement
Market Engagement

In 2016, we wrote to over **200 CO_2-intensive companies.**

Company Engagement

Dialogue with TEPCO: improvements concerning nuclear risk management.

13. World Economic Forum: http://reports.weforum.org/global-risks-2016/coping-with-climate-change/
14. McKinsey (2016): Accelerating the Energy Transition.

Climate change and measures to counteract climate change entail financial risks, as well as opportunities. Opportunities to make profitable investments in solutions that counteract climate change and at the same contribute to a liveable world in which the consequences of climate change remain limited for pension participants.

2.1 Why climate and environment as an area of focus

In 2016, a number of climate-related boundaries were broken. The concentration of CO_2 in the atmosphere rose to above 400 parts per million (PPM) and 2016 was the warmest year on record. The current level of global CO_2 emissions and the expected rise are too high to keep the global rise in temperature below 1.5°C by 2050. If no action is taken this will have major consequences. The global rise in temperature will result in extreme weather conditions, such as droughts and floods, causing drinking water and food shortages and making parts of the world inhabitable.[15] In turn, this can result in growing refugee flows and social unrest.

Climate change is sometimes referred to as 'the tragedy on the horizon' due to the time that elapses between actual actions – CO_2-emissions – and the impact on climate. Uncertainty about policy and the speed of action by governments is a key factor in curbing the effects of climate change over the long term. This uncertainty is already important to investors in terms of their investment decisions. Investors are calling for a predictable climate and energy policy. In the study 'Accelerating the Energy Transition', McKinsey estimates that € 10 billion per year in investments is required between 2020 and 2040 for the Netherlands to achieve its EU climate objectives.[16] Globally an estimated $1 trillion per year is required. This amount is known as the 'clean trillion'.[17] This concerns investments in energy efficiency and renewable energy. It is clear that there are opportunities for investors here.

2.2 Climate change-related developments

The Paris Climate Agreement went into effect in 2016. The 22nd Conference of Parties (COP22) held in Marrakech in November focused on the implementation of the Climate Agreement. The treaty was ratified by the necessary number of countries.

Due to the Climate Agreement, climate change has moved higher on the agenda of politicians and policymakers. In December, the Dutch Minister of Economic Affairs presented the Energy Agenda. The Energy Agenda describes how the Netherlands wants to give substance to the Paris Agreement on Climate Change by reducing CO_2 emissions to almost nil by 2050. The Dutch government is focused on a broad package of measures varying from energy efficiency to generating renewable energy and sustainable heating.[18] Furthermore, the legal obligation to have homes and buildings connected to the gas network will be dropped and there are plans to increase sea-based wind farms. Starting in 2035, all new cars sold must have zero emissions. Climate change also is a topic of concern among supervisory authorities. In 2016, DNB published a report about sustainable investments by pension funds. The supervisory authorities expect financial parties to be aware of the climate risks in their portfolios.[19] DNB's report 'Time for Transition', also published in 2016, points to the importance of a speedy and managed transition to a climate-neutral economy.

15. The Nature Conservancy (2015): Climate change – threats and impacts
16. McKinsey (2016): Accelerating the Energy Transition
17. Ceres (2014): Investing in the Clean Trillion
18. Central Dutch Government (2016): Energy Report Transition to sustainable energy
19. DNB (2016): Sustainable Investment in the Dutch Pension Sector.

Task Force on Climate-related Financial Disclosures

In December, the Task Force on Climate-related Financial Disclosures (TCFD) of the Financial Stability Board (FSB), of which we are a member, published its recommendations concerning transparency about financial aspects of climate change. The recommendations are related to the strategy, governance, risk management, risk criteria and objectives concerning climate change and apply to the financial, as well as non-financial sector. The recommendations, which are of a voluntary character, will be finalised in 2017.

These recommendations affect us in two ways: as a user of company reports and as an author of our own financial reports. Transparent reports often are a starting point for our investment policy, risk management and engagement with companies in the area of climate change and the energy transition. As an author, we will set a good example in our financial reporting and quickly proceed to voluntary implementation. In various areas – for example in reporting the footprint of equity investments – we have already started this.

2.3 How we contributed to this area of focus in 2016

2.3.1 Investing in Climate Solutions

At the end of 2016, we had a total of over € 3.8 billion invested in climate solutions for our clients. In 2015, the total quantity of sustainable energy generated through these investments amounted to more than 3.8 million megawatt-hours. This is equivalent to the average electricity use of over 1 million households per year. In 2015, the total CO_2 emissions avoided due to these investments was more than 4 million tonnes of CO_2. This is equivalent to the average CO_2 emissions of more than 175,000 households per year. An overview of our investments in climate solutions and their impact is available on our Investing in Solutions webpage.

In addition to the above-referenced Alliander green bonds (Section 1.3.3), in 2016 we invested in the green bonds of Iberdrola Finanzas S.A.U.. These bonds concern the financing of renewable energy projects. We also invested in green bonds of BNP Paribas and Rabo Groen Bank B.V..

Vantage London

Another investment in solutions is the joint venture between the PGGM Private Real Estate Fund (PREF) and Legal & General Capital; Vantage London Limited Partnership (Vantage). Vantage invests in offices in London with the objective of redeveloping these offices and realising a considerable energy reductions in the process. This year, Vantage for the first time participated in the Global Real Estate Sustainability Benchmark (GRESB), that assesses real estate in terms of sustainability. The fund immediately was one of the best scoring office funds in this benchmark. An illustration of this is the Senator House office in London. Following a thorough investigation, the building's heating and cooling systems were adjusted. This resulted in a reduction in gas consumption of 70% and a decrease in electricity consumption of 17%. This translates into a 34% reduction of CO_2 emissions. This is equivalent to the emissions caused by the energy consumed by 140 households, or by 280 passenger cars, in one year. In 2017, the building will be totally renovated and made even more sustainable.

Paris Office Partnership (POP)

In 2016, PREF and Foncière Atland initiated a joint venture aimed at asset management in and around Paris: the Paris and Ile-de-France office partnership (POP). POP manages offices in Paris with the aim of achieving low energy and water use. POP further substantiates our strategy aimed at making office buildings sustainable. Over the coming years, PGGM wants to give further substance to this strategy in other European cities and capitals as well.

Mexican Windmills

At the end of 2015, we withdrew as investor from the planned wind farm in Mexico. In 2016, this was frequently in the news. The wind farm was supposed to become the largest wind farm in Latin America and make a major contribution to clean energy. However, the project encountered social and political resistance, which we reported on in our 2013 and 2014 annual reports. In spite of the various consultation rounds during which construction was given a green light, construction was once again indefinitely halted at the end of 2015. This creates a great deal of uncertainty and risks, and we consequently decided to withdraw from the project.

2.3.2 ESG Integration

Portfolio Risk Analysis

We take material climate opportunities and risks into account in our investment decisions. For example, the Fixed Income Securities Team, which focuses on Emerging Markets, integrates ESG ratings with qualitative findings into their company assessments. From this analysis it became evident, for example, that the performance of MC Norilsk Nickel JSC (Norilsk) is unsatisfactory in relation to many key themes, such as health and safety, emissions and wastewater. We therefore decided to sell this company's bonds.

Managing Climate Risks
Building on our previous work and following the Paris Climate Conference, we initiated an internal climate working group in order to identify and manage climate risks within the portfolio. The objective of the working group is to better understand how climate change and the measures taken to counteract climate change – can affect the portfolio, and to advise our clients on how to manage the risks and exploit opportunities. The impact of climate change is already noticeable on the financial markets. In sectors, such as energy, real estate, infrastructure and insurance, companies are adjusting their policy and strategy. We are however only at the beginning. It is likely that the impact of climate change on financial markets will be much greater over the coming years. Investors that are able to prepare for this will most likely earn better investment returns in the long-term.

A key theme in our approach is the development of a number of climate scenarios, also recommended by the TCFD. These scenarios distinguish themselves based on the speed of technological developments and on government policy designed to counteract climate change. Based on these different scenario's we assessed the current portfolio and looked for investments with positive returns. In our research we work closely with our clients and peers.

CO_2 reduction in the investment portfolio
We aim to contribute to counteracting climate change by reducing the CO_2 emissions of our investments. Our largest client has mandated us to halve the CO_2 emission of investments by 2020 in comparison to 2015. At the beginning of 2015, we identified the CO_2 emission of all companies in the equities portfolio and completed a benchmark in comparison to which we will be halving emissions.[20] Since the completion of the benchmark, the CO_2 footprint has been reduced from 339 tonnes of CO_2 per million dollars of company turnover to 326 tonnes of CO_2 as at 1 January 2016.[21]

The CO_2 reduction is done in four annual stages and will be completed by 2020. In 2016, we initiated CO_2 reductions in the Developed Markets Equity PF fund and the Emerging Markets Equity PF fund.[22] We measured the CO_2 efficiency of the most CO_2 intensive companies in the three sectors with the highest CO_2 emissions: energy, utilities and materials (incl. chemicals, steel, cement and mining). In total this represents over 200 companies with relatively high CO_2 emissions per dollar. We will gradually phase out the companies with the highest CO_2 emissions per dollar company turnover from the portfolio. The freed-up capital will be reinvested in more efficient CO_2 companies in these three sectors: companies with lower CO_2 emissions per dollar. Where possible, we do this with a country-neutral reweighting. Prevention of a reduction in equity interest is only possible if companies display a significant improvement in CO_2 efficiency. In 2016 we also analysed CO_2 reduction in the alternative equities portfolio and a suitable CO_2 reduction strategy was designed for this investment portfolio. We expect the decision-making process concerning this new strategy to be completed and implementation to start in 2017. Halving the CO_2 emission of the portfolio is a challenging goal; not least due to the lagging availability of CO_2 emission data. Company CO_2 data is available over the course of the calendar year following the reporting year. This results in a delay of almost two years in measuring the CO_2 footprint.

Platform Carbon Accounting Financials

As a member of the Platform Carbon Accounting Financials (PCAF) we actively contribute to developing reporting standards concerning the CO_2 footprint of investments. The members of PCAF are developing objectives for reducing the CO_2 footprint. Generally, these objectives are related to a limited number of investment categories. Differences in measurement methods make it difficult to compare the strategies of different institutions. PCAF aims to develop standards for the most relevant investment categories thus making it easier to compare financial institutions in terms of their CO_2 reduction. In February 2017, PCAF published its progress report with provisional conclusions concerning equities, government bonds, mortgages and project financing. PCAF is expected to publish its final report by the end of 2017.

2.3.3 Engagement with companies and market parties

Outreach to CO_2-intensive companies
We use the phased reduction of equity interests as a signal to CO_2-intensive companies. We combine this approach with intensive shareholder dialogue. We have written to the companies affected by our reduction policy, explaining the sale of shares and addressing their CO_2 intensity. With this approach we want to encourage sustainable production. Our aim is that by 2020 all companies in the utilities, energy and materials sector, will report on their CO_2 emissions and that the most CO_2-intensive companies have increased their CO_2

20 We purchase data on CO_2 emissions from the data specialist Trucost. An elaborate description of the Measurement Method is available on PGGM's website.
21 In addition to the company's own CO_2 emissions (Scope 1), this also comprises power consumption (Scope 2) and the CO_2 emissions of direct suppliers (Scope 3).
22 The collective value as at 31-12-2016: € 31.8 billion

efficiency by at least 25 per cent compared to 2015. We also urge companies that run a high risk of being hit by climate policy and stranded assets, to adopt better risk management practices and to make a positive contribution to the clean energy transition. Our aim is that by 2020 the major companies in the energy sector will have integrated both risks and opportunities inherent to the energy transition into a long-term strategy consistent with the 1.5ºC scenario.

In 2016, we wrote to over 200 CO_2-intensive companies. Of these, 53 were in the utilities sector. We have asked these companies to remove fossil fuels from their business operations and to increase investments in renewable energy and energy efficiency. In addition, we ask for improved environmental impact reporting. Especially in China and India, companies barely report any relevant information about their environmental impact. We received 75 responses to our letters by the end of 2016. Many companies state that they have started down the path towards cleaner energy and consider our message as support to proceed further. We consider this a very good first step, but will continue our dialogue with these companies and will continue to ask for additional measures and investments in renewable energy. Our message repeatedly is that companies must set ambitious and realistic goals for improving their CO_2 efficiency as a means of contributing to preventing the undesirable consequences of climate change and as such to halving the CO_2 footprint of the equities portfolio.

Dialogue about environmental pollution: Tokyo Electric Power Corporation (TEPCO)

We not only engage companies in a dialogue about climate change, but about other forms of environmental pollution as well. An example of this is our dialogue with TEPCO, the company behind the nuclear disaster in Fukushima Daiichi. Not long after the nuclear disaster it became apparent that inadequate safety systems and procedures possibly exacerbated and extended the effects of the earthquake and the tsunami. We engaged the company in a discussion and urged it to take measures at the management level in order to better anchor nuclear risk management practices. The company has implemented improvements and is open to suggestions for further improvement, such as binding recommendations made by the independent nuclear advisory council and more substantive knowledge at the executive board level. We will continue to insist on this over the coming year.

2.3.4 Shareholder proposals

Companies, particularly in the oil and gas industry, are increasingly faced with active shareholders, submitting shareholder proposals asking for a transition to sustainable energy. In the Netherlands, a group of shareholders under the name ‘Follow This’, submitted such a shareholder proposal to Royal Dutch Shell Plc (Shell), in which they asked for a new strategy to move the company towards becoming a sustainable energy company. We issued a statement in which we indicated that we support the Follow This message that Shell should show greater leadership in the energy transition. However, we did not vote for the shareholders proposal. In principle we are of the opinion that the responsibility for a drastic change in strategy lies with the company’s executive board and not with its shareholders.[23] On the other hand, Shell must properly inform its shareholders on the strategy and the company’s risk management, making a proper assessment of the company’s policies possible.

During the course of the year a large number of shareholder proposals concerning the environment and safety were submitted to the AGMs of Japanese utility companies. We supported those proposals that asked for an expansion of safety measures and for investment in sustainable energy or energy efficiency. We did not support proposals that were highly directive in nature and asked for radical changes in strategy.

2.4 Outlook for 2017

Based on a climate risk model and on climate scenario’s we are going to identify where and how our different investment categories are affected by climate change. In 2017 we will be developing instruments designed to anchor climate into the investment policies of our clients and the internal investment processes. In addition, we will continue working on reducing CO_2 emissions in the equities portfolio. We expect to start working on reducing CO_2 emissions in the alternative equities portfolio. The next investment categories that will be analysed for CO_2-reduction opportunities are real estate and corporate bonds. In the area of engagement, over the coming year we will primarily focus on urging companies with the highest pollution track record to increase their CO_2 efficiency. Aside from this, we will continue to pursue discussions with energy companies concerning better risk management and contributing to the energy transition. We will do this based on the analyses that we carry out in various (international) alliances, such as the Transition Pathways Initiative. Finally, we will further expand our investments in climate solutions as a means of achieving a positive impact.

23 See PGGM website for our voting guideline

3. Water

WHY THIS AREA OF FOCUS

SOCIAL RELEVANCE

40% of the world population
affected by water scarcity for at least 1 month each year[24]

620 million people
do not have access to clean water[26]

RELEVANCE TO PGGM AND ITS CLIENTS

Investment opportunities in water supply over the next 15 years:
€ 84 trillion[25]

Risk:
Globally, more than
1 billion jobs,
approximately 40% of the labour market, are highly dependent on water.[27]

WHAT & HOW

WHAT WE DO

Investing in
Water Solutions

OUR PERFORMANCE IN 2016

Total: **€ 867million**
New in 2016: **€ 451 million**

Invested in i.a.:
> Water treatment
> Water conservation
> Drinking water production

Results i.a.:
65 million m³
of wastewater treated.

65 million m³

Impact of these investments in 2015:
litres of treated water equivalent to
taking 1.4 billion showers

Engagement
Market engagement

Urged 34 lagging companies in highly water-dependent sectors to start reporting on their water risk exposure and management via the CDP.

Company engagement

Contributed to the PRI's **engagement project** concerning the consequences of water shortages in the agricultural sector.

ESG integratie

- Worked on **standardising water-related data** through means of the annual Water Information Request.
- Researched the **financial consequences** of water shortages and/or pollution for 10 companies.

24. World Economic Forum: The Global Risk Report 2016
25. UNESCO (2014) World Water Assesment Programme facts and figures
26. Worldometers (2016) Water

Globally, four billion people are affected by serious water scarcity at least one month per year. Half a billion people contend with water shortage throughout the entire year. The lack of water threatens health, food security and economic growth. As such the lack of clean water is not only a social problem, it is also a problem for companies and investors.

3.1 Why water as an area of focus

Water is of major importance to industry and the business community. Globally, more than 1 billion jobs, approximately 40% of the labour market, are highly dependent on water; water is a key ingredient in many products and business processes.[27] Poor water quality or insufficient supply can limit, and even halt, activities in business operations and in the supply chain. This brings risk for investors to invest in these companies, as well as opportunities for investing in solutions to water shortages and in sustainable water management.

3.2 External Developments

The frequency and duration of droughts is increasing worldwide. Water reserves are declining, due to melting glaciers and over-pumping of groundwater. In May 2016, the World Bank published an important report concerning water scarcity. If countries do not take action quickly, water shortages will result in higher food prices, migration, conflicts, and declining economic growth.[28]

Water is a so-called top sector in which the Netherlands excels with specific knowledge, expertise, and innovations, for example in water treatment and reuse and delta infrastructure. Attempts to exploit these comparative advantages are increasingly taking shape via platforms and alliances of which we are a member. This is important to our clients because in the search for returns we must pick up on new developments sooner and shape investment opportunities.

3.3 How we contributed to this area of focus in 2016

3.3.1 Investing in water solutions

At the end of 2016, we invested a total of € 867 million in water solutions on behalf of our clients. In 2015, the total volume of clean drinking water saved, treated and supplied by means of these investments was 103 million m^3. This volume of treated water is equivalent to the average annual water consumption of over 840,000 residents in the Netherlands. An overview of our investments in water solutions and their impact is available on our Investing in Solutions webpage.

An example of an investment in water solutions is the investment in Emerson Network Power B.V. (Network Power). Network Power provides data centre cooling solutions and by means of their global network offers services and solutions for implementing, maintaining and optimising this product. For example, in 2016, Network Power initiated a programme designed to save energy and millions of litres of water.

On behalf of our clients we also invest in solutions through listed equities. By means of this portfolio we invested in Suez, a company which focuses on the production of drinking water in Europe, the US and Asia. In addition, the company is active in the area of waste processing, recycling and the generation of renewable energy from waste. In 2015, Suez treated approximately 4,3 million m^3 of wastewater. Furthermore, Suez produced approximately 4,4 million m^3 of drinking water. This is equivalent to 6 times the total annual water consumption of Dutch households.

In addition to the current opportunities within the existing mandates, we are also assessing the desirability and feasibility of a thematic water and food mandate within the portfolio. Furthermore, we are assessing how we can ramp up and improve these investments focusing on Dutch water expertise and innovations.

3.3.2 Better data about water risks

We are engaging market parties to develop better insight into material water risks and opportunities, so these can be integrated into investment decisions (ESG Integration). Although water scarcity is recognised as a major systemic risk, this scarcity is seldom reflected in the price of water. As a result, there is no stimulus to make efficient use of water, and this also limits the opportunities for investing in solutions. In the meantime, investors have little data

27. UNESCO: The United Nations World Water development report
28. The World Bank: High and Dry, Climate Change, Water and the Economy

concerning companies exposure to water risks. Index investors in particular have an interest in having standardised reports to enable them to compare the water risks to which the companies in their portfolio are exposed, so as to be able to determine any under or overweighting. Therefore we are working on developing such a standard.

Water Information Request
To better anticipate the systemic water scarcity risks, we worked with the CDP, the most important initiative for voluntary reporting about water-related subject areas through means of the annual Water Information Request. In February we held discussions about water scarcity with the International Council on Mining and Metals (ICMM) and the Global Oil and Gas Industry Association for Environmental and Social Issues (IPIECA). From these discussions it is evident that there is a need for a shorter and more focused survey. To increase the response to and the relevance of the CDP Water Information Request, we urged CDP to develop a simpler survey, focused on a limited set of key indicators for material water risks. Together with Norges Bank Investment Management (NBIM) and ACTIAM, and in consultation with the World Resources Institute (WRI) and Ceres, we proposed a set of key indicators. CDP has already made minor improvements to its Water Information Request for 2016 and has promised to make more significant adjustments in 2017.

In 2016, we once again made an effort to increase the reach of CDP's Water Information Request. With the UN Principles for Responsible Investment (PRI), an initiative of the United Nations for sustainable investing of which we are a signatory, and together with ACTIAM, we urged 34 lagging companies in highly water-dependent sectors to start reporting on their water risk exposure and management via the CDP. In part at our urging, Bloomberg has made progress in this regard. For 5,000 companies, the location of their production facilities are available via CDP's terminal. This data can be combined with water scarcity maps, so that an initial approximation of each company's exposure to water risks can be made. This might consist of the percentage of production facilities, suppliers or clients located in areas faced with water scarcity (as a percentage of sales or turnover that is threatened by water shortage). This is a major step forward in providing for the comparability of the exposure to local risks at the company level.

3.3.3 Dialogue with companies and market parties about water risk

Our dialogue with companies is focused on reducing water risks in the equities portfolio.

Engagement in the agricultural supply chain
In 2016, we participated in an engagement project about water use in the agricultural supply chain. We did this together with other investors under the PRI banner.
In this project a dialogue was initiated with companies in the food and textile industry that potentially are most affected by the consequences of water shortages in the agricultural production sector. Companies such as General Mills Inc. and PepsiCo Inc. have shown good progress in increasing water efficiency and reducing water pollution by their contract farmers. In 2017, we will conclude this project with a Best Practices Report in which we discuss and illustrate the various levels of water risk management in the supply chain.

China Water Risk
Because there still is a great deal of ambiguity about the severity and nature of water risks, it is important to focus engagement on the material risks. In 2016, we made a contribution to a preliminary study by China Water Risk to monetise water risks. In addition, we initiated our own study into the financial consequences of water shortages and pollution for 10 companies in China, India and the US. The objective is to reduce water dependency and pollution by these companies and to increase their contribution to collective water security.

3.3.4 Shareholder proposals

As a 'big stick', but also in order to initiate engagement, we vote on shareholder proposals or submit our own. We want to stimulate a change in behaviour on the part of the companies in which we invest. In 2016, for example, we submitted shareholder proposals together with other investors to make improvements in the area of water pollution by Tyson and Hormel, two large American food and meat producers that pollute water due to the intensive livestock farming in their supply chains.
In the case of Hormel this has resulted in improvements in managing the water risks of their meat production companies. For our complete voting record see Appendix 3.

3.4 Outlook for 2017

In 2017, we expect an increased interest in water, in part because adjusting to a changing climate is becoming more important. More severe floods, longer droughts and water pollution incidents can be expected to draw the attention of investors to the materiality of water risks. This will boost the development of technologies, for example for water storage. We will continue to be involved in this in various ways; through engagement initiatives, sector initiatives such as the Water Investor

Hub and by investing in water solutions and innovations. Also, we will continue incorporating material water related opportunities and risks into our investment decisions. The increased interest in water security also leads to a call for better data concerning water use, water pollution and water scarcity. The emphasis is expected to be on the new version of the CDP Water Information Request for investors and on the further development of data available from Bloomberg. We will be engaging companies in 2017 based on our own research into the financial consequences of water shortages and pollution.

4. Food

WHY THIS AREA OF FOCUS

SOCIAL RELEVANCE

750 million
undernourished people throughout the world[29]

1.6 billion people
throughout the world are overweight [31]

RELEVANCE TO PGGM AND ITS CLIENTS

Investment opportunities in food production technologies:

By 2050,
60% more food
must be produced globally.[30]

Risks associated with large-scale food production:
> Reputation risks for companies and investors

WHAT & HOW

WHAT WE DO

Investing in
Food Solutions

ESG Integration

OUR PERFORMANCE IN 2016

Total: **€ 2.8 billion**
New in 2016: **€ 629 million**

Invested in (i.a.):
> Efficient production
> Solutions to reduce food wastage

Results (i.a.):
640 million litres of milk
produced in developing countries.

111,000 tonnes/hectare
improvement in return.

Impact over 2015 equivalent to:
4600 trucks
filled with food.

Under pressure from its investors and buyers, Astra Agro committed to adhering to a sustainability policy for its palm oil activities.

29. Unicef (2016): Ondervoeding.
30. UNESCO: The United National World Water Development report 2016
31. Worldometers (2016): Voedsel.

The UN estimates that worldwide almost 800 million people suffer from chronic malnutrition. The Netherlands' ambition is to banish malnutrition and hunger for 32 million people between now and 2030. There is a great deal of work left to do in this area.

4.1 Why food as an area of focus

In 2016, civil wars, droughts and floods put food security under pressure. The number of countries requiring food aid is rising. In over 50 countries, the level of hunger is alarming already, while the global population continues to grow and is expected to amount to 9 billion people by 2050.[32] In addition, our food patterns are changing. In emerging economies, such as China, people are consuming more meat and dairy. Globally there is not enough available arable land to meet these food needs. Long-term droughts, desertification, severe rain storms and floods resulting from climate change will furthermore make food production more difficult. We have to make production smarter in order to keep pace with the rising demand for food in this situation of lagging supply. There are opportunities for investors here.

4.2 External Developments

In 2016, a great deal of attention was devoted to the untenability of Western eating habits with its large-scale consumption and production of meat. The World Resource Institute refers to beef as the 'coal' of the food industry, regarding the tremendous greenhouse gas emissions associated with this. Farm Animal Investment Risk and Return (FAIRR) is an initiative for investors focused on the undesirable effects of the intensive livestock farming sector on climate, water and health. The associated solution 'Sustainable Protein' is a concept that we will likely be hearing more of; the investment in plant proteins as a means of reducing meat production.

4.3 How we contributed to this area of focus in 2016

4.3.1 Investing in Food Solutions

We want to contribute to increasing global food security. On behalf of our clients, we concentrate on investment opportunities in solutions for food production, access to food and food quality. At the end of 2016, we had € 2.8 billion invested in food solutions on behalf of our clients. In 2015, i.a. an additional 111,000 tonnes of food per hectare was produced by means of these investments, in comparison to the average production on agricultural land in the same country. This quantity is equivalent to 4.600 trucks of food. An overview of our investments in food solutions and their impact is available on our Investing in Solutions webpage.

In 2016, we made a new investment in a solution related to food security; an Eurochem corporate bond. Eurochem is a Russian producer of artificial fertilisers. This company distributes artificial fertilisers throughout the world, in particular in developing countries. Artificial fertilisers are required to increase the availability of food. This not only contributes to greater food security, it also provides better income for local farmers in developing countries.

Climate versus food security: a dilemma

The production of artificial fertilisers is energy intensive. Thus, producers of artificial fertilisers that make a positive contribution to food security could at the same time be highly CO_2-intensive due to the production process. As a result, a number of producers of artificial fertilisers may be removed from our investment portfolio as part of our CO_2 reduction programme. At the end of 2016 and the beginning of 2017, PGGM conducted a study of the most CO_2-intensive producers of artificial fertilisers and their opportunities for CO_2 reduction. In 2017, PGGM will initiate an engagement programme with these companies with the objective of increasing the CO_2 efficiency of the artificial fertiliser production process while retaining production and profit levels.

4.3.2 Monitoring Developments

We do not have an active engagement programme for the food theme. However, our engagement service provider, Global Engagement Services (GES) does screen companies in the portfolio for ESG-related risks, for example in relation to food security. In 2016, GES critically monitored the palm oil sector, particularly the largest palm oil producer in Indonesia, Astra Agor Lastari Tbk (Astra Agro). In 2015, Astra Agro announced a new policy for sustainable palm oil production. Progress was made in this area in 2016. Where Astra Agro initially was solely concerned about compliance with laws and

32. United Nations: General Assembly 28 March 2016

regulations it has, under pressure from its investors and buyers, committed to adhere to a sustainability policy. Implementation of this policy is supported by an independent Consortium of Resource Experts (CORE) that includes the Rainforest Alliance. Following a report published by Amnesty International concerning child labour in the palm oil sector, GES recently has also taken action. In 2017, under the banner of the PRI project Labour Practices in Agricultural Supply Chains, we will engage in a dialogue ourselves on this topic with various companies, including Wilmar International Ltd. and Nestlé SA.

In addition, the necessity for an unambiguous land ownership and right of land use register, was raised by a trade mission under the leadership of Prime Minister Rutte in November 2016, in which we took part. We made a plea to the governments of the Netherlands and Indonesia to work together on establishing a clear property ownership and right of land use register ('One Map'). This would allow palm oil companies and their investors, as well as other land users to be assured of their rights. Lack of clarity in this area today is often a source of conflict between local communities, farmers and companies. PGGM no longer has a direct role in this after halting its market engagement with the palm oil sector in 2015. Through means of GES we are, however, involved in violations of the Global Impact principles by individual palm oil companies.

4.4 Outlook for 2017

In 2017, we expect new investment opportunities in food security, in part due to improving raw material prices and an increasing interest in real assets. We will investigate the desirability and feasibility of a thematic investment mandate, specifically for the food and water areas of focus. Within the existing mandates, investment opportunities are as yet limited. The generic private equity funds are not specifically equipped for these relatively unknown themes. As a result, water and food remain 'underinvested' in comparison to the other two themes – climate and health – in which we can already invest a great deal trough means of public equity.

Not new, but certainly growing, is the focus on undesirable side-effects of large-scale agriculture and monocultures on climate, water, biodiversity and health. This includes the desire to trace foodstuffs to the region in which they are produced and transparency about the way in which they were produced. We will primarily do this through our engagement relating to the water and human rights themes.

5. Health

WHY THIS AREA OF FOCUS

SOCIAL RELEVANCE

2 billion people
globally without access to medicines[33]
affordable healthcare systems in developed countries are under pressure

Non-infectious diseases kill
38 million people per year
three quarters of these people are in developing countries[35]

RELEVANCE TO PGGM AND ITS CLIENTS

Opportunities for companies:
The growth of the GNP is highly correlated with higher spending on healthcare; emerging markets are expected to spend an additional **$1 trillion on healthcare** in 2050.[34]

Risk:
High costs of medicine
constitute a financial and reputation risk for companies and consequently a risk for investors.

WHAT & HOW

WHAT WE DO

Investing in
Healthcare Solutions

OUR PERFORMANCE IN 2016

Total: **€ 3.69 billion**
New in 2016: **€ 893 million**

Invested in:
> Medicines
> Treatments
> Care homes

Results:
> Patients provided with medicines
> Cancer treatments

Impact in 2015: **530,000 people**
throughout the world had access to healthcare, or benefited from improved quality of healthcare

Engagement

The pharmaceutical company Takeda launches new **Access to Medicine Strategy**

ESG Integration

ESG integrated into investment decisions; no Mylan Laboratories Inc. bonds were purchased

33. Access to Medicine Foundation (2016): What is the Index?
34. CFA Institute (2016): Health Care Investing - The Promise and the Pitfalls
35. World Health Organization (2015): Global Health Observatory (GHO) data

Healthcare for all, is the third goal of the Sustainable Development Goals for 2030. Access to good healthcare is not only a basic necessity, it also is a human right. Health is essential for sustainable development.

5.1 Why healthcare as an area of focus

The quality of, and access to, healthcare is improving throughout the world. Major progress has been made on health-related challenges: polio has been virtually eradicated, more than 45% of people living with HIV/AIDS have access to medicines and vaccines against malaria are being developed.[36] In addition, there are all kinds of technical developments, such as care robots and 3D printers that can print plaster casts. However, not everyone benefits from these developments. Two billion people throughout the world do not have access to the medicines and healthcare they require.

Healthcare is an important area of focus for PGGM due to our historical connection with this sector. In addition, healthcare has our attention because investments in this sector can result in social and financial returns. Access to good healthcare throughout the world creates higher living standards and provides opportunities for people to continue to develop themselves, for companies to tap into new markets and for economies to grow. Companies that do not sufficiently anticipate global challenges, such as rising healthcare costs and the aging population are going to miss out on the opportunities these challenges bring. Companies that do anticipate these challenges, for example by developing better and cheaper medicines and by innovative solutions for the care of the elderly, can instead leverage the demographic challenges to their benefit. The same applies to the food sector, where the trend towards healthier, or less unhealthy, food is playing an increasing role in consumer choice. This trend cannot be ignored by the sector. Consequently we see an increase of companies taking this into account in the composition of existing products and the development of new ones.

5.2 External Developments

In 2016, the urgency of providing access to healthcare received national and international attention. In addition to the issues related to epidemics such as the Zika virus, other factors, such as the elections in the United States, have put the need for access to good and affordable healthcare back on the agenda.

In November 2016, the new edition of the Access to Medicine Index (AtM) was published. Every 2 years the AtM Foundation publishes the ATM index that ranks pharmaceutical companies in terms of their contribution to improving access to medicines in developing countries. AtM regularly made headlines in 2016. Various Dutch news programs and newspapers, such as Zembla, Trouw and the Volkskrant, devoted attention to this topic.

5.3 How we contributed to this area of focus in 2016

5.3.1 Investing in Healthcare Solutions

On behalf of our clients we invest in companies that work on strategic solutions for improved (access to) healthcare. In 2016, we invested € 893 million in healthcare solutions. At the end of 2016, we had a total of € 3.69 billion invested in healthcare solutions on behalf of our clients. In 2015, more than 530,000 people throughout the world had access to healthcare, or benefited from improved quality healthcare, due to these investments. An overview of our investments in healthcare solutions and their impact is available on our Investing in Solutions webpage.

Gilde Healthcare Services II

In 2014, the PGGM Private Equity Fund invested in Gilde Healthcare Services II Partners B.V., a fund that invests in the healthcare sector, primarily in the Benelux and Germany. In 2016, various investments were made through this fund. For example, we invested in the NIZO Groep, an organisation that assists companies in improving the quality and sustainability of foods and pharmaceutical products. NIZO's clients include companies that focus on selling healthy, innovative foods and ingredients.

36. Aidsfonds (2016): Feiten en cijfers

Investment in AstraZeneca Plc
In our listed equities mandate we focus on companies that, through their solutions, generate significant cost savings in the healthcare value chain. For example, we invested in the pharmaceutical company AstraZeneca. This company, among other things, develops and sells medicines against cancer and diabetes, combined with a specific diagnostics test. This test provides assurance that patients with a certain genetic profile fully benefit from this medicine. AstraZeneca's products make a positive contribution to reducing the number of victims.

By means of the Listed Equities portfolio, we invested in pharmaceutical companies that make a material contribution to healing or reducing the effects of various illnesses, such as hepatitis C, HIV/AIDS, various forms of cancer and diabetes. In addition to investments in the pharmaceutical industry, we invested in suppliers to this industry, such as suppliers of laboratory equipment capable of accurate and fast diagnostic tests.

5.3.2 Dialogue with companies and market parties

We have a clear vision on access to medicines that we disseminate in our engagement and voting activities: the pricing of medicines must be transparent and must take affordability into account. In this way pharmaceutical companies avoid pricing themselves out of the market. Affordable medicines lead to better healthcare and at the same time provide for sustainable profit.

Access to Medicine
The average score of the pharmaceutical companies analysed has dropped. This is attributable to the decision of F. Hoffmann-La Roche Ltd. (Roche) not to provide any information to the AtM Index. Roche made this decision because oncological medicines, Roche's primary focus, are not included in the AtM Index methodology. This puts Roche at a disadvantage in determining its final score. We have tried to convince Roche to provide information even so, but unfortunately we were not successful in this regard. We will continue to ask Roche to cooperate in the next edition of the AtM Index and at the same time we will attempt to convince the Access to Medicine Foundation to address Roche's concerns. If Roche is excluded from consideration, the average score of all companies has improved considerably, while the Index methodology was further refined. We are delighted about this positive trend. We will continue to engage companies concerning improved access to medicines.

Engagement result: pharmaceutical company Takeda launches new Access to Medicine strategy
In August 2016, Takeda announced its new Access to Medicine strategy. Pursuant to this strategy, the company will make various medicines against non-infectious diseases, such as cancer, more accessible and affordable for ten countries selected on the basis of healthcare needs. Furthermore, the company has created a structural alliance with NGOs, government bodies and other companies. These initiatives address many of the concerns we expressed. Takeda is the largest producer of medicines in Japan. In the past, Takeda scored lowest of all companies on the AtM Index regarding access to affordable medicines. We have been in discussion with this pharmaceutical company for some time and are happy with this result. As a result of this strategy, Takeda's score on the 2016 AtM Index has risen significantly.

Discussions with PepsiCo Inc. and General Mills Inc. about obesity
We engaged in a dialogue about obesity with PepsiCo and General Mills in 2016. We expect the manufacturers of food and beverages to do their best to make their products as healthy as possible and in this way help avoid obesity. Among other things, this means reducing sugar and fat, enriching products with healthy ingredients, limiting the marketing aimed at children and informing consumers about how products fit into a healthy lifestyle. We ask companies to formulate clear objectives regarding these topics, to make these objectives public and to report on progress. General Mills in particular appears to be open to our suggestions. We expect the demand for healthy food to increase. Companies that respond to this will be well positioned to benefit from this health trend. The reverse applies to companies who fail to do so. We will continue our dialogue with PepsiCo and General Mills over the coming years.

5.3.3 ESG Integration

We incorporate material healthcare-related opportunities and risks into our investment processes. For example, in infrastructure investments, health and safety are a fixed part of the monitoring discussions. Management is asked to devote attention to these risks, particularly if performance is less than satisfactory. Recently, in the context of a bond issue, we spoke with Mylan Laboratories Inc. about the problems this company was lately confronted with; namely the considerable price increase in one of its medicines. As a result of this dialogue the Credits Team decided not to purchase any bonds.

5.3.4 Exclusions

Where necessary we exclude companies in accordance with the Responsible Investment Implementation Framework. In the second half of the year, the Danish tobacco producer Skandinavisk Tobaks Kompagni A/S was listed on the stock exchange and for that reason was added to the list of exclusions as of 1 January 2017. The Brazilian Souza Cruz S.A. and the Romanian Utalim

Slatina S.A. were removed from the list of exclusions of tobacco companies due to respectively, an acquisition and the termination of the listing on the stock exchange.

5.4 Outlook for 2017

In 2017, we will continue to focus on improving access to healthcare. We will continue our dialogue with the companies analysed based on the recently published AtM Index, which provides a good indication of the sector's progress. We will also continue to ask companies in the healthcare sectors to focus on innovation that improve healthcare and make it more affordable. We will ask pharmaceutical companies to identify the risks of their pricing policies in developed countries. This makes access to medicines an integral part of the strategy of these companies. Finally, we will search for opportunities to increase investments in healthcare solutions.

6. Human Rights

WHY THIS AREA OF FOCUS

SOCIAL RELEVANCE

Almost 21 million people are victims of forced labour

they generate $150 billion in illegal profits in the private economy.[37]

46 million people live in slavery[38]

RELEVANCE TO PGGM AND ITS CLIENTS

Opportunities for companies:

The welfare of employees can result in better performance and lower capital costs

Risk:

- **Reputational damage and legal proceedings**
- **Companies are increasingly held responsible for incidents in the supply chain**

WHAT & HOW

WHAT WE DO

OUR PERFORMANCE IN 2016

WHAT WE DO	OUR PERFORMANCE IN 2016
Engagement **Market engagement**	Engagement programme on **working conditions** in the agricultural sector; We wrote to companies in this sector
Company engagement	Vale and BHP Billiton have promised to address the immediate consequences of the dike breach, as well as its long-term impact.
Exclusions	**Singapore Technologies Engineering Ltd** is no longer involved in the production of controversial weapons and has been removed from our list of exclusions.
ESG Integration	Passive portfolios **checked** for compliance with human rights.

37. Know the chain (2016): The issue
38. Global slavery index (2016): global findings

The Sustainable Development Goals focus on human rights and inclusive developments: on growth that can benefit everyone. It is essential to focus attention on human rights and on adherence to international labour standards. The UN's Global Compact Violator principles are our reference point in this regard.

6.1 Why human rights as an area of focus

We want to limit and prevent human rights violations by the companies in our portfolio. We recognise the responsibility of investors in the area of human rights. There are real risks for companies associated with the violation of human rights, such as reputational damage and legal action, when failing to comply with a growing number of laws in this area. Increasingly, cmpanies are held responsible for human rights violations occurring in the supply chain.[39] Aside from risks there are also opportunities in the effective management of human rights and working conditions. An active, fully integrated approach to human rights enables companies to anticipate and manage key risks before they manifest or get out of control.

By having a human rights policy and by taking human rights into account in investment processes, investors can contribute to preventing and reducing human rights violations. We develop our beliefs, our policies and instruments in line with international standards, such as the International Bill of Human Rights and the International Labour Organisation (ILO) Working Conditions Convention.

6.2 External Developments

The Global Slavery Index shows that almost 46 million people still live in slavery today. Since 2014 this number has risen by an alarming one third.[40] In addition, the working conditions of a large part of the global population are poor. Globally there are initiatives that are trying to put an end to this.

Development of Human Rights Benchmarks

Following the success of the Access to Medicine Index, new benchmarks are being developed focused on human rights and labour laws. These indices are a tool for investors and companies. They provide insight into how companies can address risks relating to social issues. 'Know the Chain' focuses on forced labour and provides a benchmark for 20 companies in three sectors in which forced labour is a major risk, namely ICT, beverages and clothing. The Corporate Human Rights Benchmark scores the top 100 companies in the agricultural, clothing, mining, and oil and gas sectors. The results of the benchmark will be published in March 2017. We are monitoring the developments and methodology of these benchmarks and are considering the use of these tools in engagement activities and ESG Integration. Both methods have been integrated into the collective agreements with the PRI.

The European Union's Business and Human Rights Agenda

In May 2016, the Ministry of Foreign Affairs, together with European social organisations, organised a multi-stakeholder conference designed to promote the EU's Business and Human Rights Agenda. The need for setting conditions pertaining to human rights for the private sector was emphasised. A clarification of minimum standards is required, as well as providing more and better explanations to companies so that they can raise their ambitions in this area. An example of such minimum standards is the agreements of the Dutch government with the banking sector. In October, the ICSR Agreement for the Banking Sector was signed by banks, government and social organisations. The agreement, , includes arrangements about chain analyses in the area of human rights, transparency and sharing knowledge and experience.

6.3 How we contributed to this area of focus in 2016

In 2016, the PGGM Human Rights Policy was finalised. In this policy we indicate how we implement our responsibilities in the area of human rights, not only within PGGM Vermogensbeheer B.V., but also within PGGM N.V.'s Procurement and Human Resources departments.

39. KPMG (2016) Adressing human rights in business
40. The Global Slavery Index (2016)

6.3.1 Engagement of companies and market parties

We are engaged in a dialogue with various companies, market parties, agencies and governments. We focus our engagement activities on providing more standardised human rights reporting and encourage companies to respect human rights and labour laws in their aim for growth.

Working Conditions in the Agricultural Sector
Together with several other investors we developed and published a statement under the PRI banner in which investors declare they will engage in a dialogue with beverage companies concerning working conditions in the agricultural chain. At the end of April 2016, we supported the PRI in presenting the new engagement programme about working conditions in the agricultural chain, linked to this statement. We sought cooperation with and the participation of other investors in the programme. We also wrote to companies in this sector. This engagement program will continue over the coming two years with the objective of making the agricultural sector aware of the expectations of investors concerning the labour standards in the supply chain and to encourage them to improve their practices and reporting about these issues.

Mining Sector Engagement Results
We are engaged in a dialogue with companies in the mining sector. At Glencore we observe an improvement in the human rights assessment process and in the risk-related reporting. Glencore reports in accordance with the UN Voluntary Principles on Security and Human Rights, and has agreed to publish the results. We also observe an improved human rights risk assessment process at Freeport McMoran. While our involvement with these companies primarily focuses on improving policies and reporting, we have also asked questions about various incidents and how the companies respond to human rights abuses in their supply chain. In case of structural violations of international standards relating to human rights and labour standards, our engagement is reinforced by the continuous involvement and efforts of our engagement service provider GES. The UN Global Impact Principles serve as our guideline.

It is good to see that we are able to engage in an open dialogue with these companies and that improvements have been made. The dialogue with Glencore and Freeport McMoran will be continued until the end of 2017. Then we will assess the progress made and decide on a possible continuation of these engagement initiatives. We are looking forward to the results of the Corporate Human Rights benchmark pilot. We will evaluate this benchmark as a potential instrument for our continued involvement.

Cobalt Engagement
In addition, we had exploratory discussions with companies in the automotive and electronics industry that use cobalt. A report issued by Amnesty International shows that child labour is an issue in the cobalt supply chain.[41] We spoke with various companies, including representatives of Apple Inc., and were told that they are actively working on creating better working conditions in the supply chain. We expect to receive updates and reports on this from these companies later in 2017. We continue to actively monitor developments and if necessary will initiate a more focused engagement programme.

Commitments made by BHP Billiton & Vale
Due to a dike breach at an iron ore mine in Brazil last year, dozens of people died. As a result of this event, GES, with input from PGGM and other investors, met with the mining companies Vale S.A. (Vale) and BHP Billiton Ltd. (Billiton), that collectively founded the joint venture Samarco Mineracao S.A. for the construction of the mine and the dike. Vale and Billiton have promised to address the immediate consequences of the dike breach, as well as its long-term impact. Currently, investigations are being conducted and the companies will set up a programme to repair the environmental and social damage based on the findings. We have asked the companies to prepare and publish a document with the lessons learned. As soon as the evaluation reports are complete, GES will schedule follow-up meetings with the companies to discuss the reports.

6.3.2 ESG Integration

We incorporate material human rights-related opportunities and risks into our investment processes. In the passive portfolios we check the investments a few times each year for adherence to human rights. We use the UN Guidelines as a directive to assess whether companies do enough to control human rights risks. For the active investment strategies we include the human rights-related risks in the due diligence process. Depending on the outcome, we formulate agreements with portfolio managers on managing these risks and on reporting potential incidents. For example, in the infrastructure investments selection process, we take the potential for conflict within the region, the labour standards and working conditions within the region, and the relationship with trade unions into account. In addition, we also take the potential negative consequences for the local communities or the consumer in relation to the company into account. We are working on further developing our monitoring tools, so we can improve the relevant ESG aspects of the assets. We also refer to the responsibilities concerning human rights and labour standards in our contracts with external portfolio managers.

41 Amnesty International: This is what we dy for. Human rights abuses in the democratic republic of the Congo. Power the global trade in cobalt.

6.4 Exclusions

We exclude companies or the government bonds of countries that are involved in serious or systematic violations of human rights. In 2016, we removed Singapore Technologies Engineering Ltd from our list of exclusions, because the company is no longer involved in the production of controversial weapons. In addition to companies, we also exclude the government bonds of countries on the EU's and UN's sanction lists. In 2016, we removed the Ivory Coast from the list of exclusions for government bonds. The Ivory Coast is no longer sanctioned by the UN and the European Union. The UN took this decision due to durable positive developments in the country's situation, citing the successful presidential elections in 2015 as the most notable accomplishment. Shortly thereafter, the EU adopted the UN's resolution. The exclusion of the government bonds of Belarus was a topic of discussion by the ABRI. The sanctions against this country were partially lifted, while the EU's arms embargo against this country remains in force. This is why we decided to maintain the exclusion of the government bonds of Belarus for the time being.

6.5 Outlook for 2017

In 2017, we will work on implementating the PGGM Human Rights policy. Although the policy is a formalisation of current practices, it also is an opportunity for improvement. We will work together with external parties in order to assess and improve our tools and procedures. In addition, we will work together with other experts on the implementation of the UN principles for human rights and companies. We want to increase awareness and knowledge of investors and as a consequence anchor human rights as a component of ESG analysis and due diligence. We want to achieve focused impact by means of investments and as such contribute to the SDGs. In this regard it is important for the impact of human rights to be taken into account in investment decisions.

7. Corporate Governance

WHY THIS AREA OF FOCUS

SOCIAL RELEVANCE

Good corporate governance is a prerequisite for **sustainable socio-economic development.**

Good and responsible management contributes to **embedding companies into society.**

RELEVANCE TO PGGM AND ITS CLIENTS

Opportunities for companies:
Corporate governance ensures that management focuses on **long-term value creation** and takes into account the interests of stakeholders, including the interests of our clients.

Risk:
poor corporate governance can result in **investment losses**[42]

WHAT & HOW

WHAT WE DO

WHAT WE DO	OUR PERFORMANCE IN 2016
Engagement **Market engagement**	Contributed to the introduction of the **Stewardship Code** in Hong Kong
Company engagement	Mitsubishi Estate improves **Corporate Governance structure**
Voting	Globally, we voted against management's recommendations on **2,256 remuneration proposals.** This represents **67%** of the total number of votes on remuneration proposals.
Legal Proceedings	PGGM is participating in a € 3.3 billion **class action suit** against VW.
ESG Integration	**Feeprotocol** incorporated in investment decisions.
Exclusions	**1st exclusion** after engagement on corporate governance in 2016.

42. Oxford & Arabesque (2015): From the stockholder to the stakeholder. How sustainability can drive financial outperformance

Well-functioning markets and companies are a condition for sustainable socioeconomic development. This contributes to better financial and social returns.

7.1 Why we focus on corporate governance

Corporate governance assumes the active participation of shareholders in the decision-making process at the annual general meeting. It enables us, as an investor, to exert influence in support of sustainability, continuity and social added value of companies. Well-functioning companies are a prerequisite for sustainable socioeconomic development. In reverse, poor corporate governance, or poor company management, constitutes a risk to investors.

7.2 External Developments

European Shareholders' Rights Directive (SRD)
At the end of 2016, The European Commission reached agreement on the revision of the European Shareholders' Rights Directive (SRD). In addition to new shareholders' rights, the revised Directive also contains a large number of transparency obligations that institutional investors, pension funds, insurance companies and asset managers are expected to comply with (over time). These obligations request policies related to active ownership and request openness about the mandates between asset owners and asset managers.

Our view on incorporation versus investment attractiveness
Long-term active ownership is encouraged in Europe. Proposals to stimulate this were made in various European countries, such as making loyalty dividends and voting rights legally feasible. We are not convinced that these instruments will contribute to long-term active ownership. There is a risk that loyalty shares with additional voting rights will be misused, thereby harming the interests of minority shareholders in relation to major shareholders. These interests are already under pressure at Dutch listed companies, because Dutch business law offers ample opportunity for deviating from the proportionality principle (one share means one vote). This negatively affects the investment attractiveness for minority shareholders in the Netherlands. In the context of the Memorandum on the Renewal of Business Law, the Dutch Minister of Security and Justice, partly on behalf of PGGM, has urged Eumedion to secure a better position in Dutch business law for minority shareholders in publically listed companies.

7.3 How we contributed to this area of focus in 2016

7.3.1 Corporate Governance Standards

Dutch Corporate Governance Code
Else Bos, CEO of PGGM N.V. and member of the Supervisory Board of PGGM Vermogensbeheer B.V., is one of the members of the Dutch Monitoring Commission Corporate Governance Code (MCCG). The objective of this Commission is promoting the topicality and usability of the Dutch Corporate Governance Code. At the beginning of 2016, MCCG published a proposal for a new framework and initiated a consultation on this. During the consultation period we made a contribution to Eumedion's response. The Corporate Governance Code was published in December 2016. The principles and provisions focus on the implementation of responsibilities for long-term value creation, the management of risks, effective management and supervision, remuneration and the relationship with shareholders and stakeholders.
The focus on long-term value creation and, in particular, the introduction of the internal culture as an explicit component of corporate governance is new, and means that this framework in certain respects is also leading from an international perspective.

Corporate Governance Principles for US Listed Companies and Institutional Investors
Early 2017, the Corporate Governance Principles for US Listed Companies and Institutional Investors, jointly initiated by PGGM, was signed by various major American and European investors. The United States of Amerika (USA) is an important market for our investments.
This framework reinforces our collaboration with large American investors. Furthermore, it gives us key points of reference in our dialogue with companies. This is the first framework for corporate governance and active ownership on the American market with this level of support from American, as well as European and Asian parties.

7.3.2 ESG Integration

Companies that are the subject of investment through the PGGM Listed Real Estate Fund (LREF) are scored in terms of the ESG factors. Corporate Governance is a key factor in this respect. In case of a low score, we will proportionately reduce our investments in the relevant company. In addition, the scores are a reason for engaging in a dialogue on certain subjects. The LREF Team has taken the initiative of establishing an Investor

Advisory Committee. This alliance with other institutional investors forms an important platform for jointly calling companies to account.

7.3.3 Remuneration guideline for portfolio companies

In 2016, we sought support from other investors for our remuneration guideline for portfolio companies, in order to encourage them to consistently speak out against excessive remuneration. We also initiated the implementation of the remuneration guideline through engagement and voting. We ranked the companies in the portfolio based on excessive remuneration practices. This resulted in a list of the top 10 companies. In 2016, we started a dialogue with these companies about their remuneration and/or remuneration structure. More information about our Remuneration Guideline and Voting Guideline is available on our website.

NXP Semiconductors N.V. (NXP) Remuneration Policy

In November 2016, the American Qualcomm Incorporated announced its intention to acquisition the Dutch chipmaker NXP. We became aware of the size of the remuneration NXP's CEO was to receive in the event of a successful takeover. The value of the awarded (bonus) shares and option rights turned out to amount to more than $400 million. As an investor in NXP we consider this remuneration totally unacceptable. We have been voting against these types of remuneration proposals at annual general meetings throughout the world. Unfortunately, at NXP the issue was never put to a vote. We therefore publicly called on NXP to significantly moderate this remuneration. As far as we are concerned, the fact that these (bonus) shares and option rights have been awarded legitimately does not justify this remuneration structure. The acquisition is expected to be completed in 2017, after which NXP is no longer going to be a listed company and PGGM will no longer be an NXP shareholder.

Wells Fargo in troubled waters due to multi-million dollar scandal

In September 2016, it became known that a fine of $185 million had been imposed on the American bank Wells Fargo & Company (Wells Fargo). An investigation demonstrated that Wells Fargo for years had systematically set up (additional) accounts and applied for credit cards for clients without informing them about this. Although as many as 2% of all Wells Fargo employees were fired as a result of this matter, many highly placed executives got off scot-free. At the end of September an announcement was made that the bonuses that were illegitimately awarded would be recovered. It was possible for this situation of abuse to arise within Wells Fargo due to poor corporate governance; for example the undesirable situation in which the Chairman's and CEO's positions were combined and occupied by a single person. We believe in an independent position of the board and this includes a separation of these two functions. The Chairman/CEO of Wells Fargo has since withdrawn and has been succeeded by the COO. Although the split-up of the Chairman and CEO roles, which we had urged previously, currently is a fact, we continue to closely monitor the situation.

7.3.4 Engagement of companies and market parties about Corporate Governance

We engage in a constructive dialogue with companies when corporate governance improvements are required or feasible. We focus on independent supervision, board composition, shareholder rights and remuneration. The focus is on the Netherlands, the US and Japan.

Engagement result: Introduction of the Stewardship Code in Hong Kong

Early in 2016, the Hong Kong Securities and Futures Commission (SFC) published the results of its consultation on the draft Principles of Responsible Ownership, a 'Stewardship Code' for Hong Kong.
We provided our comments on the concept through means of the Asian Corporate Governance Association (ACGA). Although not all of our recommendations were adopted, we are delighted that the SFC is introducing these Principles. The Principles are voluntary and are intended for all investors operating in Hong Kong. We are of the opinion that they will contribute to further corporate governance improvements in Hong Kong.

ING Group

We have been engaged in a dialogue with the ING Groep N.V. since 2005 about cancelling their certificate of share structure. We are not a proponent of certificates of shares because it is in conflict with one of the most important corporate governance principles; the proportionality principle. We have asked ING to abolish certification. Mid-2016, ING announced that it will convert listed certificates of shares into ordinary shares.

In addition, ING had requested very broad authorisation to issue ordinary shares, up to as high as 50% of the outstanding share capital. In the AGM, as well as subsequently in an interview in Het Financieele Dagblad, we explained that we only approve of the use of more extensive share issue authorisation for financial institutions under strict conditions. Unfortunately, this agenda item was approved with a majority of votes.
We will continue to urge ING to only make use of the extensive share issue powers in the event of an acute financial emergency situation.

Mitsubishi Estate improves Corporate Governance structure

The Japanese real estate company Mitsubishi Estate Company Ltd (Mitsubushi Estate) will create an audit and nomination committee and will significantly increase the board's independence. We have been in discussion about these topics with Mitsubishi Estate since 2011. We consider it important that the audit responsibility is largely assigned to independent non-executive directors. At Mitsubishi Estate (and virtually all Japanese companies) the current committee had few powers of intervention. Also, the executive board had the opportunity of selecting its own supervisory directors. We consequently consider the introduction of a nomination committee, that for the most part consists of independent non-executive directors, an important step forward. In addition, Mitsubishi Estate has decided to significantly increase the number of independent executive board members, which now is far above the required minimum (of two) in Japan. All of these steps mean that Mitsubishi Estate has taken on a leading role in its sector in these areas.

7.3.5 Voting

In 2016 we voted at 3,657 shareholders' meetings. We voted against management's recommendations on 2,256 remuneration proposals. This represents 67% of the total number of votes on remuneration proposals. In the US, this figure is even higher and we voted against management's recommendations in 86% of the cases (723 times). Appendix 3 lists in which regions and on which subjects we voted in 2016.

7.3.6 Legal Proceedings

In 2015, we reported on our efforts to introduce a system of collective compensation proceedings for the settlement of mass claims into the Dutch legal system. At the end of 2016, the Dutch House of Representatives introduced a legislative proposal for the introduction of a collective action for damages. The legislative proposal allows for representative interest groups to recover collective damages in case a party responsible for damages is not prepared to settle. Eumedion, in part on behalf of PGGM, has actively contributed through means of its participation in the shareholders' meeting and in the legal working group, and submitted recommendations. The majority of the recommendations were adopted.

In 2016, there were three Active Legal Compensation Proceedings in which we participated on behalf of our clients. We are participating in a class action suit against the Brazilian state company Petroleo Brasileiro S.A. pursuant to a corruption scandal, which reduced the market value of the oil conglomerate by half. In addition, we are taking legal action against Toshiba due to bookkeeping fraud. Between the financial years 2008 and 2013, Toshiba raised its operating profit by over € 1 billion and published these results. The fall in prices that followed resulted in a maximum (price) drop of $11 million on the positions managed by us. A group of over 100 investors, including PGGM, has filed a claim against Toshiba on the basis of a class action (opt-in). We do not have a leading role in this and there is no cost risk since this class action operates on a no-cure no-pay basis. Earlier we initiated similar proceedings in Japan against Olympus with a positive result; the recovered investment loss amounted to € 624,000. The claims have been filed and the proceedings against Toshiba will be initiated in the near future.

A large group of investors, including PGGM, has filed a € 3.3 billion class action against VW, as well as Porsche Automobil Holding SE (Porsche). Porsche is part of the VW Group and the Porsche documents are also included in our ongoing proceedings. Both proceedings concern the same fraud. The group of investors is of the opinion that the Volkswagen Group has been in default in providing information concerning the diesel scandal as a result of which investors were unable to act in an informed manner and incurred losses when the value of the shares declined by one third. The plaintiffs accuse VW of falsifying the emission tests of certain types of diesel engines. At the present time, the defence is introducing formal legal grounds to have the case declared inadmissible. The expectation is that these actions will still take some time. Only after that will the actual substance of the legal proceedings be dealt with. For the time being we are maintaining our position in VW, because insufficient information is as yet available concerning the consequences of the diesel scandal. The American court has first and foremost given VW some time to come up with a solution for the vehicles affected by the emission scandal.

7.3.7 Exclusions

Corporate governance abuses can be of such severity that we can ultimately decide to exclude a company when we observe that dialogue does not result in any improvements.

Capital markets benefit from simple, clear and unambiguous governance structures. An important corner stone in this is the proportionality principle (one share, one vote, one dividend). As a long-term investor we would like to see this principle applied in all markets. In 2016, we excluded Altice, following engagement about its corporate governance. Since June 2015, we engaged Altice in a dialogue concerning the transfer of their registered office from Luxembourg to the Netherlands, and various other matters, such as the introduction of different types of shares: shares A each with a single voting right and shares B, each with 25 voting rights. We expressed our concerns during the annual shareholders' meeting. However, instead of corporate governance improvements, corporate governance deteriorated in the following period. Altice did not respond to our repeated calls to engage in dialogue. We consequently concluded that there are no prospects that Altice will start making the necessary changes within a reasonable period of time and we therefore decided to exclude the company effective as off 1 January 2017.

7.4 Outlook for 2017

In 2017, in the area of engagement, we will primarily focus on board composition, shareholders' rights and codes in the Netherlands, the US, Japan and France. We will closely follow developments and take action when corporate governance standards and/or practices deteriorate. Also, we will support Eumedion in its aim of securing a better position for minority shareholders in listed companies in Dutch business law.

The way in which the European Shareholders Rights Directive (SRD) will be implemented is going to play an important role in this regard. The expectation is that the European Council and the European Parliament will ratify the provisional agreement in the spring of 2017.
The Minister of Justice in the Netherlands is expected to publish a draft legislative proposal to be implemented in the first quarter of 2017. Our hope is that this will also address the proposals in Eumedion's position paper concerning the position of minority shareholders.
We expect that a best efforts obligation in relation to active ownership will be imposed on institutional investors. In the US we will continue working with various parties on a voluntary framework for corporate governance and active ownership. In Asia, we will continue to focus on independent directors, the protection of minority shareholders and related parties transactions.
We expect that several countries in Asia will introduce a Stewardship Code or hold corporate governance consultations, to which we would like to contribute.

8. Stable Financial System

WHY THIS AREA OF FOCUS

SOCIAL RELEVANCE

The size of the Dutch financial sector is
278% of GDP
> risk to the economy[43]

€ 1,400 billion in non-performing loans
on the balance sheets of European banks
> risk to the economy[44]

RELEVANCE TO PGGM AND ITS CLIENTS

We and our clients are **part of the financial system**

Properly operating capital markets are of **major importance to the economy;** to finance governments and companies, including banks, as well as for the stability of the economy.[45]

WHAT & HOW

WHAT WE DO

ESG Integration

Engagement

OUR PERFORMANCE IN 2016

Results of the **Sustainability Ladder** for the 17 most strategic counterparties analysed in the Broker Review of the Treasury, Trading & Commodities Team

For all asset classes, we work with a **compensation guideline** that includes a description of the standard framework for acceptable levels of management fees, performance fees, transaction costs and redemption fees

43. Accountant (2015): Financial Sector in the Netherlands and Europe too Large.
44. DNB (2016): Financial stability raport
45. Nederlandse Vereniging van Banken (2016): Feiten en cijfers

Confidence in the financial sector remains low. Increasing regulations must prevent a recurrence of the most recent financial crisis. The sector itself is also evaluating how to make the financial system more sustainable.

8.1 Why we focus on a sustainable financial system

As a pension investor we gain from financial returns over the long-term. It is therefore in the interest of our clients and PGGM that the financial markets are sufficiently stable in order to execute the desired investment transactions, now and in the future. For this purpose we have to work at changing our own behaviour and that of other financial parties; less focused on short-term gains at the expense of clients and society, and more on long-term value creation.

This stability is not something which can be taken for granted. Regulations were refined in response to the financial crisis thus strengthening the financial system. However, it is impossible to fully eliminate risks as is clearly evident from the film Boom Bust Boom. Long-term investors can use their influence to contribute to a more stable financial system. This also is the rationale of the second pillar ('market discipline') of the Basel Accord on Bank Supervision. Contributing to a stable and sustainable financial system also contributes to our financial ambitions, for example by investing countercyclical.

8.2 External Developments

In 2016, various financial institutions once again displayed tendencies that are not consistent with a stable and sustainable financial system. Examples of this are the use of clients bank accounts to sell products without informing clients by Wells Fargo, accusations concerning the improper use of dark pools by several international banks, including Barclays PLC, and falsifying signatures by ABN AMRO employees on mortgage applications. These are developments that do not contribute to confidence in the financial sector.

8.3 How we contributed to this area of focus in 2016

8.3.1 Behaviour

As an institutional investor we have various roles in the financial sector, such as our pension fund service provider role for our clients, business partner for other players in the sector and shareholder on the basis of investments in financial institutions. Based on these positions and roles, we want to contribute to a stable and sustainable financial system. We do this in various ways, for example by aiming to improve standards in the financial sector. We critically evaluate our own behaviour and that of our counterparties. Where necessary and possible, we adjust our behaviour in order to contribute to a stable financial system.

In 2016, we followed up on the outcome of a number of working sessions held in 2015, concerning a stable financial system. We investigated how to implement mandates with a long term focus. These mandates would also allow us to better integrate ESG subject areas into our investment decisions. We contacted various parties, including academics, to discuss how this fits within academic literature and to what extent we need a better theoretical framework that enables us to better incorporate externalities into existing investment models. Furthermore, during several internal sessions, we developed specific proposals about how to better incorporate a long-term focus into daily operations. In particular, this concerns the role of benchmarks, the mandate's focus and the reporting frequency for the liquid investment portfolios in particular. We developed this format in further detail and in 2017 we will discuss it with our clients and our partners in the Financing Capital for the Long Term (FCLT) platform and the CIO Exchange.

FCLT Membership

More and more investors are involved in long-term investing. An international alliance of pension funds, companies, asset managers and consultants, FCLT, was initiated to develop tools and approaches to help with value creation over the long-term. We are a member of this alliance and believe that agreements among pension funds and asset managers give long-term investing a boost. In the FCLT context our aim is to identify which company behaviours are consistent with long-term value creation and, by contrast, which behaviours detract from this. The coming years will be dominated by the development of instruments designed to be able to take manageable steps and amass experience with other members of this alliance.

Within PGGM there are various initiatives that anticipate this. The new asset category Investing in Solutions by means of Listed Equities is an example (see Sections 3.2.1 and 5.3.1 for examples of such investments). The listed equities portfolio has a long-term vision and is less dependent on short term fluctuations of the benchmark. The CO_2 reduction in the total investment portfolio is an example in which social return (and therefore long-term return) are incorporated into investment decisions (see Section 2.3.2).

In 2016, we executed several risk-sharing transactions with banks. In these transactions we share the credit risk with banks for an appropriate fee-return. As a long-term investor we are perfectly suited to carry such risks and consequently lower risks for banks, which contributes to a more stable system. Furthermore, we made more investments in traditional banking products with a long tenor, such as mortgages, which alleviates bank balance sheets.

8.3.2 Engagement of counterparties

We make our knowledge and experience available through networks involving other financial institutions and attempt to effect change in behaviour in close cooperation with them. We engage our bank counterparties, with whom we collaborate in executing our transactions, in a dialogue and attempt to motivate them to adopt sustainable business models with a key focus on client interests.

Sustainability Ladder

In 2016, we continued to develop our Sustainability Ladder for banking counterparties. We use this tool to score banks in terms of their contribution to a stable and sustainable financial system and assess subject areas such as transparency, stability and long-term sustainable behaviour. We completed a second measurement in 2016. The results of this measurement will be shared with the analysed banks in 2017.

In relation to our banking counterparties, we incorporated the results of the Sustainability Ladder for the 17 most strategic counterparties analysed in the Broker Review. The Broker Review is an annual evaluation that forms the starting point for the relationship with counterparties for the coming year. The Broker Review includes a sustainability section that counts as part of the evaluation. To score the counterparties on sustainability, we use the data available from various sources such as Sustainalytics B.V., MSCI Inc. and Institutional Shareholder Services (ISS) as well as our own qualitative expert-opinion. On the basis of the scores, we held discussions with various banks concerning the steps they should take to improve their scores over the coming years, for example by demonstrating how they contribute to making the real economy more sustainable. In addition, within PGGM we are pursuing a discussion about what we can do with counterparties with a low sustainability score. We are developing engagement plans for this purpose and are developing possible escalation steps.

Compensation guideline for financial service providers

We believe in reward for real performance and that remuneration incentives focused on the long-term work. Therefore we work with a Compensation Guideline for all asset classes that includes a description of acceptable management fees, performance fees, transaction costs and redemption fees. Furthermore, this guideline provides for greater insight into the asset management costs for our clients. Also, compensation structures must be clear and transparent and aligned with the objectives of the capital provider (i.e. no high compensation for poor or mediocre performance).

In 2016, we surveyed the application of the compensation guidelines together with the investment teams. On the basis of this survey we will report to our clients in 2017 about how the compensation guidelines for external managers are incorporated into the fee protocol and we will make a proposal to further specify the application of the policy concerning compensation structures.

8.4 Outlook for 2017

In 2017, we will consult our clients to identify the investment portfolios for which we can actively implement the compensation guidelines, the investment portfolios for which this will be a challenge and the decisions we want to collectively make in this respect. In addition, we will continue discussions with our banking counterparties, particularly those with a low score. We will discuss with them the opportunities to change certain activities or behaviours, so we can collectively contribute to a stable and sustainable financial system.

9. Anchoring sustainability within the investment chain

In the previous chapters, we reported on the activities and progress relating to responsible investment, linked to the various themes. In this chapter we describe our internal processes. We illustrate how we embed responsible investment in the investment chain.

Since 2016, the investment and advisory teams have been given full ownership of the daily activities relating to responsible investment. Previously the Responsible Investment (RI) Team was accountable for this. Anchoring responsible investment within the investment chain goes beyond ESG integration in its narrowest sense. Our ultimate aim is for responsible investment to be a natural given for all teams and that it is fully internalised as part of our daily activities. This chapter describes how we implement this within PGGM. The teams are supported by a two-year transition programme, focussed on knowledge development and training. A knowledge platform has been launched to provide better access to relevant information about responsible investment. The RI Team will continue to provide support and expert knowledge for specific activities, such as engagement and innovation.

9.1 Responsible Investment Maturity Matrix

At the end of 2015, the level of maturity in the area of responsible investment was determined for each investment and advisory team based on our Responsible Investment Maturity Matrix (Figure 2). We use this matrix to measure the teams' progress.

In 2016, the level of maturity of the investment and advisory teams increased in comparison to the baseline measurement in 2015. All teams have included specific steps in their annual plans designed to improve their responsible investment approach and are evaluated accordingly. In line with the objective of the transition programme, 75% of the investment teams is currently positioned in the standardisation, internalisation and even the innovation phase in terms of the Attitude and ESG Integration aspects. There is greater awareness and the approach in virtually all teams has been improved or renewed.

Due to this transition, the role of the RI Team has changed from an operational and active role within the deal teams and as initiator of ESG Initiatives, to more of a supporting role, focused on knowledge transfer. RI works together with the investment teams in order to develop and consolidate ESG understanding. Through on-the-job training, advice on specific ESG risks and the development of tools, RI helps investment teams take a larger degree of responsibility in relation to ESG integration. The RI Team is represented on the Investment Committee, where they monitor investments and assess whether deals are in line with PGGM's responsible investment implementation framework and client policies.

	Initiate	Experiment	Standardise	Internalise	Innovate
Attitude	No or limited interest in ESG issues; sceptical.	Open to learning; awareness of ESG issues and relevance.	Tick-the-box mentality; aware of ESG issues.	ESG ownership visible in team objectives; ESG viewed as an opportunity.	Development/ dissemination of thought leadership, ESG innovation.
ESG Integration	No ESG integration or initial steps only; no or limited ESG knowledge.	Some ESG Integration, ad hoc and dependent on effort of individuals.	ESG integration in some phases of the investment process. Some ESG knowledge.	ESG integration throughout the entire investment process; ESG knowledge by entire team; continuous improvement.	Development of new responsible investment approach; motivate others to make improvements.
Policy and resources	No reference to policy; no guidelines.	Knowledge and implementation of ESG policy; no guidelines.	ESG guidelines for asset category; own resources in line with best practices.	Own guidelines and resources revised to match new client needs and best practices.	Development of guidelines for specific issues/sectors, innovative ESG tools.
Behaviour re sustainable financial system	No interest in or awareness of behaviour relevant to sustainable financial system.	Initial discussion about behaviour.	Identification of potential behavioural issues; debate about desired behaviour.	Current situation and alternative behaviour up for discussion internally and with counterparties.	Development of alternative behaviours in line with sustainable financial system.

Figuur 2: Responsible Investment Maturity Matrix

PGGM has consolidated the investment teams into eight clusters; four in public markets and four in private markets. The key ESG developments in each cluster are highlighted below.

9.2 Public Markets

Public Equity

The Long-Term Equity Strategy team is positioned to invest in solutions for the four sustainability themes, climate and environment, water, food and health, by means of public equity. This portfolio comprises approximately 85 companies and is partially managed by an external manager. Examples of these investments and their impact are referenced in previous chapters (see Sections 2.3.1, 3.3.1, 4.3.1 and 5.3.1). In 2016, the team worked on the continued development of the so-called ESG Toolbox for analysing ESG risks and improved reporting on them. In addition, RI and the teams that advise our clients on their investment policy, have updated the listed equities investment universe for investments in solutions. They refined the admission criteria for listed companies on the basis of a more transparent and more systematic methodology: for each theme, what solutions are eligible for investment and what companies make a substantial and measurable contribution to these solutions? A long-list of the potential companies in the universe was reduced to 350 companies.

Impact Measurement

Together with an external manager, we are working with the Harvard School of Public Health and the City University of New York on the further development of an impact measurement tool for investments in listed companies. In June, the initial results of the impact measurement of six companies in the listed equities portfolio were discussed. For example, Harvard researchers prepared an analysis of Vestas Wind Systems A/S (Vestas), the largest wind turbine producer in the world. Each year, Vestas turbines produce more than 145 million MWh of renewable energy and prevent more than 75 million tonnes of CO_2 emissions throughout the world. A global 'electricity grid' is used as a basis for calculating Vestas' contribution to climate change. This is a map that by region identifies the fossil fuels used to generate electricity that are replaced by producers of clean energy.

Our aim is to have the CO_2 footprint of the investment portfolio halved by 2020. The initial steps to this effect have been taken in the equities portfolio (Section 2.3.2). Other teams are also taking steps aimed at contributing to this. For example, the Systematic Equity Strategy team developed a methodology to reduce CO_2 within their investment process and is investigating the possibilities of incorporating ESG factors into their models.

Bonds

The various Fixed Income teams have been integrally incorporating ESG aspects into their investment decisions for some time. In 2016 the teams worked on embedding engagement in the investment approach and developed an innovative framework for green bonds. In this framework we specify the criteria green bonds are expected to meet to qualify as 'investment in solutions'. In addition, the teams actively contributed to external initiatives, such as the Green Bond Principles of the International Capital Market Association and a UN PRI working group focused on a shared vision of how credit rating agencies can incorporate ESG factors into company credit ratings. A joint declaration on this subject was signed by more than one hundred institutional investors and six credit rating agencies, including leading organisations, such as Standard & Poor's Financial Services LLC (S&P) and Moody's Investor Service Inc.

In 2016 our largest client approved to purchase green bonds that are issued by national governments, as well as by SSAs: Supranationals (international institutions such as the European Investment Bank), Subsovereigns (such as German federal states) or Agencies (such as the Bank Nederlandse Gemeenten) for the Rates & Inflation mandate. Financial considerations continue to be dominant in this regard. Yet, this is an important development in the green bonds market which continues to grow and provides real opportunities for investing in solutions on a large scale, while maintaining returns.

Treasury, Trading & Commodities

Although the opportunities are limited, the teams in this cluster, on the basis of growing awareness, actively sought out opportunities to implement responsible investment. For example, the Treasury Team invests in green deposits and they devote attention to ESG factors in selecting managers. The Trading Desk is closely involved in the continued development of the Sustainability Ladder for banks we work with and in the dialogue with these parties (see Section 8.3.2). The Commodities Team is working on a position paper on renewable energy in order to investigate whether investments in renewable energy futures could be a potential alternative or supplement to the current portfolio.

External Management

The External Management Team is responsible for the selection, monitoring and management of external client mandates in public markets (see Appendix 1 for the implementation of responsible investment in externally managed mandates). In selecting, monitoring and managing external managers, we include aspects relating to responsible investment. We aim to select external managers who share our ESG vision and that of our clients. We selected external managers who devote proper attention to material ESG risks and opportunities in their investment processes. These factors also are a fixed item on our agenda for the regular review meetings with external managers. In 2016 Public Guidelines were set out to specify this policy and address PGGM's standards for integrating ESG in selection and monitoring of external managers. These guidelines are new and will be implemented effective from 2017. To assess the extent to which current managers comply with these guidelines, an ESG scoring protocol will be developed in 2017. All managers will be uniformly scored in accordance with this protocol. If necessary, improvement actions will be identified.

9.3 Private Markets

Private Equity

The Private Equity (PE) Team has embedded sustainability in the investment process more systematically through the implementation of a number of tools that makes it possible to more easily assess ESG risks. For example, a system was developed that measures the ESG risks of the fund's investments, as well as the ability of the General Partner (GP) to deal with these risks. The system assesses the GP's portfolio's risks, using data about country and sector risks. This is compared with the GP's ESG scores produced on the basis of our own assessment. This is then used as a basis to identify the General Partners with whom to enter into a dialogue. In addition, incidents (severe physical accidents, major environmental incidents and the legally established misappropriation of funds) are recorded and discussed. This system was used for the first time in 2016. The result is an ESG action plan that contains clear agreements with fund managers about ESG improvements and measures designed to prevent incidents in the future.

Infrastructure

The Infrastructure Team devoted effort to the further standardisation of ESG integration and the refinement of the instruments used for assessment purposes during the selection and due diligence processes, as well as during the post-acquisition phase. The team is closely involved in the development of the Infrastructure GRESB, an international benchmark that compares infrastructure companies and projects in terms of sustainability. In total, 185 infrastructure companies in which we invest, in 53 countries on six continents, completed the GRESB survey in 2016. The PGGM funds and projects that completed the GRESB survey represent approximately 45% of the Infrastructure portfolio. The results of the GRESB performance measurement are used to engage management in a dialogue about their ESG policy, procedures, performance and areas for improvement.

Real Estate

Sustainability is a high priority for the Real Estate teams. As a result, the PGGM Private Real Estate Fund (PREF) and the PGGM Listed Real Estate Fund (LREF) perform very well in comparison to the GRESB. Both funds show an outperformance in comparison to the global GRESB average, which includes 759 real estate companies and funds, and in comparison to the relevant benchmark. Appendix 4 contains the 2016 PREF and LREF scores.

In addition, more of our real estate investments qualify as Green Star, the most sustainable category. The size of the Green Stars in the PREF currently is € 7.4 billion, an increase of € 2.2 billion in comparison to last year.
12 PREF investments, totalling € 2.1 billion, in fact belong to the 20% best scoring GRESB participants. The size of the Green Stars in the LREF currently is € 5.8 billion, an increase of € 0.7 billion in comparison to last year.
21 LREF investments, totalling € 2.3 billion, belong to the 20% best scoring GRESB participants.

Credit & Insurance Linked Investments

The Credit & Insurance Linked Investments Team manages two investments mandates: Insurance Linked Investments and Credit Risk Sharing Transactions.
A Centre of Expertise has been created within the team to support the way in which ESG factors are incorporated in the assessment of the investments of both mandates. Based on their expertise, the teams contribute to internal discussions and working groups about a.o. climate change and behaviour in the context of a stable financial system. An example of the latter is the team's contribution to the debate held in the European Parliament in 2016, about simple, transparent and standardised securitisation structures. We support Brussels initiative of stimulating the development of well-structured products on the basis of qualitative criteria. Provided they are designed properly and with healthy risk sharing, synthetic securitisations can work well for investors as well as the lending banks. Sharing credit risks more broadly, gives banks room to grant more loans to the real economy.

We actively contributed to the debate by the European Parliament, for example by participating in stakeholder sessions in Brussels and by publishing a paper together with APG and Banco Santander in which we emphasise the benefit of securitisation. Furthermore, we spoke with multiple supervisory authorities in various EU countries about our vision of healthy securitisation structures, and how we ensure that our investments incorporate high quality structures, with healthy risk-sharing.

9.4 Risk & Compliance

Risk Analysis

In cooperation with the Risk Analysis department, the RI Team and the investment teams, an ESG framework was developed for the deal team process. This way we provide for greater consistency in terms of the approach used by the various investment teams. Furthermore, the framework helps the Risk Analysis Team, as part of their second line monitoring role, to critically assess whether the investment teams devoted sufficient attention to the ESG risks. This framework has been further detailed to create specific frameworks for the various investment categories and its application is being tested as part of a pilot.

Performance Analysis

Since the equity benchmarks are adjusted to reduce CO_2 emissions (see Section 2.3.2), the Performance Analysis team, measures the impact of phasing out investments with relatively high CO_2 emissions. On the one hand, the team measures the financial impact by comparing the regular benchmark against the CO_2-adjusted benchmark. On the other hand, the teamt measures the social impact by determining the reduction in the number of tonnes of CO_2 emissions in the equities portfolio. In this respect we make use of the data provided by Trucost, a specialised ESG data supplier.

Risk Control

As part of a broader investigation into climate risk in the investment portfolio, the Risk Control Team made a first attempt to put a figure on the risk of a carbon tax.
A global carbon tax is gaining increased attention and the calculation of a tax of this nature provides a quantitative substantiation for the climate debate within PGGM and with our clients. Risk Control has calculated the direct impact of a carbon tax for each company in the equities portfolio. For each company, the tonnes of CO_2 emissions reported by Trucost are multiplied by the tax, resulting in the expected total carbon tax levy for the relevant company. The analysis displays major differences between portfolios, sectors and the benchmarks. For example, the equities portfolio contains approximately 3,000 companies. The three companies with the highest theoretically calculated tax levy, collectively represent 11% of the total levy.

9.5 Outlook for 2017

Over the coming year we will continue to focus on further anchoring responsible investment within the investment chain. The result of the transition programme must be such that all relevant teams have internalised responsible investment. In 2017, in the context of the transition programme, attention will primarily be devoted to training and knowledge development. In addition, the focus will be on changing attitude and behaviour in teams. Furthermore, effort will be devoted to more consistently assessing and monitoring the responsible investment approach used by internal and external portfolio managers. Finally, a plan will be developed for securing ownership within the investment chain after the completion of the transition programme.

Outlook

Impact investing is booming. Increasingly, financial institutions are embracing SDG themes as a generally accepted framework for impact investments. Consensus about solutions, selection criteria and impact indicators are very important for the transparency and credibility of such investments in SDGs. In 2017, we will continue to work on this with other investors and financial institutions, companies and government.

Aside from developing standards and tools we will also further expand our investments in solutions in 2017. We will investigate the desirability and feasibility of a thematic investment mandate for food and water within the portfolio. The continued upscaling of green investment opportunities is also important. Governments will increasingly assume their responsibility for stimulating green growth. A 60 percent growth in green government bonds is forecasted for 2017. This provides the scale required to finance the transition to a clean energy supply and offers us opportunities to invest in climate solutions.

We expect the influence of climate change and the measures to slow down climate change on financial markets to increase, in part due to new regulations, such as, for example, carbon pricing. The reported impact will have to be ever better substantiated. Aside from the standardisation of positive impact indicators, there will also be a requirement to gradually 'offset' the financial returns against externalities, such as pollution or emissions. An investor able to prepare itself well for this change is likely to earn better investment returns over the long-term. Sooner or later such externalities will have to be internalised.

Based on the developed climate models and scenarios, from 2017 onwards we will identify how and in which parts of the portfolio, investments can be affected by climate change and the measures implemented to counteract climate change. In addition, we will continue working on reducing CO_2 emissions in the investments portfolio. In the area of engagement, we will primarily focus on urging companies with the highest pollution track record to increase their CO_2 efficiency. In addition to delaying climate change (mitigation), attention will be focused on adapting to climate, which, one way or another, is going to change. Examples of this include adapting to the consequences of climate change in terms of water availability and health.

We are delighted that the TCFD mandate has been extended to at least September 2018. PGGM will continue to be intensively involved in the work of the TCFD, for example as a member of the user group that helps companies with the implementation of the recommendations, and that identifies examples of best practices. We expect that the recommendations can give our investments in solutions a significant boost in relation to the theme climate and environment.

The financial sector will be monitored by society in terms of its contribution to sustainable prosperity. A stable financial system is indispensable in this regard. In 2017, we will continue to critically appraise ourselves, as well as our financial counterparties. The Sustainability Ladder developed by PGGM will provide the necessary input.

Finally, in 2017, we expect to devote more attention to the material ESG risks in the investment portfolio and more selectivity in terms of the relevant ESG factors per sector. PGGM will support this in various ways, for example by participating in the Investor Advisory Group of the Sustainability Accounting Standards Board (SASB) and by engaging companies in a dialogue on financial ESG risks, for example on the basis of shadow prices for CO_2 and water. By making use of Big Data in addition to the voluntary transparency of companies, the financial ESG risks for investors will become more transparent. We still have a long way to go in this area. The traceability of products and services in specific regions and their ESG risks (for example in the area of water and human rights) is becoming more important, as well as feasible. In 2017, we will continue to focus our efforts on this, for example with Bloomberg. Through means of these activities and partnerships, we hope to achieve good returns in 2017 and at the same time take the world a small step further towards sustainability and durability. For the benefit of everyone, and especially the pension participants of our clients, now and in the future.

Appendix 1 Implementation of Responsible Investment

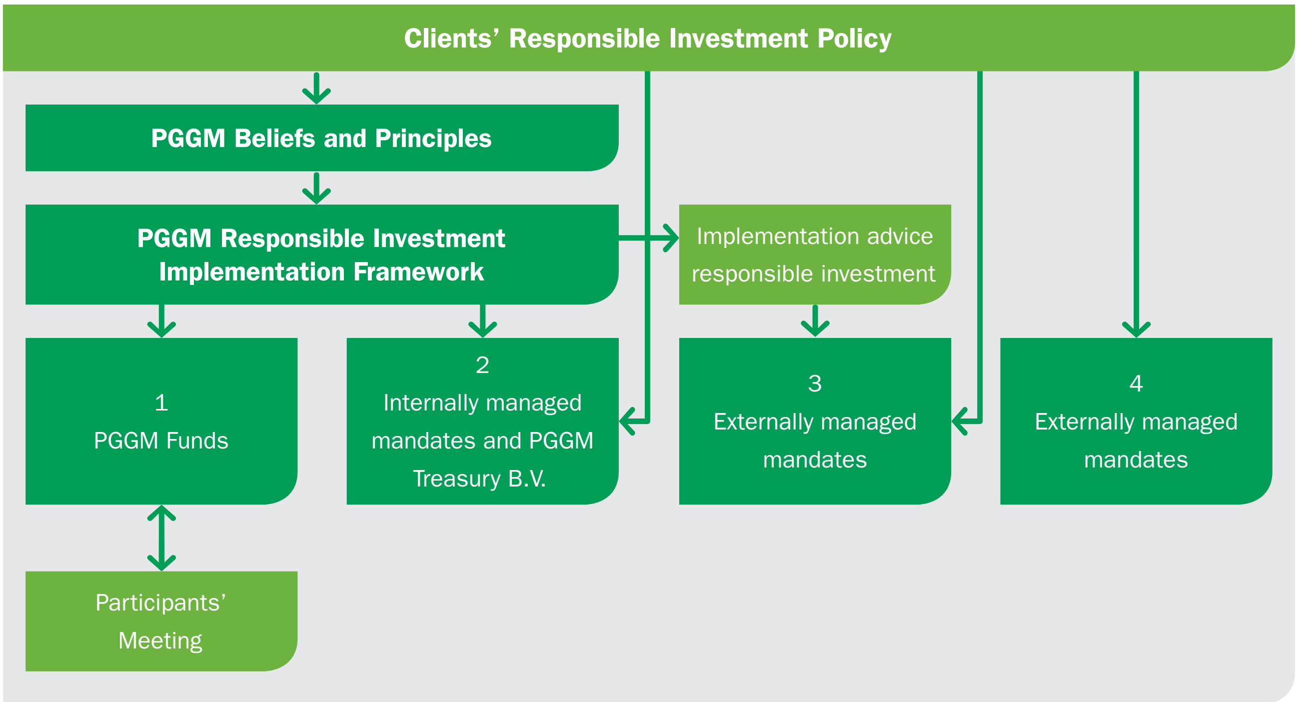
The PGGM Beliefs and foundations and the PGGM Responsible Investment Implementation Framework, suplemented by implementation guidelines for individual investment categories, apply to all investment and advisory activities that fall within the following three categories:

(1) We manage various PGGM mutual funds in which multiple clients participate, as well as the activities of PGGM Treasury B.V.

(2) We manage internal mandates for individual clients.

(3) We provide implementation advice to clients that invest in externally managed mandates via PGGM.

We also manage external mandates to which the PGGM Beliefs and Principles and the PGGM Responsible Investment Implementation Framework are not directly or indirectly applied (4).

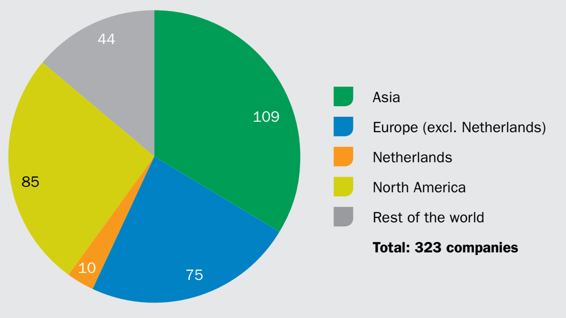


Appendix 2 Engagement

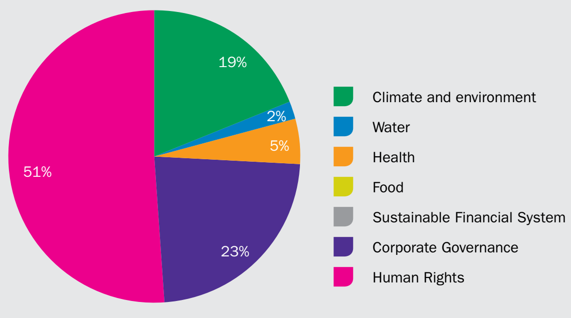
In 2016, we have been in dialogue with 323 companies. We carry out part of these engagement activities ourselves. In addition, we have outsourced part to the engagement service provider, GES. This enables us to reach a broad range of the companies in the portfolio. The reported figures reflect our activities combined with GES' activities. The CO_2-intensive companies we wrote about in chapter 2.3.3. are not included in these figures. We achieved a total of 76 engagement results, or steps taken by these companies focused on ESG improvement.

In addition to engagement focused on companies, we seek dialogue with market parties such as legislators and regulators. In 2016, we engaged in a dialogue with 23 market parties, most of which was aimed at improving corporate governance standards in markets in which we invest. We achieved 5 engagement results. We are involved in engagement activities throughout the world. These activities are spread across various subject areas (see following diagrams).

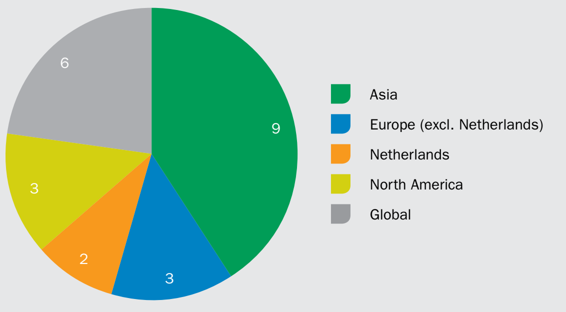
Distribution of Engagement Activities with Companies by Region in 2016



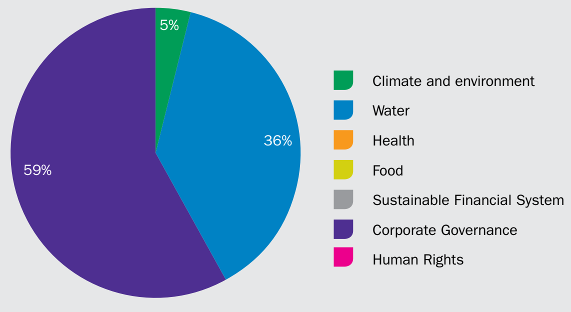
Distribution of Engagement Activities with Companies by Area of Focus in 2016



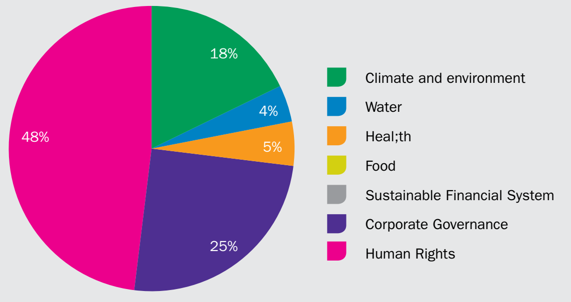
Distribution of Engagement Activities with Market Parties by Region in 2016



Distribution of Engagement Activities with Market Parties by Area of Focus in 2016



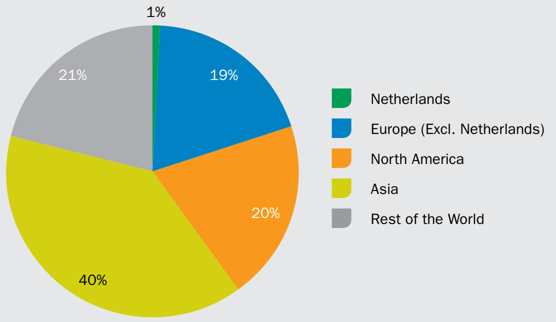
Distribution of Engagement Activities by Area of Focus in 2016



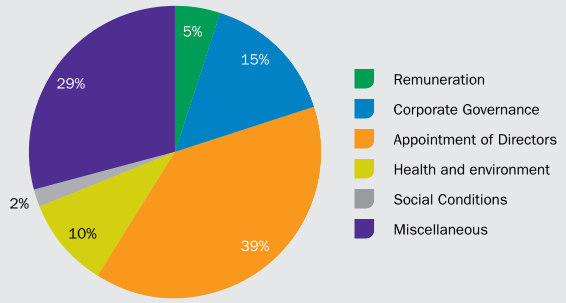
Appendix 3 Voting

In 2016 we voted at 3,657 shareholders' meetings. We voted against management's recommendations on 2,256 remuneration proposals. This represents 67% of the total number of votes on remuneration proposals. In the US, this figure is even higher and we voted against the management recommendation in 86% of the cases (723 times).

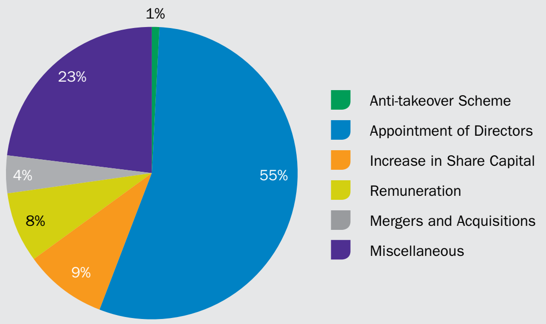
Distribution of Shareholders' Meetings by Region in 2016



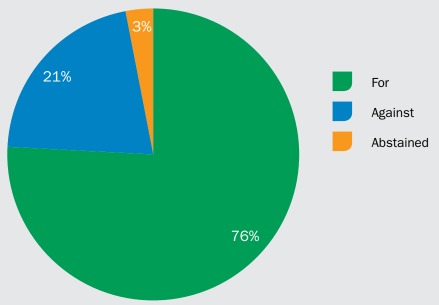
Distribution of Shareholders' Meetings by Category in 2016



Distribution of Management Proposals by Category in 2016



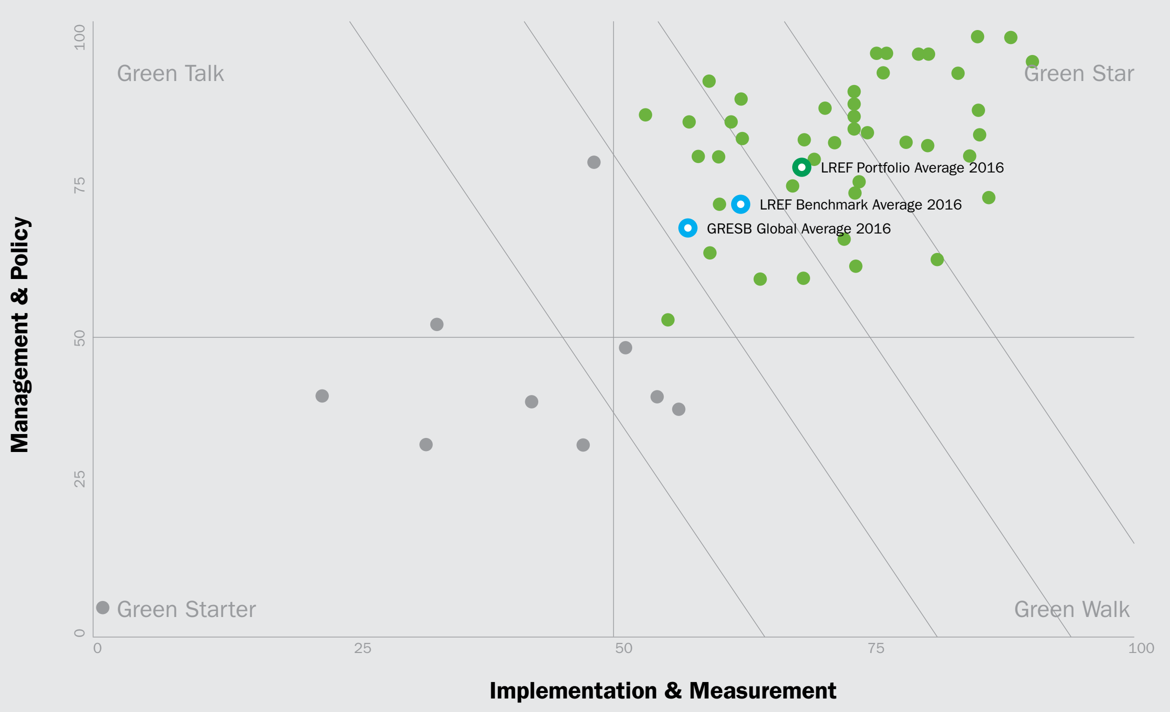
Distribution of Voting Instructions in 2016



Appendix 4 GRESB

GRESB-survey 2016: Private Real Estate Fund

GRESB-survey 2016: Listed Real Estate Fund



Appendix 5 Accountability

In this 2016 Annual Responsible Investment Report, we provide information for our clients, their participants and other interested parties on the activities undertaken in the field of responsible investment in 2016. Where we refer to clients in this report we mean both the clients participating in the PGGM funds and the clients for whom we manage mandates. If we state that we invest in a certain portfolio, we always mean that we do so on behalf of our clients.

The information in this annual report only covers responsible investment activities carried out by PGGM. More extensive information on PGGM N.V. and PGGM Coöperatie U.A., and about sustainability at the PGGM N.V. level is available on PGGM's website and in the 2016 PGGM N.V. Annual Report. This PGGM 2016 Annual Responsible Investment Report provides information on the 2016 financial year running from 1 January to 31 December 2016. The report is a progress report and does not provide a comprehensive overview of activities and current investments. It is limited to the responsible investment activities carried out by PGGM Vermogensbeheer B.V. in 2016.

Reporting and Transparency

Transparency is an important element for us. We aim to be a reliable partner and provide clarity about what we do and why. We publish our Annual Responsible Investment Report every year on our website. We also provide quarterly reports to our clients and write online blogs that explain our position on specific topics. Finally, we also enable our clients to provide their participants and other stakeholders with annual information on the investment portfolio and on the parties with which we do business on their behalf.

Guidelines Followed

In compiling the PGGM 2016 Annual Responsible Investment Report we have in principle adhered to the international reporting principles of the Global Reporting Initiative (GRI), the GRI Standards. The GRI standards relate to both substantive choices (materiality, involvement of stakeholders, the sustainability context, completeness) and the quality of the reporting (balance, comparability, accuracy, timeliness, clarity, reliability). We did not follow the GRI to the letter in this report. We adhered as much as possible to the reporting principles specified in the GRI in compiling this annual report. The GRI standards do not fully apply to this annual report, because this report concerns asset management activities and is not relevant at the PGGM N.V. level. Further information on the sustainability activities at the corporate level can be found in the PGGM N.V. Annual Report, which fully adheres to the GRI reporting guidelines. The 6 principles of the PRI were also used as a reporting guideline. As a signatory to the PRI, we report on our activities to the PRI each year. The corresponding public report is available on PRI's website.

Selection of Material Subjects

As an asset manager with a widely diversified portfolio, it is not easy for us to define the most essential subject areas in the field of responsible investment. We have selected the relevant subject areas on the basis of a materiality analysis. During the process of identifying the material subject areas we consulted our clients, our key stakeholders. Internally, we consulted the asset management organisation, as well as the client advisory organisation. In addition, we conducted a media analysis. We assigned a higher priority to subject areas that received a great deal of media attention.

In defining relevant subject areas we took external developments into account. The key sustainability subject areas, relevant laws and regulations and international agreements in each chapter form the framework, a broader context within which our activities take place.

The table below contains the key material subject areas for 2016. We consider it essential for these subject areas to be dealt with in the 2016 Annual Responsible Investment Report.

Material Subject Areas

- Developments: from Risk to Impact
- Anchoring Sustainability within PGGM
- Investing with Impact
- Measuring Continued Impact Development
- Climate Risks
- Transparency (TCFD)
- CO_2 Reduction in the Portfolio
- US Corporate Governance Code
- Compensation Guideline for Financial Service Providers
- Access to Healthcare

Review

KPMG Sustainability has evaluated the PGGM 2016 Annual Responsible Investment Report. See the Assurance Report in Appendix 6.

Appendix 6 Assurance report of the independent auditor

To the readers of the Annual Responsible Investment Report 2016 of PGGM Vermogensbeheer B.V.

Our conclusion

We have reviewed the 'Annual Responsible Investment Report 2016' (hereafter: the Report) of PGGM Vermogensbeheer B.V. (further 'PGGM') based in Zeist. Based on our review, nothing has come to our attention to indicate that the Report is not presented, in all material respects, in accordance with the internally developed guidelines as described in the section 'Appendix 5 Accountability'.

The Report includes prospective information such as ambitions, strategy, plans, expectations and estimates. Inherently the actual future results may differ from these and are therefore uncertain. We do not provide any assurance on the assumptions and achievability of prospective information in the Report.

Basis for our conclusion

We have performed our review on the Report in accordance with Dutch law, including Dutch Standard 3000:" Assurance Engagements other than Audits or Reviews of Historical Financial Information".

This review engagement is aimed to obtain limited assurance. Our responsibilities under this standard are further described in the section 'Our responsibilities for the review of the Report' below.

We are independent of PGGM Vermogensbeheer B.V. 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 that the review evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Responsibilities of Management for the Report

The Management of PGGM is responsible for the preparation of the Report in accordance with the internally developed guidelines as described in the section 'Appendix 5 Accountability', including the identification of stakeholders and the determination of material matters. The choices made by Management regarding the scope of the Report and the reporting policy are described in the section 'Appendix 5 Accountability'.

Management is also responsible for such internal control as it determines is necessary to enable the preparation of the Report that is free from material misstatement, whether due to fraud or error.

Our responsibilities for the review of the Report

Our responsibility is to plan and perform the review assignment in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusion.

A review is aimed to obtain a limited level of assurance. Procedures performed to obtain a limited level of assurance are aimed at determining the plausibility of information and are less extensive than a reasonable assurance engagement. The level of assurance obtained in review engagements is therefore substantially less than the level of assurance obtained in an audit engagement. We apply the 'Nadere voorschriften accountantskantoren ter zake van assurance opdrachten (RA)' (Regulations for Audit Firms Regarding Assurance Engagements) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

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 decisions of users taken on the basis of the Report. The materiality affects the nature, timing and extent of our review procedures and the evaluation of the effect of identified misstatements on our conclusion.

We have exercised professional judgement and have maintained professional skepticism throughout the review, in accordance with the Dutch Standard 3000, ethical requirements and independence requirements.

Our main procedures consisted of:

- Performing an analysis of the external environment, obtaining an understanding of relevant issues and challenges for PGGM regarding responsible investment, and of the organization's business;
- Evaluating the appropriateness of the reporting criteria and its consistent application, including the evaluation of the reasonableness of management's estimates;
- Evaluating the design and implementation of the reporting systems and processes related to the information in the Report;
- Interviewing relevant staff responsible for providing the information in the Report, carrying out internal control procedures on the data and consolidating the data in the Report;
- Reviewing relevant data and evaluating internal and external documentation, based on limited sampling, to assess the accuracy of the information in the Report.

Amsterdam, 28 April 2017

KPMG Sustainability,
Part of KPMG Advisory N.V.

M.A.S. Boekhold-Miltenburg RA
Director

Colophon

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