Mapping farm animal welfare risks

Case study on investments by Dutch pension funds in high risk companies in the chicken and pig meat value chain

Fair Pension Label

The Fair Pension Label is a coalition of the following organizations:
Amnesty International, Milieudefensie, Oxfam Novib, PAX and World Animal Protection

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About this report

This report has been commissioned by the Fair Pension Fund Label (Eerlijke Pensioen Label) which is a coalition of the following organisations: Amnesty International, Milieudefensie, Oxfam Novib, PAX, and World Animal Protection. The aim of the Fair Pension Label is to encourage the top ten largest pension funds in the Netherlands (based on the number of participants) to invest responsibly and encourage investee companies to conduct businesses responsibly using their financial leverage. This report, initiated by World Animal Protection, examines the financial relationships between chicken and pig meat producing and processing companies, retailers and restaurants and pension funds active in the Dutch market and calls upon pension funds to uphold certain minimum requirement for animal welfare in this industrial sector.

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Samenvatting

Dieren zijn wezens met gevoel en bewustzijn, die respect en bescherming verdienen. Als gevolg van veranderingen in regelgeving en een groeiend consumentenbewustzijn ten aanzien van dierenwelzijn, is aandacht van bedrijven voor dierenwelzijn niet alleen een kwestie van ethiek maar draagt ook bij aan de bedrijfswaarde en toekomstbestendigheid van een onderneming.

Op industriële schaal geproduceerd kippen- en varkensvlees voor menselijke consumptie gaat gepaard met een ernstige aantasting van het welzijn van dieren. Dieren worden dicht op elkaar gehouden in besloten ruimtes, er worden dierenrassen gefokt met eigenschappen die schade toebrengen aan het welzijn van dieren, dieren worden regelmatig blootgesteld aan verminking en mishandeling of bij de slacht onvoldoende verdoofd. De intensieve of industriële veehouderij volgt een bedrijfsmodel gebaseerd op het benutten van schaalvoordelen, met als hoofddoel het maximaliseren van de winstgevendheid. Dit gaat ten koste van het welzijn van dieren.

Dit onderzoeksrapport geeft een overzicht van de risico's op het gebied van dierenwelzijn in de waardeketens van kippen- en varkensvlees en welke maatregelen kunnen leiden tot verbetering van het dierenwelzijn. Ook worden de financiële relaties in kaart gebracht van tien Nederlandse bedrijfstakpensioenfondsen en de wereldwijd grootste verwerkers van kippen- en varkensvlees, fastfoodrestaurants en supermarktketens. De onderzoeksbevindingen dienen als basis om de dierenwelzijnsrisico's van boerderijdieren te adresseren bij institutionele beleggers en pensioenfondsen aan te moedigen hun invloed aan te wenden bij de onderzochte bedrijven om dierenwelzijn binnen hun bedrijfsvoering en toeleveringsketens te verbeteren.

Dit praktijkonderzoek richt zich op de tien grootste (op basis van deelnemersaantallen) bedrijfstakpensioenfondsen in Nederland, die zijn geselecteerd voor het Eerlijk Pensioen Label.

Naam	Sector
• Algemeen Burgerlijk Pensioenfonds (ABP)	Overheid en onderwijs
• Bedrijfstakpensioenfonds voor de Bouwnijverheid (BpfBOUW)	Bouwsector
• BPL Pensioen	Landbouwsector
• Pensioenfonds Detailhandel	Detailhandel
• Pensioenfonds Horeca & Catering (PH&C)	Horeca & Catering
• Pensioenfonds Metaal en Techniek (PMT)	Metaal en techniek
• Pensioenfonds van de Metalektro (PME)	Fijnmetaal en elektrotechniek
• Pensioenfonds Vervoer	Transportsector
• Pensioenfonds Zorg en Welzijn (PFZW)	Gezondheidszorg en welzijn
• Stichting Pensioenfonds voor Personeelsdiensten (StiPP)	Uitzendkrachten en pay rollers

Voor een selectie van 28 bedrijven zijn de beleggingen in obligaties en aandelen door de tien Nederlandse pensioenfondsen onderzocht.

Alle tien pensioenfondsen beleggen in één of meerdere bedrijven die voor dit praktijkonderzoek zijn geselecteerd, zie sectie. 2.1. Uit het onderzoek blijkt dat de geselecteerde pensioenfondsen financiële relaties hebben met 21 van de 28 bedrijven. De pensioenfondsen beleggen in vijf kippenvleesbedrijven, vier varkensbedrijven, vijf restaurantketens en zeven supermarktketens. Alle tien pensioenfondsen hebben investeringsrelaties met fastfoodketen McDonalds en de supermarktketens Carrefour en Tesco. Zes pensioenfondsen, te weten ABP, BpfBOUW, PFZW, PH&C, PME en PMT geven openheid over zowel hun beleggingsrelaties als hun beleggingswaarden. De zes pensioenfondsen hebben in totaal € 3,4 miljard geïnvesteerd in de geselecteerde bedrijven. ABP neemt daarvan het grootste aandeel voor haar rekening (50% van € 3,4 miljard) en investeerde ongeveer € 1,7 miljard, gevolgd door PFZW dat ongeveer € 693 miljoen (20% van € 3,4 miljard) in de geselecteerde bedrijven investeerde. De andere vier pensioenfondsen hadden een relatief laag aandeel beleggingen, respectievelijk 12% (PMT), 9% (PME), 6% (BpfBOUW) en 1% (PH&C).

Volgens het Eerlijk Pensioen Label dienen pensioenfondsen een verantwoord beleggingsbeleid te formuleren, gebaseerd op internationaal erkende standaarden en initiatieven, beleggingscriteria te formuleren met betrekking tot duurzame ondernemingspraktijken, en zorg te dragen voor de implementatie van dit beleid. Op het gebied van dierenwelzijn betekent dit de onderschrijving van algemeen aanvaarde principes, zoals de 'Vijf Vrijheden van Dieren'. Deze dienen te worden vertaald in soortspecifieke minimumnormen op het gebied van dierenwelzijn.

Dit rapport geeft een overzicht van bestaande normen en vrijwillige initiatieven op het gebied van dierenwelzijn. Voor de kippen- en varkenshouderij zijn bijvoorbeeld in een aantal landen (vrijwillige) minimumnormen ontwikkeld, in samenwerking met het bedrijfsleven en dierenbeschermingsorganisaties, zoals in Nederland het Beter Leven keurmerk. Het betreft haalbare normen met een bescheiden ambitieniveau in vergelijking met hogere welzijnsnormen (zoals biologisch of Label rouge) die zorgen voor belangrijke verbeteringen ten opzichte van de gangbare kippen- en varkenshouderij. De geografische reikwijdte van deze normen is echter beperkt.

Om deze beperkingen te boven te komen en vooruitgang te stimuleren, kunnen volgens het 'SMART'-principe **s**pecifieke, **m**eetbare, **a**mbitieuze, **r**ealistische en **t**ijdgebonden doelstellingen worden geformuleerd, die stapsgewijs kunnen worden opgevolgd en geëvalueerd. Dit kan op wereldwijde schaal worden gedaan, rekening houdend met regionale verschillen op het gebied van normen en praktijken op het gebied van dierenwelzijn.

Voor vleeskuikens zijn normen op het gebied van huisvesting en bewegingsruimte van belang, selectie van specifieke rassen en verrijking van stalsystemen. Voor varkens dienen de normen betrekking te hebben op verrijking van de stalinrichting, en geleidelijke afschaffing van het gebruik van 'zwangerschapskratten' voor zeugen en het tegengaan van verminkingen, zoals het afknippen van de staart.

Het Eerlijk Pensioen Label (EPL) roept pensioenfondsen op om in hun verantwoord beleggingsbeleid minimumeisen op het gebied van dierenwelzijn op te nemen zoals die in dit rapport worden toegelicht en doet daarbij de volgende aanbevelingen:

1. Het formuleren van publiek beleid dat niet alleen voldoet aan algemene beginselen op het gebied van dierenwelzijn, maar ook meer in detail uitgewerkte minimumeisen omvat ten aanzien van investeringen in bedrijven in de waardeketen van kippen- en varkensvlees.
2. Het opleggen van dierenwelzijnsbeleid bij hun externe vermogensbeheerders, in het geval het vermogen van het pensioenfonds extern wordt beheerd.

3. Toepassing van verantwoord beleggingsbeleid op het gebied van dierenwelzijn op zowel actief als passief beheerd vermogen en op zowel aandelen als bedrijfsobligaties.
4. Ondersteuning van ondernemingen waarin wordt geïnvesteerd bij de omschakeling van intensieve veehouderij naar een meer diervriendelijke veehouderij, te beginnen met het niveau zoals vastgelegd in de minimumeisen.
5. Engagement en dialoog met bedrijven in de kippen- en varkensvleeswaardeketens, aan de hand van meetbare en tijdgebonden doelstellingen om zodoende dierenwelzijn in de vleesindustrie op een hoger niveau te krijgen.
6. Beëindiging van de investeringsrelaties met bedrijven die binnen een bepaald tijdsbestek geen verbetering laten zien in het behalen van de engagementdoelstellingen.
7. Meer openheid van zaken geven over de bedrijven waarin pensioenfondsen investeren, over inhoud en doel van engagementtrajecten, alsmede met welke bedrijven in de verschillende stadia van de waardeketen gesprekken zijn gevoerd, en de bereikte resultaten.

Summary

Animals are sentient beings that deserve respect and protection. Amidst, changing regulatory landscape and growing consumer awareness, animal welfare can not only be considered as an important ethical value a company should adhere to, but is also important to create business value and become future proof.[1]

The industrial scale of chicken and pig meat production for human consumption compromises severely on animal welfare. Animals are kept in confined, barren spaces, breeds are used that are detrimental for welfare, animals are mutilated, inhumanely handled and slaughtered without proper stunning. Industrial, or intensive, livestock production follows a business model based on exploiting economies of scale, with the main objective to maximize profitability. Animal welfare is therefore continuously at risk.

This report gives an overview of the animal welfare risks in chicken and pig meat value chains and corresponding mitigation measures. Moreover, it maps the financial relationships of Dutch industry-wide pension funds with the biggest chicken and pig processing companies, fast food restaurants and retailers. As such, it provides a point of departure to address farm animal welfare risks by institutional investors and encourages pension funds to leverage their power with the investee companies to improve animal welfare within their operations and supply chains.

This case study focusses on the ten largest industry-wide Dutch pension funds (in number of participants) selected for the Fair Pension Label:

Name	Sector
• Algemeen Burgerlijk Pensioenfonds (ABP)	Government and education
• Bedrijfstakpensioenfonds voor de Bouwnijverheid (BpfBOUW)	Construction
• BPL Pensioen	Agriculture
• Pensioenfonds Detailhandel	Retail
• Pensioenfonds Horeca & Catering (PH&C)	Hotel and catering
• Pensioenfonds Metaal en Techniek (PMT)	Metalworking and engineering
• Pensioenfonds van de Metalektro (PME)	Metalworking and engineering
• Pensioenfonds Vervoer	Freight and passenger transport
• Pensioenfonds Zorg en Welzijn (PFZW)	Social welfare and healthcare
• Stichting Pensioenfonds voor Personeelsdiensten (StiPP)	Temporary workers, pay rollers

For the 28 selected companies, the investments in bonds and shares by the ten Dutch pension funds have been investigated.

All ten pension funds invest in one or more companies selected for this case study, see section 2.1. Investments were found in 21 of the 28 selected companies. In terms of value chain segment, the Dutch pension funds are invested in five chicken meat companies, four pig meat companies, five restaurant companies, and seven retailers. Restaurant McDonalds, and the retailers Tesco and Carrefour have investment links with all the ten pension funds. Six pension funds, namely ABP, BpfBOUW, PFZW, PH&C, PME, and PMT, disclose information on both their investment relations and investment values. The six Dutch pension funds invested in total € 3.4 billion in the selected companies. ABP accounts for the largest share (50% of € 3.4 billion) of this value and invested about € 1.7 billion followed by PFZW that invested about € 693 million (20% of € 3.4 billion) in the selected companies. The other four pension funds had a relatively low share of investments, respectively 12% (PMT), 9% (PME), 6% (BpfBOUW), and 1% (PH&C).

According to the Fair Pension Label, pension funds need to establish a responsible investment framework, based on widely supported international standards and initiatives, formulate responsible investment criteria with regard to sustainable business practices, as well as ensuring implementation of these policies. In the case of animal welfare, widely supported general principles do exist, such as the 'Five Freedoms of Animals'. However, these need to be translated into species-specific minimum standards that mitigate animal welfare risks.

This report gives an overview of existing animal welfare standards and initiatives. Some of these standards fail to safeguard a responsible minimum level of animal welfare, others are geographically circumscribed. For example, chicken and pig welfare requirements of voluntary standards, have been developed in a series of countries and are industry led and/or initiated by NGOs. They are realistic to achieve and modestly ambitious compared to higher welfare standards (like organic or Label rouge) and bring important improvements. Their geographical scope is however restricted.

To overcome these limitations and to drive progress, standard-setting according to the SMART-principle allows for specific, measurable, ambitious, realistic and time-bound objectives and targets, which can be monitored and evaluated. This can be done globally, taking into account regional differences in points of departure.

For broiler chickens this includes lower stocking densities, selection of specific breeds and enrichment at housing systems. For pigs this encompasses inter alia enrichment and the phasing out of the use of crates and mutilations.

The Dutch Fair Pension Label calls upon pension funds to uphold minimum welfare requirements as highlighted in the report and recommends them to do this by:

1. Making a public commitment/policy that not only adheres to general principles of animal welfare but further details the expectations from investee companies across the value chain, reflecting the stated minimum requirements.
2. Enforcing animal welfare policies on their external asset managers, in case assets are managed externally.
3. Applying the animal welfare commitments to actively and passively managed assets and uniformly on shareholdings and bondholdings.
4. Supporting investee companies in their efforts towards a transition to using industry standards that bring animal welfare practices in the industrial livestock sector to a higher level, starting with the level as laid down in the minimum requirements.
5. Engaging with companies across the chicken and pig meat value chains with clear and time-bound targets to achieve the stated minimum requirements by clients and the industry as a whole.
6. Ending investments in companies that do not show any improvement in meeting the engagement targets within a given timeframe.
7. Improving transparency on investments, engagements, and outcomes with the companies involved at the various stages of the meat industry value chain.

Introduction

September 2018, in a warning addressed to McDonald's Chairman Enrique Hernandez Jr. and CEO Stephen J. Easterbrook, the New York State Pension Fund expressed its concerns about the "potential financial and reputational risks associated with McDonald's chicken welfare practices." With good reason. McDonalds refuses to commit to responsible minimum chicken welfare standards. It sources its chicken meat from Tyson Foods, a company with notoriously low animal welfare requirements that regularly negatively hits the news following investigations revealing wanton cruelty.

McDonalds and Tyson Foods are not isolated examples. On December 12th, 2018, the Humane Society United States filed an 81-page complaint with the U.S. Federal Trade Commission, against chicken meat Pilgrim's Pride, based on undercover investigations, whistle-blower claims and U.S. Department of Agriculture inspection records. The complaint details, amongst other issues, the irresponsible practices of using fast growing breeds, high stocking densities and filthy, dark and barren environments.[2] Pilgrim's Pride is a supplier to big multinational fast food and retail companies like Burger King, Wendy's, Kroger, Costco and Walmart.

The list goes on. Mid-July 2018, hidden-camera footage revealed workers at a Kentucky pig farm kicking and punching animals in their faces, ripping out the testicles of pigs without any pain relief, and violently smashing pigs against the ground to kill them. The farm supplied pigs to JBS, by sales the largest meat processing company in the world. Early December 2017, gross animal welfare violations were revealed in – again – a Tyson Foods farm on the Delmarva peninsula.[3] In January 2017, hidden-camera footage showed graphic animal abuse at a pig farm connected to Hormel Foods, a supplier to – inter alia – Walmart and Costco.[4]

These are only some recent examples from the United States. In other regions, animal welfare violations are often just as bad and persistent – if not worse.

The fact that the New York State Pension Fund formally lodged its concern is no coincidence. It is a major shareholder of McDonalds. Consequently, it runs both financial and societal risks by investing in McDonalds. As such, the New York State Pension Fund is far from unique. Dozens of pension funds world-wide invest in McDonalds and/or in its supplier Tyson Foods, including many Dutch pension funds. This is hardly surprising. According to a corporate social responsibility (CSR) sector risk assessment commissioned by the Dutch government and published by KPMG in 2014, the Dutch financial sector – and particularly pension funds – are prone to considerable animal welfare risks.[5]

In other words, money saved by Dutch employees for their retirement is currently used to maintain and expand the misery of billions of chickens, pigs and other sentient beings. As shareholders of large, multinational meat processors, fast food companies and retailers, Dutch pension funds are directly linked to the suffering of countless farm animals.

Active ownership, such as engagement, dialogue and exerting their voting rights, may provide opportunities for pension funds to use their leverage to improve animal welfare. This report therefore not only maps the links between pension funds, companies and animal welfare risks, but also points out how these risks can be mitigated.

At face value, farm animal welfare seems to get little attention from Dutch pension funds. The theme is omitted in the publicly accessible responsible investment policies of the ten largest industry-wide pension funds, in number of participants.[6] Still, awareness within the investment community that animal welfare is one of the environmental, social and governance (ESG) issues that need to be considered as part of investment decisions is increasing, both in terms of risks and opportunities: analysing animal welfare practices improves risk management, unlocks investment opportunities and guides active ownership.[7] Or, as the OECD notes: "failing to consider long-term investment value drivers, which include environmental, social and governance issues, in investment practice is seen to be a failure of fiduciary duty".[8] This also holds true for animal welfare.

This report gives an overview of the animal welfare risks in chicken and pig meat value chains and corresponding mitigation measures. Moreover, it maps the financial relationships of ten Dutch industry-wide pension funds with selection 28 companies in chicken and pig meat value chains. As such, it provides a point of departure to address farm animal welfare risks by institutional investors. The research is commissioned by the Fair Pension Label, a coalition of five Dutch NGOs: Amnesty International, Friends of the Earth Netherlands (Milieudefensie), Oxfam Novib, PAX and World Animal Protection Netherlands (WAP). The financial research is carried out by Profundo; the report is written by Profundo and WAP.

The coalition partners are member of the Fair Finance Guide International (FFGI) network. According to FFGI, financial institutions should expect companies they finance or invest in, to comply with widely supported international standards and initiatives in their production and supply chains. Financial institutions should integrate responsible investment criteria in risk management and investment decisions. FFGI has developed a methodology to assess the responsible investment policies of financial institutions, and on a regular basis publishes policy assessment updates. The FFGI methodology also includes animal welfare assessment criteria, such as the 'five freedoms of animals', and criteria addressing housing and animal transport.

The companies selected for this case study are the world's largest industrialised chicken and pig meat producers and processors, retailers and restaurants. They run high animal welfare risks and corresponding reputational risks - as is described in Chapter 1. Their production or sourcing is typically according to mainstream industry practice, with low minimum welfare requirements. Many of them have been involved in animal welfare scandals in recent years. This chapter is an updated version of the corresponding chapter in the 2018 Fair Finance Guide report 'Risking Animal Welfare'.

Chapter 2 maps the financial links between Dutch pension funds and the world's largest industrialised chicken and pig meat producers and processors, retailers and restaurants.

Chapter 3 describes legislative or voluntary standards, principles and initiatives. In Appendix 1 , an overview is given of how the welfare policies of a selected group of companies compare to EU and responsible minimum standards.

Chapter 4 draws conclusions from the first four chapters and provides recommendations for the pension funds.

A Dutch and English summary of the findings of this case study can be found on the first pages of this report.

Chapter 1 Animal welfare and industrial livestock production

1.1 Animal welfare in industrial livestock production

Industrial or intensive livestock production follows a business model based on exploiting economies of scale. The main objective of industrial livestock production is to maximize profitability based on:[9]

- Efficiency in the use of resources (in particular feed resources) by animals with fast growth and high feed conversion;
- Finding cheaper feed resources anywhere in the world; and;
- intensifying animal density per unit of area (per square metre of buildings).

Industrial livestock farming can be characterised by highly specialised genetic selection (for faster growing animals), high stocking densities (to increase productivity per square meter of building) and a lack of natural light and environmental enrichment (to limit costs). Furthermore, industrial livestock farming is highly labour-extensive. It takes only one farm worker to run thousands of pigs or even tens of thousands of broiler chickens. In contrast with for instance organic stock farming, industrial livestock farming is not land-related: it is completely dependent on external inputs, including feed and fossil fuels.

Industrial livestock production is very well integrated into commodity supply chains in terms of inputs and outputs, including through international trade. Parts of the same animal reared in a stall in Latin-America may very well end up on different plates in Europe, Africa and China. It therefore steers towards the lowest possible production costs and towards standardization of products and sanitary requirements. As a consequence, technologies and management practices used are almost uniform across the world.

Global institutions emphasize that the industrial livestock model is not necessarily the preferred model for meat production. To quote the Director General of the UN Food and Agriculture Organisation (FAO): 'FAO estimates that more than half of the world's rural poor are livestock farmers and pastoralists... We need to make sure that smallholders and pastoralists will not be pushed aside by large capital-intensive operations.' The Principles for Responsible Investments in Agriculture and Food Systems of the United Nations' Committee on World Food Security (UN CFS) also highlight the importance of smallholders, including family farmers in animal husbandry. Smallholder, mixed farming systems provide a major contribution to world food security. It is estimated that smallholders, including livestock farmers, produce 80 per cent of the food consumed in Asia and sub-Saharan Africa[i]. [10]

[i] Note that not all production is conducive to food security. Food security is not just about production (availability), but also about providing livelihoods and income (access), a way to diversify diets (utilization) and proving a buffer to price volatility, market related and other shocks (stability).

There are more reasons to question the wisdom of investing in the industrial livestock model. It has often profound negative impacts on public health and the environment - including contributing to antimicrobial resistance, zoonoses, climate change and biodiversity loss.[11] Investing in plant-based (or in-vitro based) alternatives for industrially produced animal protein may therefore well be more desirable. The successful 2019 IPO of the company Beyond Meat suggests fast growing potential.[12] However, this research does not address the overall complexities of industrial livestock production but is limited to the negative impact on animal welfare. The question of which model(s) of agriculture are most suitable to sustainably feed the world, falls outside the scope of this research.

Increasing attention for – and concern about – animal welfare is reflected in the outcomes of the 2016 Eurobarometer on attitudes towards animal welfare, at the request of the European Commission.[13] More than nine in ten EU citizens believe it is important to protect the welfare of farmed animals (94%), whereas 82% of Europeans believe the welfare of farmed animals should be better protected than currently is the case. Furthermore, no less than 93% agrees that imported products from outside the EU should be produced in compliance with the same animal welfare standards as those in the EU, out of which 62% strongly agrees.

Given these outcomes and trends, animal welfare can not only be considered as an important ethical value a company should adhere to, but also of importance to create business value and become future proof. Good animal welfare practices are more and more indispensable for reputational risk management, accountability towards customers and for seizing opportunities to produce higher quality products, access new markets and customers and to expand existing markets by being ahead of competitors. Furthermore, in many cases, good animal welfare practices can help improve efficiency and food quality.[14]

Finally, the reason to care about animal welfare follows the recognition that animals are – along with people – sentient beings that deserve respect and protection. This is reflected in the 'Five Freedoms'. Originally put forward by the United Kingdom (UK) Farm Animal Welfare Council, these principles underpin international dialogue on animal welfare and are reflected in countless guidelines, recommendations, codes, and legislation.

The five freedoms may be applied to all animals but are especially pertinent for farm animal welfare, expressed as:[15]

1. Freedom from hunger and thirst, by ready access to water and a diet to maintain health and vigour;
2. Freedom from discomfort, by providing an appropriate environment;
3. Freedom from pain, injury, and disease, by prevention or rapid diagnosis and treatment;
4. Freedom to express normal behaviour, by providing sufficient space, proper facilities and appropriate company of the animal's own kind;
5. Freedom from fear and distress, by ensuring conditions and treatment, which avoid mental suffering.

The Five Freedoms are animal welfare principles rather than detailed instructions on how to take care of and treat animals. They emphasize that the welfare of an animal includes its physical and mental state; that good animal welfare implies both fitness and a sense of well-being; and that any animal kept by humans must, at least, be protected from unnecessary suffering. As a consequence, the Five Freedoms also have received criticism as being too broad to be meaningful and too much focused on negative states of welfare and too little on positive welfare. In other words, the Five Freedoms are mainly aimed at preventing suffering, rather than promoting positive experiences for animals.[16]

1.2 Animal welfare in industrial broiler farming

The meat chicken, the so called 'broiler', is the most farmed land animal in the world. More than 70 billion farm animals are reared every year (excluding fish) and about 85% of these are broilers.[17] More than 40 billion of these chickens live in low-welfare, industrial systems. And this number is expected to rise. If left unaddressed, global poultry production is expected to reach 124 million tons by 2020, an increase of 25% within a 10-year timeframe. In South Asia poultry demand is even expected to increase more than sevenfold by 2050, mainly driven by increasing consumption in India, which will soon be the world's most populated country.[18]

This increase in production is projected to almost solely take place by the growth of industrial production facilities – which may also take-over much of current smallholder poultry farming. Currently, the biggest producing countries are the US, China and Brazil – together responsible for 44% of global broiler production. Uniformity and market power concentration of global industrial broiler production is illustrated by the fact that only three genetics companies control the breeds used by the vast majority (95%) of industrial broiler farms.[19]

1.2.1 Chicken sentience

By nature, chickens are forest dwellers: they are a domestic subspecies of the red jungle fowl that is native to Asia. Chickens live in flocks with a naturally sophisticated dominance hierarchy, the proverbial 'pecking order'. Chickens are able to remember and recognise over 100 other individuals and perform over 30 types of call, including calling their young, warning of danger and alerting others to the presence of food. Unlike young human children, chickens are able to comprehend that when an object is taken away and hidden from them, it still exists. Moreover, they can learn how to obtain food by social learning.[20]

Chickens are naturally playful and spend much of the day foraging: captive jungle fowl spend approximately 60-90% of daylight hours foraging. They also like to dust-bathe. This behaviour serves several functions including feather maintenance and parasite control. Flying behaviour is normally limited to roost high up in trees, to escape predators or to establish dominance.[21]

1.2.2 Welfare violations

Within industrial poultry production, chickens (broilers) are bred by crossing three or four grandparental lines to achieve fast growth and efficient feed conversion. As a result of breeding, housing conditions and management practices, the Five Freedoms are often violated:

- **Freedom from hunger, inappropriate feed and thirst**

  Broiler breeders (the parental animals) often suffer from hunger: to prevent fast growth from harming reproductive functions, they are put on a severely restrictive diet.[22] Moreover, it is standard practice that broiler chicks do not get feed and water within the first 24-72 hours after hatching, causing hunger, thirst, and higher mortality rates.[23] Furthermore, the quality of drinking water can pose concerns. For example, in The Netherlands, in 2013, the Animal Health Service ('Gezondheidsdienst voor Dieren') classified 22% of the drinking water in poultry production as 'not suitable' and another 12% as 'less suitable'.[24]

- **Freedom from discomfort**

  Due to fast growth, broilers not seldom have locomotion problems and are very susceptible to heat stress.[25] High ammonia and dust levels are another common issue, causing respiratory discomfort.[26] Broiler breeders can suffer from chicken mite. Transport and slaughter pose additional, often severe risks.[27]

- **Freedom from pain, injury and disease**

  Due to several factors, including fast growth, broilers are at high risk of a range of painful disorders, including lameness, footpad dermatitis, breast blisters, joints and skeletal disorders and heart and lung failure.[28] Infectious diseases like avian flu regularly plague stocks, leading to (preventive) mass culling. Furthermore, broiler breeders are often subject to mutilations: the dubbing of combs and the trimming of beaks and spurs.[29] Slaughter methods often fail to render chickens unconscious, resulting in countless birds dying in pain – and even cooked alive.[30] Fire safety measures are often lacking or inadequate, resulting in large numbers of birds being destroyed, in case of fire. Poor protection against extreme weather events and floods may be an additional source of severe pain and injury (and stress). For example, the 2018 hurricane Florence killed an estimated 3.4 million chickens in US farms linked to companies like Tyson Foods, Sanderson and Purdue.[31]

- **Freedom from fear and chronic stress**

  Limited space and barren housing conditions promote the occurrence and duration of negative social interactions and the resulting social stress. Catching, transport and slaughter cause fear. Rough handling, cramped transport conditions and upside-down shackling for slaughter are widespread. Aggressive mating or semen collection/artificial insemination of broiler breeders is an additional source of fear and stress within industrial poultry production.[32]

- **Freedom to express natural behaviour**

  High stocking densities, genetic selection, monotonous housing conditions and an unnatural lighting regime impair natural behaviour, activity and resting patterns.[33] Foraging activity is substantially less than under semi-natural circumstances. Parent-infant interaction is impossible and the same holds true for establishing social hierarchies: chickens are hatched mechanically and live on farms by tens or hundreds of thousands. Furthermore, broiler breeders run risks to exhibit abnormal behaviour, excessive feather packing and cannibalism. Finally, the freedom to express natural behaviour is constrained by the limited time these birds are allowed to live. Broilers are usually killed at the age of 35-42 days, well before reaching maturity. Under semi-natural circumstances, chickens can easily become 8-10 years.[34]

1.2.3 Mitigation measures

To mitigate the above welfare violations, the following measures are important:[35]

- Decrease stocking densities, allowing broilers space to stand, stretch, turn around, sit, and/or lie down comfortably at the same time, and express natural behaviours. Stocking densities should be low enough to prevent excessive temperatures and humidity; competition, stress, aggression, and abnormal behaviour; and to enable good litter management. Research shows substantial welfare improvements when stocking densities are 30 kg/m2 or lower.[36]

- Improve environments by providing at least 2 meters of usable perch space and two pecking substrates per 1,000 birds. Moreover, ensure a healthy light regime, including by providing natural light and periods of darkness of preferably six hours uninterrupted. This will stimulate natural behaviour. Ammonia and dust levels should be low.
- Use breeds that demonstrate higher welfare outcomes.
- Adopt controlled atmospheric stunning using inert gas or multi-phase systems, or effective electrical stunning without live inversion. Limit transport times to maximum 8 hours.

Generally, the companies in which Dutch pension funds invest – identified in the next chapter – do not, or not sufficiently, respect the Five Freedoms. To take their corporate responsibility, they must implement these mitigation measures. See for a gap analysis of a selection of these companies Appendix 1 .

1.3 Animal welfare in industrial pig farming

Each year, globally, 1.4 billion pigs are reared and slaughtered for their meat, about two-thirds of them in intensive systems. Half of the world's pigs are 'produced' in China, many still by smallholders rather than in intensive farms, although this is changing rapidly, and the government is pushing hard for vertically integrated, intensive pork production. Other big pork producing countries, although far behind China, are the US, Brazil, Germany, Spain, Russia and Vietnam. The FAO projects that the world's pig production will grow on average with 0.8% per annum until 2030. As in poultry production, market power is increasingly concentrated. In contrast, and for religious reasons, pig farming in Muslim countries is relatively minimal, if not absent.[37]

1.3.1 Pig sentience

Domestic pigs are descendants from wild boars, a species first domesticated about 9,000 years ago. However, cognitively and behaviourally modern pigs are not very different from their ancestors, since selective breeding has been primarily focused on production traits like fast growth and reproduction.[38] Pigs are very social and intelligent animals with a highly developed sense of smell. Studies of pig cognition, emotion, and behaviour show that the ethological traits inherent in pigs are similar to those of dogs and chimpanzees. For example, research suggests that pigs possess a certain level of numerical understanding and have the ability to take the perspective of others (known as 'Machiavellian Intelligence').[39]

1.3.2 Welfare violations

As with chickens, breeding and farming conditions within industrial pork production are often at odds with the five freedoms:

- **Freedom from hunger, inappropriate feed and thirst**

  Many sows are subjected to restricted feeding regimes (to the extent that their behaviour is affected).[40] By nature, pigs spend a considerable time of the day foraging for a variety of different foodstuffs. By contrast, in intensive pig farming, the animals get uniform feed only once or twice a day, which limits eating behaviour to a bare minimum. Furthermore, access to drinking water during long distance transport is often problematic.[41]

- **Freedom from discomfort**

  Due to barren housing conditions, including hard, often wet and slippery slatted floors, pigs generally have no opportunity to comfortably lay down or nest and are hindered in their locomotion – which is amplified by genetic selection on fast growth. Sows may even show pressure ulcers.[42] Poor air quality (notably high levels of ammonia) often result in ocular, olfactory and respiratory discomfort. Transport, not seldom over long distances, and problematic slaughter practices are an additional source of (severe) discomfort.

- **Freedom from pain, injury and disease**

  Routine mutilations are standard practice in most countries, including castration, tail docking and teeth clipping. Lack of enrichment and ensuing boredom and aggression is often cause of injuries. Substantial percentages of animals – up to 60% in growing pigs - suffer from gastric ulcers.[43] Lameness, osteochondrosis (leg weakness) and leg lesions are widespread. In fact, lameness is a common cause for culling sows second only to reproductive 'failure'. On top of this, sufficient safety measures are often lacking, posing relatively high risks for animals dying by fires and other calamities.[44]

  Infectious diseases like swine fever pose additional risks. In some countries outbreak containment measures include mass culling of healthy animals. The worst example is the 2018-2019 outbreak of African Swine Fever in China and South-East Asia. Its unprecedented scale may lead to the culling of 200 million pigs, many of whom are buried alive and burnt alive.[45]

- **Freedom from fear and chronic stress**

  Fearfulness is affected by type of housing.[46] Due to very limited space and barren conditions, the occurrence and duration of negative social interactions (and the resulting social stress) is much higher in intensive systems than in extensive systems.[47] Handling, transport and slaughter practices often cause acute fear and stress.[48]

  Especially worrying in this respect is CO_2 gassing of pigs, which cause intense stress and suffering.[49] Many large pig producers – including Smithfield, Tyson Foods. Pilgrim's JBS and Vion Foods – use this method for stunning. It is beneficial for efficiency and meat quality, but not for the animals involved. Most companies publicly deny negative welfare impacts. Only the Dutch pork and beef producer Vion Foods has shown bravery and leadership by letting the process be filmed – the result of which, carefully commented upon by welfare scientists, has helped to aggravate concerns to the extent that, in 2015, Dutch Parliament adopted a motion to phase out this slaughter method in The Netherlands.[50]

- **Freedom to express natural behaviour**

  High stocking densities severely limit behavioural space. Barren housing conditions impede social, exploring and rooting behaviour as well as wallowing. Pigs – and especially sows – in intensive systems are markedly less active than pigs in semi-natural environments.[51] Stereotypical (abnormal) behaviour such as sham chewing and bar biting is not uncommon amongst individually confined sows, still common practice outside the EU. Nesting behaviour by pregnant sows is thwarted. Finally – but less extreme as in the case of broilers – the time allowed to pigs to express natural behaviours is very limited: the typical slaughter age is six months, the age of reaching their adolescence.

Note that progress is being made regarding the housing of sows. Individual lifelong confinement in gestation crates has been greatly restricted within the EU since from January 2013 "Member States shall ensure that sows and gilts are kept in groups during a period starting from four weeks after the service to one week before the expected time of farrowing"[52], whilst a series of companies have committed to phasing out this practice before the mid-2020s, including BRF and Nestlé.[53] Nevertheless, the prolonged use of gestation crates is still mainstream practice in the US, Latin-America and Asia. Moving to group housing is very important, but in itself does not guarantee a sufficiently enriched environment to enable exploring behaviour. Moreover, commitments to out phasing farrowing crates are rare. In the same vein, enrichment for fattening pigs remain an enormous challenge, even for production within the EU.

1.3.3 Mitigation measures

To mitigate the above welfare violations, the following measures are important:

- Decrease stocking densities, allowing animals space to stand, stretch, turn around, sit, and/or lie down comfortably at the same time. Stocking densities should be low enough to prevent excessive temperatures and humidity; competition, stress, aggression, and abnormal behaviour; and to enable good litter management. Gestation and farrowing crates for sows must be phased out.
- Provide environmental enrichment to enable proper investigation and manipulation activities for all stages of pig production. Materials need to be ingestible, chewable, destructible and odorous, regularly replaced to sustain interest, accessible to all pigs, and clean and hygienic. Depending on climatic conditions, bedding substrates, such as straw, are strongly encouraged for additional physical and thermal comfort.
- Provide a sufficient quantity of bulky high-fibre forage to prevent hunger and digestive problems for breeding gilts and sows on a restricted diet, in addition to their ration of energy-rich food.
- Minimize painful procedures. Tail docking must not be carried out routinely. It may be used only as a last resort when all risk factor mitigation measures have failed to prevent tail biting behaviour. Surgical castration must not be carried out. Instead, immunocastration can be used or intact males raised.
- Avoid selective breeding to increase litter sizes to beyond the number a sow can raise.
- Postpone the weaning of piglets until the age of 28 days or later to be better prepared for the physiological, environmental and social challenges associated with the change in housing, diet, and social environment at weaning.
- Limit transport time to 8 hours. Electric goads or prods should not be used when catching, loading, unloading, or moving pigs. Pigs should be moved with a flat "pig board" rather than with a stick.
- Stun pigs before slaughter using a method that causes instantaneous unconsciousness lasting until death. Phase out CO2 gassing of pigs.

Generally, the companies in which Dutch pension funds invest – identified in the next chapter – do not, or not sufficiently, respect the Five Freedoms. To take their corporate responsibility, they must implement these mitigation measures. See for a gap analysis of a selection of these companies 0.

Chapter 2 Financial relationships

To establish the financial links, ten Dutch pension funds and 28 chicken ad pig meat companies were selected. The methodology for the financial research can be found in Appendix 1 .

2.1 General findings

For the selected companies, the investments in bonds and shares by the ten Dutch pension funds have been investigated. Data availability was found as follows:

Six pension funds disclose information on investment relations and investment values:

- Algemeen Burgerlijk Pensioenfonds (ABP);
- Pensioenfonds Zorg en Welzijn (PFZW);
- Pensioenfonds Horeca & Catering (PH&C);
- Pensioenfonds van de Metalektro (PME);
- Pensioenfonds Metaal en Techniek (PMT); and
- Stichting Bedrijfstakpensioenfonds voor de Bouwnijverheid (BpfBOUW).

Three pension funds disclose information on their investment relations, but do not provide the investment values:

- BPL Pensioen;
- Pensioenfonds Detailhandel; and
- Pensioenfonds Vervoer).

Stichting Pensioenfonds voor Personeelsdiensten (StiPP) pension fund does not disclose any detail about its investments in companies. An indicative investment link is identified through its external asset manager, Van Lanschot Kempen.

All the ten pension funds invest in one or more companies selected for this study. Investments were found in 21 of the 28 selected companies. Table 1 on the next page provides the number of investment links identified for the ten Dutch pension funds. The links of ABP, BpfBOUW, BPL, Pensioenfonds Detailhandel, PFZW, PH&C, PME, PMT, and Vervoer is definitive as it is derived from their public reports.

ABP, BpfBOUW, and PFZW have the highest number of investment links. The three pension funds had links with 17 companies out of 28 selected companies.

StiPP had links with six selected companies through its asset manager Van Lanschot Kempen. StiPP excludes Walmart Stores Inc from its active funds but still has exposure to this company through passive investing.[54]

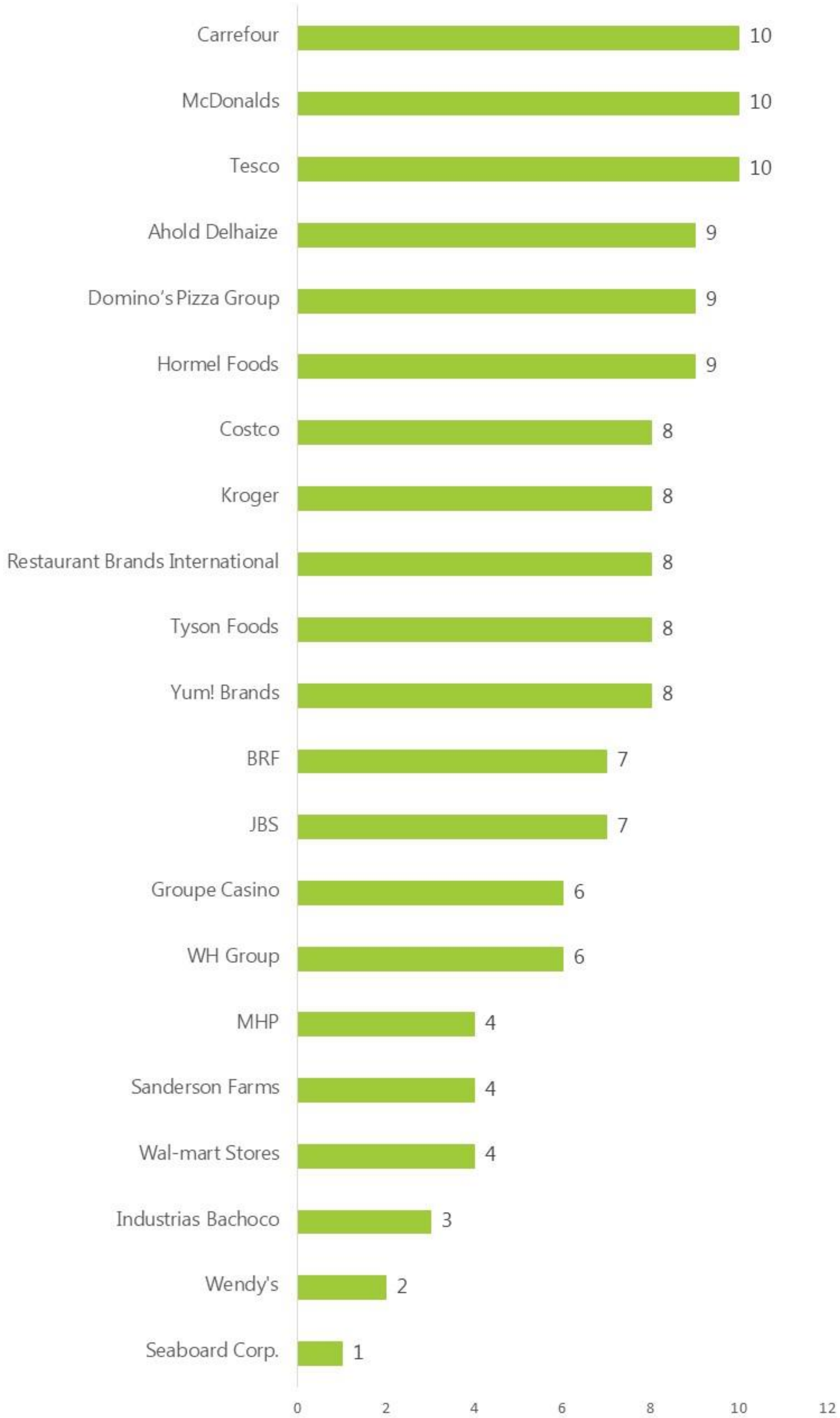
Table 1 Number of investment links per pension fund*[55]

Selected companies	ABP	BpfBOUW	BPL	Detailhandel	PFZW	PH&C	PME	PMT	Vervoer	StiPP**	Total
Ahold Delhaize	x	x	x	x	x	x	x	x	x		9
BRF	x	x		x	x		x	x	x		8
Carrefour	x	x	x	x	x	x	x	x	x	x	10
Costco	x	x		x	x	x	x	x	x		8
Domino's Pizza Group	x	x	x	x	x	x	x	x	x		9
Groupe Casino			x	x	x		x	x		x	7
Hormel Foods	x	x	x	x	x	x	x	x	x		9
Industrias Bachoco	x	x			x						3
JBS	x	x		x	x	x	x		x		7
Kroger	x	x	x	x	x	x	x	x			8
McDonalds	x	x	x	x	x	x	x	x	x	x	10
MHP	x	x		x	x						4
Restaurant Brands International	x	x	x	x	x		x	x	x		9
Sanderson Farms	x	x				x				x	4
Seaboard Corp.						x					1
Tesco	x	x	x	x	x	x	x	x	x	x	10
Tyson Foods	x	x		x	x	x	x	x	x		8
Wal-mart Stores				x		x			x	x	4
Wendy's						x	x				2
WH Group	x	x			x		x	x	x		7
Yum! Brands	x	x		x	x	x	x	x	x		8
Total	**17**	**17**	**9**	**16**	**17**	**15**	**16**	**14**	**14**	**6**	

* Most recent filings, as of February 2019; ** Indicative link through asset manager/s

Figure 1 on the next page provides number of links per selected company. Out of the 28 selected companies, 21 companies had investments from Dutch pension funds as per the most recent filings in February 2019. Restaurant McDonalds, and the retailers Tesco and Carrefour had investment links with all the ten pension funds. Seaboard Corp. had investment links with only one pension fund, PH&C.

Figure 1 Number of investment links per selected company*[56]



* Most recent filings, as of February 2019.

In terms of value chain segment, the Dutch pension funds are invested in five chicken meat companies, four pig meat companies, five restaurant companies, and seven retailers. No investments could be identified for two chicken meat companies namely LDC (France) and Guangdong Wen's Food Group (China), and five pig meat companies namely Cofco Meat holdings (China), Ningbo Tech-bank (China), RusAgro (Russia), Thai Foods Group (Thailand), and Yurun Group (China). Table 2 shows Dutch pension funds investment links per value chain segment.

Table 2 Investment links of Dutch pension funds per value chain segment*[57]

Companies	ABP	Bpf-BOUW	BPL	Detailhandel	PFZW	PH&C	PME	PMT	Vervoer	StiPP**
Chicken meat										
Industrias Bachoco	x	x			x					
JBS	x	x		x	x	x	x		x	
MHP	x	x		x	x					
Sanderson Farms	x	x				x				x
Tyson Foods	x	x		x	x	x	x	x	x	
Total chicken meat	*5*	*5*	*0*	*3*	*4*	*3*	*2*	*1*	*2*	*1*
Pig meat										
BRF	x	x		x	x		x	x	x	
Hormel Foods	x	x	x	x	x	x	x	x	x	
Seaboard Corp.						x				
WH Group	x	x			x		x	x	x	
Total pig meat	*3*	*3*	*1*	*2*	*3*	*2*	*3*	*3*	*3*	-
Restaurant companies										
Domino's Pizza Group	x	x	x	x	x	x	x	x	x	
McDonalds	x	x	x	x	x	x	x	x	x	x
Restaurant Brands International	x	x	x	x	x		x	x	x	
Wendy's						x	x			
Yum! Brands	x	x		x	x	x	x	x	x	
Total restaurant companies	*4*	*4*	*3*	*4*	*4*	*4*	*5*	*4*	*4*	*1*
Retailers										
Ahold Delhaize	x	x	x	x	x	x	x	x	x	
Carrefour	x	x	x	x	x	x	x	x	x	x
Costco	x	x		x	x	x	x	x	x	
Groupe Casino			x	x	x		x	x		x
Kroger	x	x	x	x	x	x	x	x		

Companies	ABP	Bpf-BOUW	BPL	Detailhandel	PFZW	PH&C	PME	PMT	Vervoer	StiPP**
Tesco	x	x	x	x	x	x	x	x	x	x
Walmart Stores				x		x			x	x
Total retailers	*5*	*5*	*5*	*7*	*6*	*6*	*6*	*6*	*5*	*4*
Total links	**17**	**17**	**9**	**16**	**17**	**15**	**16**	**14**	**14**	**6**

* Most recent filings, as of February 2019; ** Indicative link through asset manager/s.

As mentioned earlier, six pension funds namely ABP, BpfBOUW, PFZW, PH&C, PME, and PMT disclose information on both, their investment relations and investment values. As per the most recent filings available in February 2019 (for PH&C as of August 2019), the six Dutch pension funds invested € 3.4 billion in the selected companies. ABP accounted for the largest share (50% of € 3.4 billion) of this value and invested about € 1.7 billion followed by PFZW that invested about € 693 million (20% of € 3.4 billion) in the selected companies as of February 2019, most recent filings. The other four pension funds have a relatively low share in the total investments, respectively 12% (PMT), 9% (PME), 7% (BpfBOUW), and 1% (PH&C). Table 3 provides details of each pension fund's investment values in the selected companies per value segment and company.

Table 3 Investments of six Dutch pension funds per value chain segment* (in € million)[58]

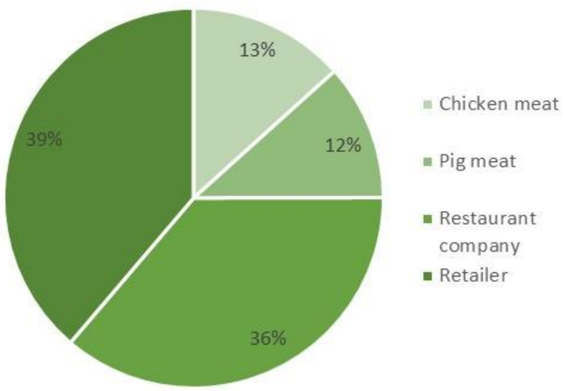
Companies	ABP	BpfBOUW	PFZW	PH&C	PME	PMT	Total	% of Total
Chicken meat								
Industrias Bachoco	2	0.3	3				5	
JBS	83	4	5	0.1	0.1		92	
MHP	2	0.3	16				19	
Sanderson Farms	58	6		0.2			64	
Tyson Foods	144	16	56	1.5	22	35	275	
Total chicken meat	*289*	*26*	*81*	*2*	*22*	*35*	*455*	*13%*
Pig meat								
BRF	37	2	10		11	16	76	
Hormel Foods	81	10	29	1	4	8	133	
Seaboard Corp.				0.1			0.1	
WH Group	145	15	13		9	5	187	
Total pig meat	*263*	*26*	*53*	*1*	*25*	*29*	*397*	*12%*

Companies	ABP	BpfBOUW	PFZW	PH&C	PME	PMT	Total	% of Total
Restaurant companies								
Domino's Pizza Group	10	2	6	0.1	3	6	27	
McDonalds	618	103	133	11	69	67	1,001	
Restaurant Brands International	3	0.2	23		7	20	54	
Wendy's				0.2	0.3		0.5	
Yum! Brands	67	35	24	2	12	16	155	
Total restaurant companies	*698*	*140*	*186*	*13*	*92*	*109*	*1,237*	*36%*
Retailers								
Ahold Delhaize	127	36	49	3	21	22	258	
Carrefour	8	0.4	73	7	38	54	173	
Costco	212	18	139	8	36	54	468	
Groupe Casino			6		16	37	59	
Kroger	47	1	49	1	27	44	169	
Tesco	58	8	58	4	21	30	179	
Wal-mart Stores				10			10	
Total retailers	*452*	*64*	*374*	*33*	*159*	*240*	*1,322*	*39%*
Total	**1,702**	**256**	**693**	**49**	**298**	**414**	**3,411**	**100%**
% of total							**100%**	

* Most recent filings, as of February 2019.

Six Dutch pension funds invest 39% of the identified investments in the selected retail companies and about 36% in restaurant companies. The chicken and pig meat companies accounted for 13% and 12% respectively of the total identified investments by Dutch pension funds, see Figure 2.

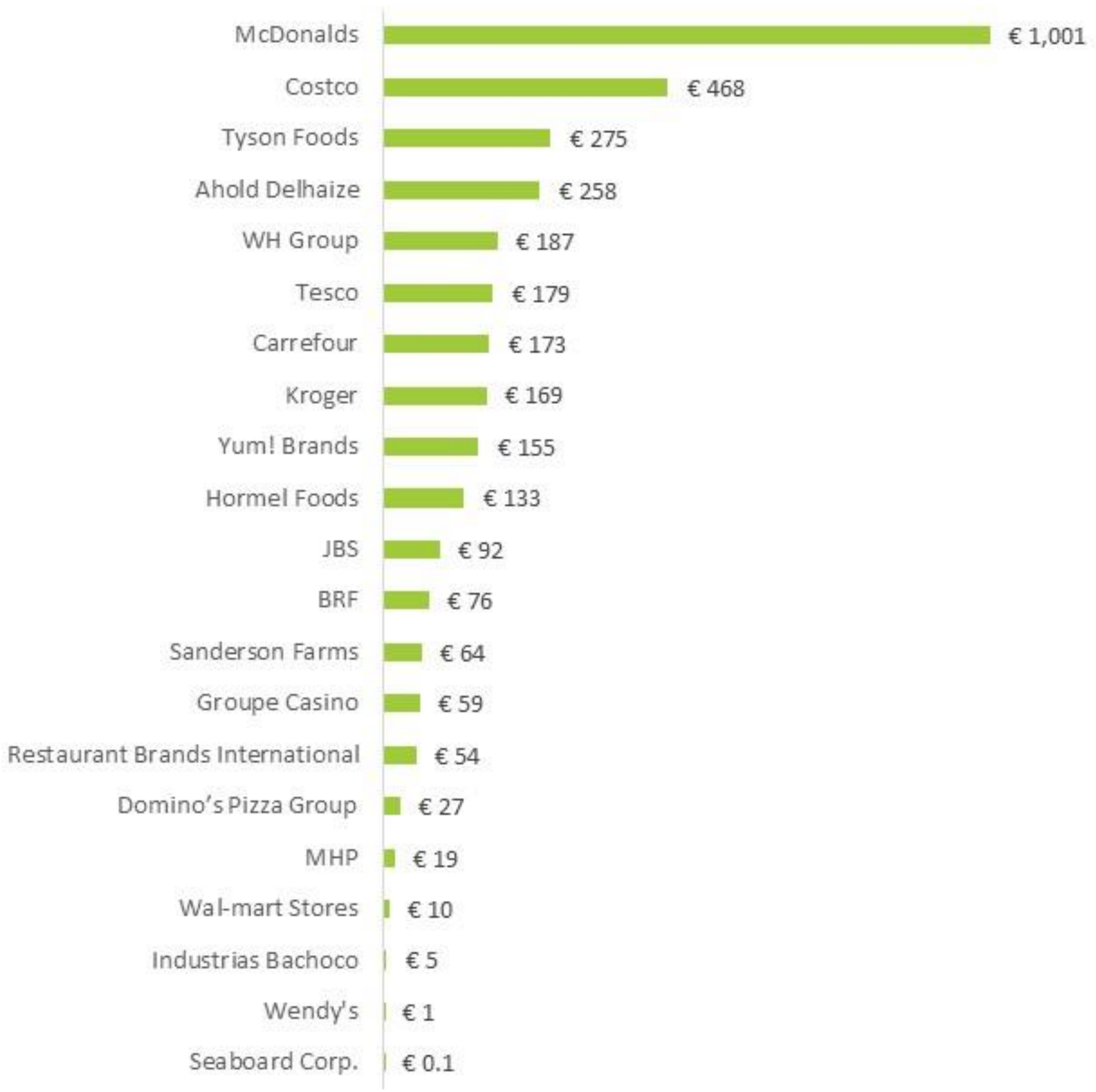
Figure 2 Share of investments per value segment*[59]



* Most recent filings, as of February 2019.

Figure 3 shows the value of the six Dutch pension funds' investments per selected company as of February 2019. McDonalds, Costco, and Tyson Foods have attracted by far the largest values of investments by the Dutch pension funds. The fast food restaurant McDonalds attracted largest investment share with a value of € 1 billion. The retailer Costco accounted for second largest share with identified investment value (€ 468 million).

Figure 3 Value of Dutch pension fund investments per company* (in € million)[60]



* Most recent filings, as of February 2019.

The next sections present the profiles and financial research findings of the individual pension funds in more detail. The profiles of individual pension funds are taken form the Fair Pension Label policy assessment report published in March 2019 and hence are not based on the most recent Annual Reports and filings.[61]

2.2 Algemeen Burgerlijk Pensioenfonds (ABP)

2.2.1 Profile

Stichting Pensioenfonds ABP (ABP) is the industry-wide pension fund for employees of government and educational institutions in the Netherlands. ABP is based in Heerlen, has 2.9 million participants and 43 employees (41 fte's).[62]

ABP owns 92.2% of the shares of APG Groep N.V., a financial services provider that through its subsidiary APG Asset Management is responsible for the asset management within ABP.[63] APG Asset Management also contracts some external asset managers to manage ABP's assets.[64] At the end of 2017, ABP's total assets amounted to € 479.3 billion, of which € 477.3 billion were investments.[65] As of 31 March 2018, the 12-month average coverage ratio was 103.0%.[66]

Table 4 provides an analysis of the investment categories relevant for ABP. As can be seen in the table, ABP is active in one of the four different investment categories.

Table 4 Analysis of relevant investment categories for ABP (in € billion)

Investment category	Asset type	Value at end of 2017	%	Relevant
Corporate credits	Loans and credits to companies (MNEs/SMEs)	-		No
Project finance	*(included in loans to companies)*	-		No
Asset management own account	Corporate shares	150.0	31.3%	Yes
	Private equity	19.5	4.1%	
	Corporate bonds	27.5	5.7%	
	Government bonds	66.2	13.8%	
	Mortgages	17.1	3.6%	
	Derivatives	56.3	11.7%	
	Real estate	50.4	10.5%	
	Other/undefined	90.3	18.8%	
Mortgages	Mortgage loans	-		No
	Other balance sheet assets	2.0	0.4%	
	Total balance sheet assets	479.3	100.0%	
Asset management for account of clients[ii]	Assets under management through APG	470.5		Yes

Source: ABP (2018, April), *Jaarverslag 2017*, p. 134, 145-149; ABP (2018, March*), Overzicht bedrijfsobligaties ABP*, APG (2018, April), *Annual Report* (Dutch), p. 3.

ii Total AUM includes the AUM of ABP as well as other institutional investors that are client of APG.

2.2.2 Financial relationships

As of February 2019, ABP's investments in shares and bonds of the selected companies stood at € 1.7 billion. The largest investment link is identified with the restaurant company McDonalds (€ 618 million) followed by the retailer Costco (€ 212 million). The chicken meat company Tyson (€ 144 million) and the pig meat company WH Group (€ 145 million) has also attracted considerable investments from ABP. Table 5 shows ABP's investments per company and value chain segment.

Table 5 Investments of ABP in the selected companies, per value chain segment* (in € million)

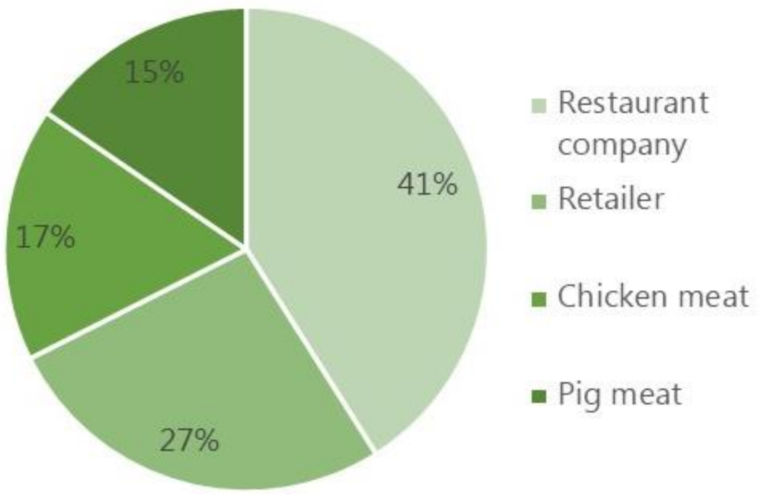
No.	Value chain segment	Values
Chicken meat		
1	Tyson Foods	144
2	JBS	83
3	Sanderson Farms	58
4	Industrias Bachoco	2
5	MHP	2
	Total chicken meat	*289*
Pig meat		
1	WH Group	145
2	Hormel Foods	81
3	BRF	37
	Total pig meat	*263*
Restaurant companies		
1	McDonalds	618
2	Yum! Brands	67
3	Domino's Pizza Group	10
4	Restaurant Brands International	3
	Total restaurant companies	*698*
Retailers		
1	Costco	212
2	Ahold Delhaize	127
3	Tesco	58
4	Kroger	47
5	Carrefour	8
	Total Retailers	*452*
17	**Total**	**1,702**

* Most recent filings, as of February 2019;

Source: ABP (2017), "Beursgenoteerde beleggingen van ABP - Aandelen & Converteerbare obligaties per 31/12/2017", viewed in December 2018; ABP (2018), "Overzicht bedrijfsobligaties ABP, per 31/03/2018", viewed in December 2018.

As per Figure 4, out of total investments identified in the selected companies for ABP, the pension fund has invested mostly in restaurants companies (41%) and retailers (27%). Chicken meat company investments accounted for 17% and pig meat company investments share stood at 15% of the total identified investments.

Figure 4 ABP's investment share per value segment*



* Most recent filings, as of February 2019.

Source: ABP (2017), "Beursgenoteerde beleggingen van ABP - Aandelen & Converteerbare obligaties per 31/12/2017", viewed in December 2018; ABP (2018), "Overzicht bedrijfsobligaties ABP, per 31/03/2018", viewed in December 2018.

2.3 Bedrijfstakpensioenfonds voor de Bouwnijverheid (BpfBOUW)

2.3.1 Profile

The Foundation for the Construction Industry Pension Fund (BpfBOUW) is the industry-wide pension fund for employers and employees of the construction industry in the Netherlands. BpfBOUW is based in Amsterdam and has 775,600 participants. BpfBOUW itself does not have any employees, as the 12 members that at the end of 2017 were part of the pension fund´s board bureau and were employed by the Foundation Technical Bureau for Construction. The real estate asset manager Bouwinvest Real Estate Investment Management (REIM) is a 100% subsidiary of BpfBOUW and at the end of December 2017 accounted for 152.5 full time equivalents.[67]

BpfBOUW has outsourced most of the asset management tasks to APG Asset Management, part of the APG Groep (Netherlands) which is in turn controlled by Dutch pension fund ABP.[68] APG Asset Management also contracts some external asset managers to manage BpfBOUW's assets.[69] The real estate asset management is executed by BpfBOUW's subsidiary REIM.[70] At the end of 2017, BpfBOUW's total assets amounted to € 63.7 billion, of which € 63.4 billion were investments.[71] As of 31 May 2018, the 12-month average coverage ratio was 117.4%.[72]

Table 6 provides an analysis of the investment categories relevant for BpfBOUW. As can be seen in the table, BpfBOUW is active in one of the four different investment categories.

Table 6 Analysis of relevant investment categories for BpfBOUW (in € billion)

Investment category	Asset type	Value at end of 2017	%	Relevant
Corporate credits	Loans and credits to companies (MNEs/SMEs)	-		No
Project finance	*(included in loans to companies)*	-		No
Asset management own account	Corporate shares	19.1	30.0%	Yes
	Private equity (incl. infrastructure)	2.0	3.2%	
	Corporate bonds	12.8	20.1%	
	Government bonds	10.3	16.1%	
	Mortgages	0.0	0.0%	
	Derivatives	3.2	5.0%	
	Real estate	8.7	13.6%	
	Other/undefined	7.3	11.5%	
Mortgages	Mortgage loans	-		No
	Other balance sheet assets	0.4	0.6%	
	Total balance sheet assets	63.7	100.0%	
Asset management for account of clients[iii]	Assets under management through Bouwinvest	9.4		Yes

Source: BpfBOUW (2018, June), *Jaarverslag 2017*, p. 12, 60-61, 87, 108; Bouwinvest (n.d.), "Over Bouwinvest", online: https://www.bouwinvest.nl/over-ons/over-bouwinvest/, viewed in September 2018; Bouwinvest REIM (2018, April), *Annual Report* (Dutch) 2017, p. 3.

2.3.2 Financial relationships

As per most recent filings in February 2019, BpfBOUW had investments valued at € 256 million in the selected companies. Almost 40% of this investment was in the restaurant company McDonalds. Table 7 on the next page shows the investments of BpfBOUW in the selected companies.

[iii] Total AUM includes the AUM of BpfBOUW as well as other institutional investors such as pension funds that are client of Bouwinvest REIM.

Table 7 Investments of BpfBOUW in the selected companies, per value chain segment* (in € million)

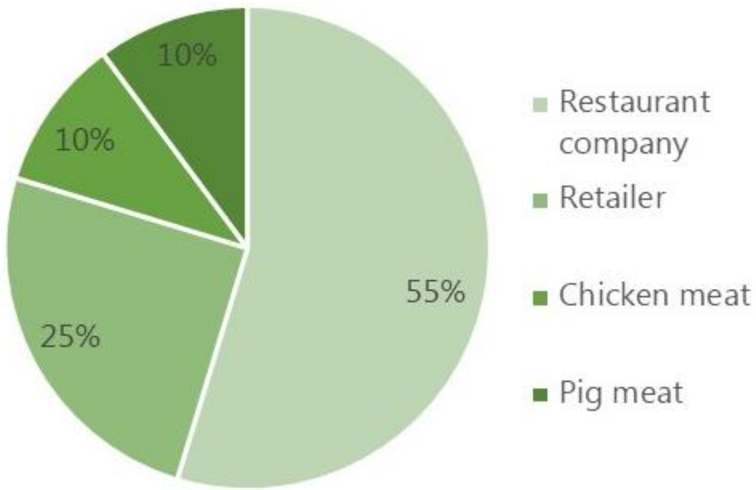
No.	Value chain segment	Values
Chicken meat		
1	Tyson Foods	15.7
2	Sanderson Farms	5.6
3	JBS	3.7
4	Industrias Bachoco	0.3
5	MHP	0.3
5	*Total chicken meat*	25.6
Pig meat		
1	WH Group	14.7
2	Hormel Foods	9.5
3	BRF	2.1
3	*Total pig meat*	*26.4*
Restaurant companies		
1	McDonalds	102.8
2	Yum! Brands	35.1
3	Domino's Pizza Group	1.5
4	Restaurant Brands International	0.2
4	*Total restaurant companies*	*139.6*
Retailers		
1	Ahold Delhaize	36.4
2	Costco	17.7
3	Tesco	8.2
4	Kroger	1.4
5	Carrefour	0.4
5	*Total retailers*	*64.1*
19	**Total**	**255.6**

* most recent filings, as of February 2019.

Source: BpfBOUW (2018), "Aandelenportefeuille BpfBOUW per 30 juni 2018", viewed in December 2018.

Figure 5 shows the share of BpfBOUW's investment per value segment. Of its total identified investments, the pension fund invested about 55% in the restaurant companies, 25% in retailers, and 10% each in the chicken and pig meat companies.

Figure 5 BpfBOUW's investment share per value segment*



* most recent filings, as of February 2019.

Source: BpfBOUW (2018), "Aandelenportefeuille BpfBOUW per 30 juni 2018", viewed in December 2018.

2.4 BPL Pensioen

2.4.1 Profile

BPL Pensioen (BPL) is the industry-wide pension fund for employers and employees of the agriculture industry in the Netherlands. BPL is based in Woerden, has 639,100 participants and does not have any employees.

BPL has outsourced most of the asset management tasks to Achmea Investment Management (Netherlands), which is part of Achmea (Netherlands). Syntrus Achmea Real Estate & Finance (Netherlands), also part of Achmea, has been contracted to manage BPL's real estate portfolio. At the end of 2016, BPL's total assets amounted to € 16.4 billion, of which € 16.1 billion were investments. As of 31 March 2018, the 12-month average coverage ratio was 102.4%.

Table 8 on the next page provides an analysis of the investment categories relevant for BPL. As can be seen in the table, BPL is active in one of the four different investment categories.

Table 8 Analysis of relevant investment categories for BPL (in € billion)

Investment category	Asset type	Value at end of 2016	%	Relevant
Corporate credits	Loans and credits to companies (MNEs/SMEs)	-		No
Project finance	*(included in loans to companies)*	-		No
Asset management own account	Corporate shares	4.4	26.8%	Yes
	Private equity	0.1	0.6%	
	Corporate bonds	1.6	9.8%	
	Government bonds	3.6	22.0%	
	Mortgages	0.0	0.0%	
	Derivatives	0.8	4.9%	
	Real estate	2.0	12.2%	
	Other/undefined	3.6	22.0%	
Mortgages	Mortgage loans	-		No
	Other balance sheet assets	0.3	1.8%	
	Total balance sheet assets	**16.4**	**100.0%**	

Source: BPL Pensioen (2017, June), *Jaarverslag 2016*, p. 80, 91-92.

2.4.2 Financial relationships

As per the most recent filing as of February 2019, BPL discloses the names of the companies where it invests in however it doesn't disclose the investment values. This research identified BPL's investment links with 9 out of 28 selected companies.[73]

- Pig meat

1. Hormel Foods

- Restaurant companies

2. Domino's Pizza Group
3. McDonalds
4. Restaurant Brands International

- Retailers

5. Ahold Delhaize
6. Carrefour
7. Groupe Casino
8. Kroger
9. Tesco

BPL does not have any investment link to the selected chicken meat producing companies.

2.5 Pensioenfonds Detailhandel

2.5.1 Profile

The Foundation for the Retail Industry Pension Fund (Pensioenfonds Detailhandel) is the industry-wide pension fund for employers and employees of the retail industry in the Netherlands. Pensioenfonds Detailhandel is based in Utrecht and has 1.1 million participants. Over the year 2016, Pensioenfonds Detailhandel on average had six employees.[74]

Pensioenfonds Detailhandel has outsourced the management of its assets to BlackRock Investment Management (United Kingdom), which is part of BlackRock (United States).[75] At the end of 2016, Pensioenfonds Detailhandel's total assets amounted to € 20.0 billion, of which € 19.6 billion were investments.[76] As of 31 March 2018, the 12-month average coverage ratio was 110.7%.[77]

Table 9 provides an analysis of the investment categories relevant for Pensioenfonds Detailhandel. As can be seen in the table, Pensioenfonds Detailhandel is active in one of the four different investment categories.

Table 9 Analysis of relevant investment categories for Pensioenfonds Detailhandel (in € billion)

Investment category	Asset type	Value at end of 2016	%	Relevant
Corporate credits	Loans and credits to companies (MNEs/SMEs)	-		No
Project finance	*(included in loans to companies)*	-		No
Asset management own account	Corporate shares	4.7	23.5%	Yes
	Private equity	0.04	0.2%	
	Corporate bonds	2.6	13.0%	
	Government bonds	8.1	40.5%	
	Mortgages	0.1	0.5%	
	Derivatives	1.0	5.0%	
	Real estate	0.9	4.5%	
	Other/undefined	2.2	11.0%	
Mortgages	Mortgage loans	-		No
	Other balance sheet assets	0.4	2.0%	
	Total balance sheet assets	**20.0**	**100.0%**	

Source: Pensioenfonds Detailhandel (2017, December), *Jaarverslag 2016*, p. 85, 87-88.

2.5.2 Financial relationships

Pensioenfonds Detailhandel discloses the names of the companies where it invests in however it doesn't disclose the investment values. This research identified the pension fund's investment links with 16 out of 28 selected companies as per the most recent filings available in February 2019.[78]

- Chicken meat

1. JBS
2. MHP
3. Tyson Foods

- Pig meat

4. BRF
5. Hormel Foods

- Restaurant companies

6. Domino's Pizza Group
7. McDonalds
8. Restaurant Brands International
9. Yum! Brands

- Retailers

10. Ahold Delhaize
11. Carrefour
12. Costco
13. Groupe Casino
14. Kroger
15. Tesco
16. Walmart Stores

2.6 Pensioenfonds Horeca & Catering (PH&C)

2.6.1 Profile

Pensioenfonds Horeca & Catering (PH&C) is the industry-wide pension fund for employers and employees of the hotel and catering industry in the Netherlands. PH&C is based in Zoetermeer, has 1.2 million participants and at the end of December 2017 had 125 employees (based on full time equivalents).[79]

PH&C has outsourced the asset management tasks to multiple external asset managers, each of which is responsible for a specific part of the investment portfolio as mentioned below:[80]

- Corporate shares and private equity:
  - AlpInvest (Netherlands)
  - BlackRock (United States)
  - BMO Global Asset Management (Netherlands)
  - Goldman Sachs (United States)
  - HarbourVest (United States)
  - Northern Trust (United States)
  - Principal Global Investors (United States)
  - RobecoSAM (Switzerland)

    - SPF Beheer (Netherlands)
    - State Street (United States)
- Bonds:
    - BMO Global Asset Management (Netherlands)
    - Loomis Sayles (United States)
    - Pramerica (Ireland)
    - Western Asset Management (United States)
- Mortgages:
    - Syntrus Achmea Real Estate & Finance (Netherlands)
    - Aegon Asset Management (Netherlands)
- Real estate:
    - Altera (Netherlands)
    - Northern Trust (United States)

At the end of 2017, PH&C's total assets amounted to € 10.5 billion, of which € 10.2 billion were investments.[81] As of 30 June 2018, the 12-month average coverage ratio was 114%.[82]

Table 10 provides an analysis of the investment categories relevant for PH&C. As can be seen in the table, PH&C is active in one of the four different investment categories.

Table 10 Analysis of relevant investment categories for PH&C (in € billion)

Investment category	Asset type	Value at end of 2017	%	Relevant
Corporate credits	Loans and credits to companies (MNEs/SMEs)	-		No
Project finance	*(included in loans to companies)*	-		No
Asset management own account	Corporate shares	3.9	37.1%	Yes
	Private equity	0.3	2.9%	
	Bonds (includes corp. and gov. bonds)	3.9	37.0%	
	Mortgages	0.4	3.8%	
	Derivatives	0.9	8.6%	
	Real estate	1.1	10.5%	
	Other/undefined	-		
Mortgages	Mortgage loans	-		No
	Other balance sheet assets	0.3	2.6%	
	Total balance sheet assets	**10.5**	**100.0%**	

Source: Pensioenfonds Horeca & Catering (2018, June), *Jaarverslag 2017*, p. 13, 54, 63.

2.6.2 Financial relationships

As per its most recent filings in March 2019, PH&C had investments valued at € 49 million in the selected companies. McDonalds and Wal-mart Stores accounted for almost 40% of this investment value (about 20% each). Table 11 shows the investment of BpfBOUW in the selected companies.

Table 11 Investments of PH&C in the selected companies, per value chain segment* (in € million)

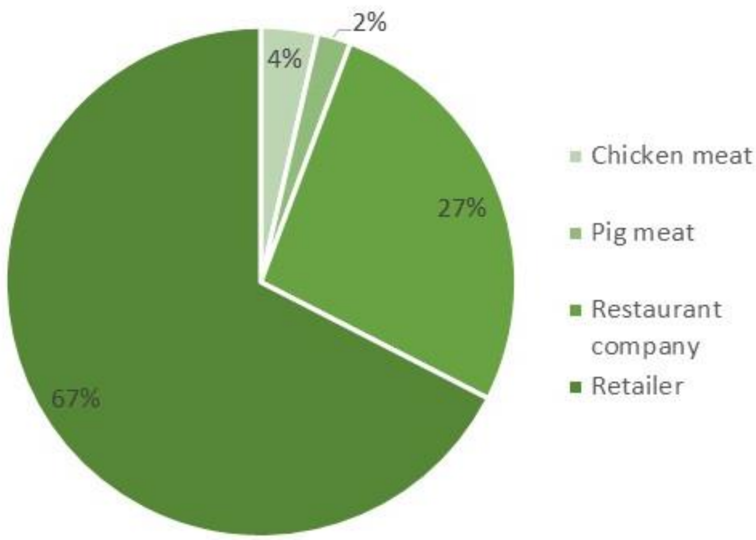
No.	Value chain segment	Values
Chicken meat		
1	Tyson Foods	1.5
2	Sanderson Farms	0.2
3	JBS	0.1
3	*Total chicken meat*	*1.8*
Pig meat		
1	Hormel Foods	0.9
2	Seaboard Corp.	0.1
2	*Total pig meat*	*1.0*
Restaurant companies		
1	McDonalds	10.5
2	Yum! Brands	2.2
3	Wendy's	0.2
4	Domino's Pizza Group	0.1
4	*Total restaurant companies*	*13.1*
Retailers		
1	Wal-mart Stores	10.1
2	Costco	7.7
3	Carrefour	6.8
4	Tesco	3.9
5	Ahold Delhaize	3.1
6	Kroger	1.4
6	*Total retailers*	*33.0*
15	**Total**	**48.9**

* most recent filings, as of August 2019.

Source: PH&C (2019), "Transparantielijst aandelen_31_03_2019", viewed in August 2019.

Figure 6 shows the share of PH&C's investment per value segment. Of its total identified investments, the pension fund invested about 67% in retailers, 27% in restaurant companies, 4% in in the chicken meat companies and 2% in pig meat companies.

Figure 6 PH&C's investment share per value segment



* most recent filings, as of February 2019.

Source: PH&C (2019), "Transparantielijst aandelen_31_03_2019", viewed in August 2019.

2.7 Pensioenfonds Vervoer

2.7.1 Profile

The Industry-wide Road Haulage Pension Fund Foundation (Pensioenfonds Vervoer) is the industry-wide pension fund for employers and employees of the road haulage sector in the Netherlands. The pension fund is based in Amsterdam, has 652,900 participants and at the end of 2017 had 25 employees.[83]

Pensioenfonds Vervoer has entrusted Robeco Institutional Asset Management (Netherlands), part of ORIX (Japan), with the selection and monitoring of the pension fund's external asset managers and investment undertakings. In total, the assets of Pensioenfonds Vervoer are managed by 29 external asset managers.[84] At the end of 2017, Pensioenfonds Vervoer's total assets amounted to € 28 billion, of which € 27.1 billion were investments.[85] As of 31 June 2018, the 12-month average coverage ratio was 105.3%.[86]

Table 12 on the next page provides an analysis of the investment categories relevant for Pensioenfonds Vervoer. As can be seen in the table, Pensioenfonds Vervoer is active in one of the four different investment categories.

Table 12 Analysis of relevant investment categories for Pensioenfonds Vervoer (in € billion)

Investment category	Asset type	Value at end of 2017	%	Relevant
Corporate credits	Loans and credits to companies (MNEs/SMEs)	-		No
Project finance	*(included in loans to companies)*	-		No
Asset management own account	Corporate shares	8.0	28.4%	Yes
	Private equity	0.1	0.3%	
	Corporate bonds	6.0	21.3%	
	Government bonds	7.9	28.3%	
	Mortgages	2.2	7.9%	
	Derivatives	1.4	5.0%	
	Real estate	0.6	2.3%	
	Other/undefined	1.0	3.5%	
Mortgages	Mortgage loans	-		No
	Other balance sheet assets	0.9	3.1%	
	Total balance sheet assets	**28.0**	**100.0%**	

Source: Pensioenfonds Vervoer (2018, June), *Jaarverslag 2017*, p. 66, 83.

2.7.2 Financial relationships

Pensioenfonds Vervoer discloses the names of the companies it invests in however it doesn't disclose the investment values. As of February 2019, filings, the pension fund had investment links with 14 out of 28 selected companies.[87]

- Chicken meat

1. JBS
2. Tyson Foods

- Pig meat

3. BRF
4. Hormel Foods
5. WH Group

- Restaurant companies

6. Domino's Pizza Group
7. McDonalds
8. Restaurant Brands International
9. Yum! Brands

- Retailers

10. Ahold Delhaize
11. Carrefour

12. Costco
13. Tesco
14. Walmart Stores

2.8 Pensioenfonds Zorg en Welzijn (PFZW)

2.8.1 Profile

Stichting Pensioenfonds Zorg en Welzijn (PFZW) is the industry-wide pension fund for employers and employees of the healthcare and social sector industry in the Netherlands. The pension fund is based in Utrecht, has 2.7 million participants and at the end of December 2017 had 17.8 employees based on full time equivalents.[88] PFZW has entrusted PGGM (Netherlands) with all asset management tasks. PGGM and PFZW used to be one organisation, but in 2008 they split into two organisations. However, PGGM and PFZW are still considered as one fiscal entity and PFZW also has a guardian role over PGGM, giving it decision rights related to certain issues.[89] At the end of 2017, PFZW's total assets amounted to € 216.3 billion, of which € 215.2 billion were investments.[90] As of 30 April 2018, the 12-month average coverage ratio was 100.1%.[91]

Table 13 provides an analysis of the investment categories relevant for PFZW. As can be seen in the table, PFZW is active in one of the four different investment categories.

Table 13 Analysis of relevant investment categories for PFZW (in € billion)

Investment category	Asset type	Value at end of 2017	%	Relevant
Corporate credits	Loans and credits to companies (MNEs/SMEs)	-		No
Project finance	*(included in loans to companies)*	-		No
Asset management own account	Corporate shares	53.9	24.9%	Yes
	Private equity	11.9	5.5%	
	Corporate bonds	18.8	8.7%	
	Government bonds	51.9	24.0%	
	Mortgages	1.7	0.8%	
	Derivatives	17.8	8.2%	
	Real estate	23.3	10.8%	
	Other/undefined		16.6%	
Mortgages	Mortgage loans	-		No
	Other balance sheet assets	1.1	0.5%	
	Total balance sheet assets	**216.3**	**100.0%**	
Asset management for account of clients[iv]	Assets under management through PGGM	**218.6**		Yes

Source: Pensioenfonds Zorg en Welzijn (2018, April), *Jaarverslag 2017*, p. 88, 111, 114-118; PGGM (2018, April), *Jaarverslag 2017*, p. 5, 9.

[iv] Total AUM includes the AUM of PFZW (€ 197.2 billion) as well as other institutional investors such as pension funds that are client of PGGM (in total € 21.4 billion).

2.8.2 Financial relationships

This research identified PFZW's € 693 million investments in the selected companies as per the most recent filings in February 2019. Almost 20% (€ 139 million) of this value was invested in the retail company, Costco, followed by € 133 million in McDonalds. Table 14 shows the breakup of PFZW's investment values per value segment and company.

Table 14 Investments of PFZW in the selected companies, per value chain segment* (in € million)

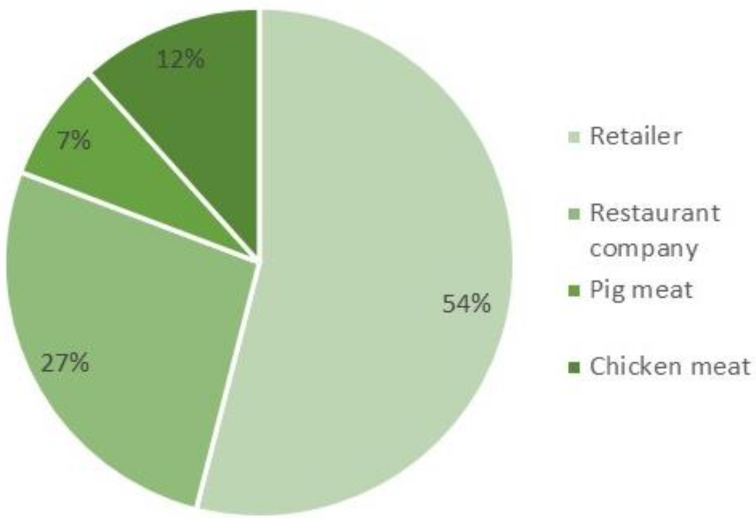
No.	Value chain segment	Values
Chicken meat		
1	Tyson Foods	56
2	MHP	16
3	JBS	5
4	Industrias Bachoco	3
4	*Total chicken meat*	*81*
Pig meat		
1	Hormel Foods	29
2	WH Group	13
3	BRF	10
3	*Total pig meat*	*53*
Restaurant companies		
1	McDonalds	133
2	Yum! Brands	24
3	Restaurant Brands International	23
4	Domino's Pizza Group	6
4	*Total restaurant companies*	*186*
Retailers		
1	Costco	139
2	Carrefour	73
3	Tesco	58
4	Kroger	49
5	Ahold Delhaize	49
6	Groupe Casino	6
6	*Total retailers*	*374*
17	**Total**	**693**

* Most recent filings, as of February 2019.

Source: PFZW (2017), "Transparantielijst Obligaties per 31/12/2017", viewed in December 2018; PFZW (2017), "Transparantielijst Aandelen per 31/12/2017", viewed in December 2018.

As per the value chain segment, PFZW invested about 54% in the retailers. Restaurant, chicken meat and pig meat companies accounted for 27%, 12% and 7% respectively, of the total investments (see Figure 7).

Figure 7 PFZW's investment share per value segment*



* Most recent filings, as of February 2019.

Source: PFZW (2017), "Transparantielijst Obligaties per 31/12/2017", viewed in December 2018; PFZW (2017), "Transparantielijst Aandelen per 31/12/2017", viewed in December 2018.

2.9 Pensioenfonds van de Metalektro (PME)

2.9.1 Profile

Pensioenfonds van de Metalektro (PME) is the industry-wide pension fund for employers and employees of the metal and electrical engineering industry in the Netherlands. The pension fund is based in Amsterdam, has 625,100 participants and at the end of December 2017 had 26 employees (21.1 full time equivalents).[92]

PME has entrusted MN (Netherlands) with all asset management tasks. MN invests part of the assets itself and has outsourced the remaining tasks to external asset managers.[93] Stichting Administratiekantoor MN, of which PME is one of the four board members, controls 95% of the shares of MN.[94] Through Stichting Administratiekantoor MN, PME effectively controls 16.7% of the shares of MN.[95] At the end of 2017, PME's total assets amounted to € 48.8 billion, of which € 48.5 billion were investments.[96] As of 30 June 2018, the 12-month average coverage ratio was 101.4%.[97]

Table 15 on the next page provides an analysis of the investment categories relevant for PME. As can be seen in the table, PME is active in one of the four different investment categories.

Table 15 Analysis of relevant investment categories for PME (in € billion)

Investment category	Asset type	Value at end of 2017	%	Relevant
Corporate credits	Loans and credits to companies (MNEs/SMEs)	-		No
Project finance	*(included in loans to companies)*	-		No
Asset management own account	Corporate shares	16.2	33.2%	Yes
	Private equity	0.9	1.8%	
	Corporate bonds	10.2	21.0%	
	Government bonds	14.9	30.6%	
	Mortgages	2.1	4.3%	
	Derivatives	1.0	2.0%	
	Real estate	2.5	5.1%	
	Other/undefined	0.7	1.5%	
Mortgages	Mortgage loans	-		No
	Other balance sheet assets	0.2	0.5%	
	Total balance sheet assets	**48.8**	**100.0%**	

Source: PME (2018, May), *Jaarverslag 2017*, p. 65, 73, 89, 93, 106, 109.

2.9.2 Financial relationships

PME's investments in the selected companies as per the most recent filings in February 2019, stood at € 298 million. McDonalds was the biggest holding amongst the selected companies and the pension fund invested about € 69 million. Table 16 shows the breakup of PME's investment values per company.

Table 16 Investments of PME in the selected companies, per value chain segment* (in € million)

No.	Value chain segment	Values
Chicken meat		
1	Tyson Foods	22
2	JBS	0.1
2	*Total chicken meat*	*22*
Pig meat		
1	BRF	11
2	WH Group	9
3	Hormel Foods	4
3	*Total pig meat*	*25*
Restaurant companies		
1	McDonalds	69

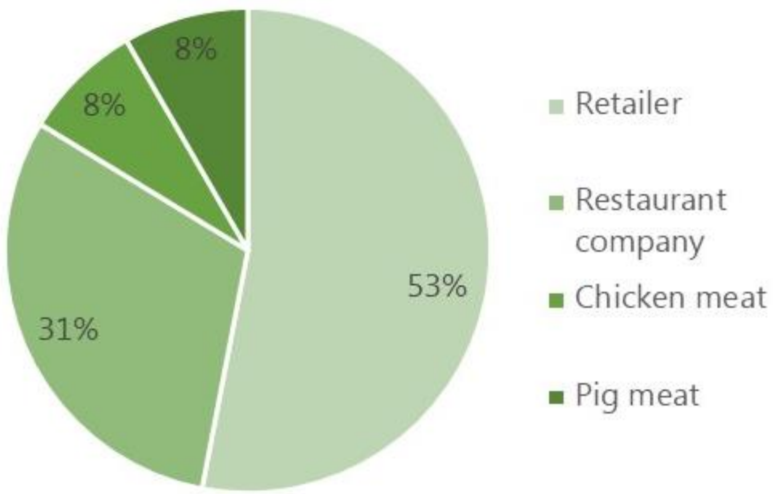
No.	Value chain segment	Values
2	Yum! Brands	12
3	Restaurant Brands International	7
4	Domino's Pizza Group	3
5	Wendy's	0.3
5	*Total restaurant companies*	*92*
Retailers		
1	Carrefour	38
2	Costco	37
3	Kroger	27
4	Tesco	21
5	Ahold Delhaize	21
6	Groupe Casino	16
6	*Total retailers*	*159*
16	**Total**	**298**

* Most recent filings, as of February 2019.

Source: PME (2017), "Aandelenoverzicht per 31 December 2017", viewed in December 2018; PME (2017), "Obligatieoverzicht per 31 December 2017", viewed in December 2018.

PME's investments in this sector is primarily through retailers (53%) and restaurant companies (31%). The chicken and pig meat segments accounted for 8% each. Figure 8 shows the PME's investment share per value chain segment.

Figure 8 PME's investment share per value chain segment*



* Most recent filings, as of February 2019.

Source: PME (2017), "Aandelenoverzicht per 31 December 2017", viewed in December 2018; PME (2017), "Obligatieoverzicht per 31 December 2017", viewed in December 2018.

2.10 Pensioenfonds Metaal en Techniek (PMT)

2.10.1 Profile

Pensioenfonds Metaal en Techniek (PMT) is the industry-wide pension fund for employers and employees of the metalworking and engineering industry in the Netherlands. The pension fund is based in Rijswijk, has 1.4 million participants and at the end of December 2017 had 35 employees.[98]

PMT has entrusted MN (Netherlands) with all asset management tasks. MN invests part of the assets itself and has outsourced the remaining tasks to external asset managers.[99] Stichting Administratiekantoor MN, of which PMT is one of the four board members, controls 95% of the shares of MN.[100] Through Stichting Administratiekantoor MN, PMT effectively controls 78.3% of the shares of MN.[101] At the end of 2017, PMT's total assets amounted to € 75.5 billion, of which € 71 billion were investments.[102] As of 30 June 2018, the 12-month average coverage ratio was 101.9%.[103]

Table 17 provides an analysis of the investment categories relevant for PMT. As can be seen in the table, PMT is active in one of the four different investment categories.

Table 17 Analysis of relevant investment categories for PMT (in € billion)

Investment category	Asset type	Value at end of 2017	%	Relevant
Corporate credits	Loans and credits to companies (MNEs/SMEs)	-		No
Project finance	*(included in loans to companies)*	-		No
Asset management own account	Corporate shares	20.7	27.4%	Yes
	Private equity	3.3	4.4%	
	Corporate bonds	13.7	18.1%	
	Government bonds	19.2	25.5%	
	Mortgages	2.6	3.4%	
	Derivatives	2.8	3.7%	
	Real estate	6.8	9.1%	
	Other/undefined	6.3	8.4%	
Mortgages	Mortgage loans	-		No
	Other balance sheet assets		0.0%	
	Total balance sheet assets	**75.5**	**100.0%**	
Asset management for account of clients[v]	Assets under management through MN	**129.0**		Yes

Source: PMT (2018, May), *Jaarverslag 2017*, p. 60, 95, 101; MN (2018, mei), *Jaarverslag 2017*, p. 8.

[v] Total AUM includes the AUM of PMT as well as other institutional investors such as pension funds that are client of MN.

2.10.2 Financial relationships

As per the most recent filings available in February 2019, PMT invested about € 414 million in the selected chicken and pig meat value chain companies. Table 18 shows PMT's investment as per value chain segment and companies. PMT is invested in only one chicken meat company, Tyson. McDonalds (€ 67 million) is the largest holding of PMT out of the selected companies of this case study.

Table 18 Investments of PMT in the selected companies, per value chain segment* (in € million)

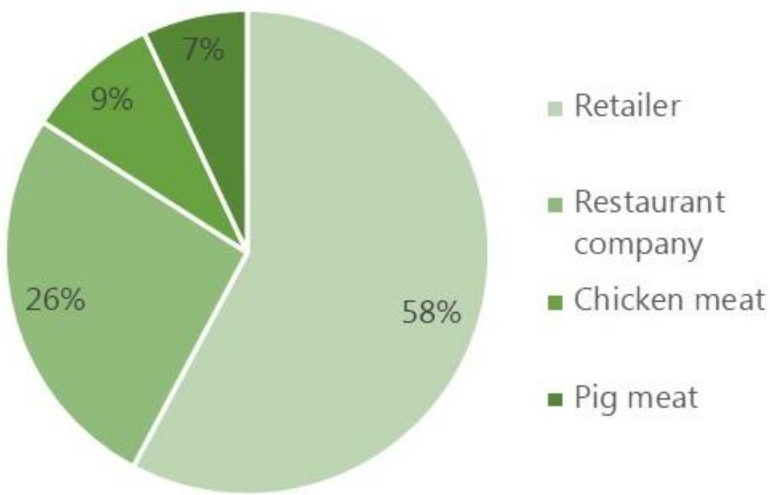
No.	Value chain segment	Values
Chicken meat		
1	Tyson Foods	35
1	*Total chicken meat*	35
Pig meat		
1	BRF	16
2	Hormel Foods	8
3	WH Group	5
3	*Total pig meat*	29
Restaurant companies		
1	McDonalds	67
2	Restaurant Brands International	21
3	Yum! Brands	16
4	Domino's Pizza Group	6
4	*Total restaurant companies*	109
Retailers		
1	Costco	54
2	Carrefour	54
3	Kroger	44
4	Groupe Casino	37
5	Tesco	30
6	Ahold Delhaize	22
6	*Total retailers*	240
14	**Total**	**414**

* Most recent filings, as of February 2019.

Source: PMT (2018), "Aandelenlijst per 31/12/2017", viewed in December 2018; PMT (2017), "Lijst Investment Grade Bedrijfsobligaties per 31/12/2017", viewed in December 2018; PMT (2017), "Lijst High Yield Bedrijfsobligaties per 31/12/2017", viewed in December 2018.

Out of the total investments in the selected companies, PMT invested approximately 58% in retailers, followed by restaurant companies (26%). Chicken meat companies accounted for 9% and pig meat companies accounted for 7% (see Figure 9) of the total identified investments.

Figure 9 PMT's investment share per value segment*



* Most recent filings, as of February 2019.

Source: PMT (2018), "Aandelenlijst per 31/12/2017", viewed in December 2018; PMT (2017), "Lijst Investment Grade Bedrijfsobligaties per 31/12/2017", viewed in December 2018; PMT (2017), "Lijst High Yield Bedrijfsobligaties per 31/12/2017", viewed in December 2018.

2.11 Stichting Pensioenfonds voor Personeelsdiensten (StiPP)

2.11.1 Profile

Stichting Pensioenfonds voor Personeelsdiensten (StiPP) is the industry-wide pension fund for temporary workers, seconded employees and payrollers in the Netherlands. The pension fund is based in Amsterdam, has 1.2 million participants and does not have any employees.[104]

StiPP has entrusted Kempen Capital Management (Netherlands), part of Van Lanschot Kempen (Netherlands), with all asset management tasks. Kempen Capital Management invests part of the assets itself and has outsourced the remaining tasks to external asset managers.[105] At the end of 2016, StiPP's total assets amounted to € 1.6 billion, of which € 1.5 billion were investments.[106] As of 31 March 2018, the 12-month average coverage ratio was 109.4%.[107]

Table 19 on the next page provides an analysis of the investment categories relevant for StiPP. As can be seen in the table, StiPP is active in one of the four different investment categories.

Table 19 Analysis of relevant investment categories for StiPP (in € billion)

Investment category	Asset type	Value at end of 2017	%	Relevant
Corporate credits	Loans and credits to companies (MNEs/SMEs)	-		No
Project finance	*(included in loans to companies)*	-		No
Asset management own account	Corporate shares	0.4	25.0%	Yes
	Private equity	-		
	Corporate bonds	0.5	29.9%	
	Government bonds	0.3	21.7%	
	Mortgages	0.1	5.3%	
	Derivatives	0.0	0.4%	
	Real estate	0.1	4.2%	
	Other/undefined	0.1	7.2%	
Mortgages	Mortgage loans	-		No
	Other balance sheet assets	0.1	6.3%	
	Total balance sheet assets	**1.6**	**100.0%**	

Source: StiPP (2018, March), *Jaarverslag 2016*, p. 75, 91, 108.

2.11.2 Financial relationships

StiPP doesn't publish any information related to its shareholdings and bondholdings. Therefore, this research identified StiPP's investment links to the selected companies through its asset manager Van Lanschot Kempen. Van Lanschot Kempen's investments in the selected companies stood at € 38 million as per the most recent filings available of selected companies in February 2019. The asset manager invested about 47% of this value in the retailer, Tesco. In the chicken meat segment, the asset manager has only investment link with Sanderson Farms. Similarly, it only invested in one restaurant company, McDonalds (see Table 20).

As per its exclusion report, StiPP excluded Walmart Stores Inc from its active funds but still has exposure to this company through passive investing.[108]

Table 20 Investments of StiPP's asset manager in the selected companies, per value chain segment* (in € million)

No.	Value chain segment	Values
Chicken meat		
1	Sanderson Farms	3
1	*Total chicken meat*	3
Restaurant companies		
1	McDonalds	10
1	*Total restaurant companies*	*10*
Retailers		

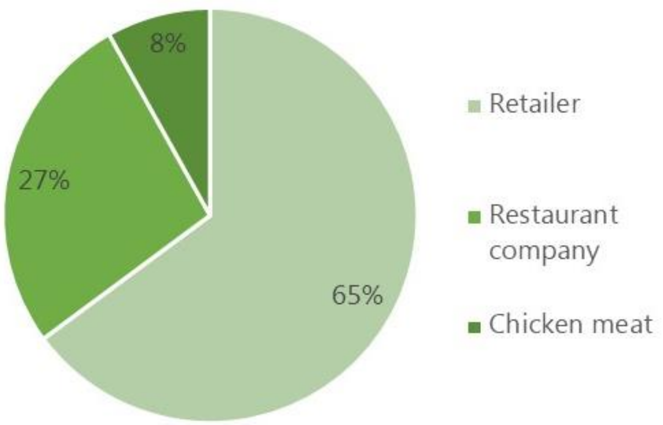
No.	Value chain segment	Values
1	Tesco	18
2	Carrefour	6
3	Walmart Stores	0.2
4	Groupe Casino	0.2
4	*Total retailers*	*24*
6	**Total**	**38**

* Most recent filings, as of February 2019.

Source: Thomson Reuters Eikon (2019), 'Shareholdings of selected companies, at most recent filing date', viewed in February 2019; Thomson Reuters Eikon (2019), 'Bondholdings of selected companies, at most recent filing date', viewed in February 2019.

As per Figure 10, StiPP's asset manager, Van Lanschot Kempen had mostly investments in the retail segment (65%) followed by restaurant companies (26%), and chicken meat companies (9%). This research did not identify any investments of Van Lanschot Kempen in the selected pig meat companies. These shares are considered to be reflective of StiPP's investment shares as StiPP does not disclose its own portfolio.

Figure 10 StiPP's asset manager's (Van Lanschot Kempen) investment share per value segment*



* Most recent filings, as of February 2019.

Source: Thomson Reuters Eikon (2019), 'Shareholdings of selected companies, at most recent filing date', viewed in February 2019; Thomson Reuters Eikon (2019), 'Bondholdings of selected companies, at most recent filing date', viewed in February 2019.

Chapter 3 Analysis of international standards and initiatives on farm animal welfare

In the current version of FFGI Methodology, the theme Animal Welfare includes the following assessment elements with respect to animal welfare in the farming sector (some of them are also part of the sector theme Food):[109]

- Companies respect the Five Freedoms of animals (also part of Food theme);
- Extremely restricted housing methods including for calves in crates, hens in battery cages and sows in feeding cubicles are unacceptable (also part of Food theme);
- Companies shift from intensive livestock farming to animal friendly production;
- Livestock farming companies are certified according to the certification schemes criteria that include animal welfare requirements (such as organic, free range, environment label, Better Life label);
- Fish farms are certified according to the certification schemes criteria that include animal welfare, including the avoidance of stress, anxiety or pain, quality feed and spacious facilities;
- Companies reduce the time limit of animal transport to a maximum of 8 hours (also part of Food theme);
- Companies integrate animal welfare criteria into their procurement and operational policies;
- Companies include clauses on the compliance with criteria on animal welfare in their contracts with subcontractors and suppliers.

Looking at species specific welfare needs, the following sections further explore these broad expectations and translate these into minimum welfare requirements that investors like pension funds, committing to these principles, should uphold with regards to broilers and pigs.

Before answering the question regarding what animal welfare standards would be appropriate for Dutch pension funds to strive for, support and commit to, several considerations merit elaboration. To start with, animal welfare is best conceived as a journey, not as a certain state that can be reached once and for all. This means animal welfare is never 'finished' and needs continuous scrutiny - the more so since it is questionable that a level of ideal animal welfare can ever be achieved within mainstream industrial animal production.

That said, standards can be a good, often indispensable instrument to achieve progress on the animal welfare continuum. Standard-setting allows for specific, ambitious, realistic and time-bound objectives, which can be monitored and evaluated. Nevertheless, not all standards are specific or stringent enough to mitigate the animal welfare risks detailed in Chapter 1. To determine what should be expected of pension funds, the following overview sets the scene.

3.1 Legislation

In terms of a baseline, there are no global legally binding animal welfare standards.[110] However, within the EU, a series of EU-directives have been adopted since the 1990s, setting legal minimum animal welfare standards within the EU for farm animals in general and some specific species, related to transport and slaughter. EU member states have the obligation to transpose these standards to national legislation. Whilst doing so, they have the liberty to adopt more stringent rules, provided these are compatible with the provisions of the Treaty on the Functioning of the European Union. In practice, member states are reluctant to be more stringent, to not create unfair competition for their farmers – and to de facto move animal welfare problems across the border.[111]

Furthermore, some alternative systems – including higher welfare aspects - are defined in EU marketing terms (Commission Regulation, 2008) and organic legislation (Council Regulation, 1999). These regulations define when animal products can be sold as 'extensive barn', 'free range', 'traditionally free range', 'total freedom free range' or 'organic'.[112] Table 21 provides an overview of the standards set for these systems on outdoor access, space allowance and minimum slaughter age.

Table 21 Overview of EU legislative standards, standards for EU marketing terms and organic standards for broiler chickens

	Minimum	Extensive barn	Free range	Traditionally free range	Total freedom free range	Organic
Outdoor access	No	No	Yes	Yes	Yes	Yes
Minimum space allowance	No maximum number of birds per m2, but maximum 42 kg liveweight per m2.	Maximum 15 birds per m2 and maximum 25kg liveweight per m2.	Indoor area: maximum 13 birds per m2 and maximum 27,5 kg liveweight per m2. Outdoor area: 1 m2 per bird.	Indoor area: maximum 12 birds per m2 and maximum 25 kg liveweight per m2. Outdoor area: 2 m2 per bird.	Indoor area: maximum 12 birds per m2 and maximum 25 kg liveweight per m2. Outdoor area: unrestricted	Indoor area: maximum 10 birds per m2 and maximum 21 kg liveweight per m2. Outdoor area: 4 m2 per bird.
Minimum slaughter age	No minimum	56 days	No minimum	81 days	81 days	70 days

Sources: Council Directive 2007/43/EC of 28 June 2007 laying down minimum rules for the protection of chickens kept for meat production; Commission Regulation (EC) No 543/2008 of 16 June 2008 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 as regards the marketing standards for poultry meat; SKAL, (n.d.) "Veehouderij / Pluimee", online: https://www.skal.nl/veehouderij/pluimvee/huisvesting/, viewed in January 2018.

The objective of these directives is to foster the common market. For the EU it is appropriate to take account of animal welfare provisions "in order to ensure rational development of production and to facilitate the organisation of the market in animals"[113]. Consequently, EU-directives embody a compromise between animal welfare concerns and the economic interests of the livestock sector, with the latter weighing most heavily. A prime example are cages for laying hens. After a decades long push to ban battery cages for laying hens, the EU decided to ban conventional battery cages but still allow 'enriched' battery cages. Similarly, although the EU requires sows to be housed in groups, they can still be confined following insemination up to 28 days in gestation crates, which are too narrow to even turn around.

A 2017 review noted that scientific animal welfare advice of the European Food and Safety Authority is most often not translated into policy. Even more tellingly, the same report finds that 'a striking deficiency in EU animal welfare legislation is that some widely-kept animal species are not protected.'[114] This is the case for cows, rabbits, ducks, turkeys, trout and salmon.

Moreover, the legally binding nature of EU minimum standards does not guarantee proper implementation. Enforcement of and compliance with animal welfare legislation within the EU is a continuous challenge. The Food and Veterinary Office of the European Commission regularly reports non-compliance, notably the absence of proper enrichment for pigs, lack of stunning for poultry during slaughter and overstocking during transport.[115] Non-compliance is both due to capacity issues of the competent authorities in the Member States as well as differences in interpretation of the (transposition of the) directives. An example of the latter: the EU Food and Veterinary Office concluded that in France the maximum mortality rates were exceeded without this being considered as a non-compliance by the competent authorities.[116]

Enforcement and compliance are also a challenge in The Netherlands. Taking violations of animal welfare legislation at the level of individual farm animal as unit of measurement, the number of violations negatively impacting on animal welfare has been estimated to be between 2.7 and 3.4 billion per year.[117] This means that on average, every farm animal in The Netherlands suffers from 5.4 to 6.8 legislative infringements.[vi] There is no reason to believe other countries perform better – in many cases on the contrary even. The Dutch government recognizes that the EU directives leave ample room for improvement. In a joint declaration with Denmark and Germany, The Netherlands urged EU Member States and the EU Commission to acknowledge the need for better regulation and better animal welfare.[118] In 2017, the EU Commission has established the EU Platform on Animal Welfare that will assist the Commission on improving the application of EU rules on animal welfare. It has created a sub-group on pig welfare, that will help to ensure the implementation of the Pigs Directive, and on live animal transport.[119]

Outside the EU, legislative minimum standards are often ever lower, narrower in scope or cover only the most basic anti-cruelty provisions. For example, the American federal Animal Protection Act explicitly excludes animals kept for farming purposes, whereas the Humane Methods Slaughter Act excludes poultry,[120] which comprises chicken, duck and turkey and amount to 98.4% of all slaughtered animals in the US in 2016.[121] It must be noted that at state level, farm animals enjoy better protection in an increasing number of stated. Other countries around the world lack animal welfare legislation altogether, including many African states and livestock production giants like Russia and China.[122]

[vi] Note that the methodology of counting violations in this report has been challenged by the Dutch competent authority, the NVWA, but follows the innate logic of the acknowledgement that every animal has an intrinsic value and an individual interest in being well – which is enshrined in Dutch legislation.

3.2 Multilateral instruments

3.2.1 OIE standards

The OIE World Organisation for Animal Health is the World Trade Organisation (WTO) reference organisation for standards relating to animal health. The OIE has published two codes (Terrestrial and Aquatic) and two manuals (Terrestrial and Aquatic) as the principle reference for WTO members. The standards are intended to safeguard the hygienic safety in the trade in animals and animal products. The Terrestrial Animal Health Code 2015 and the Aquatic Animal Health Code 2015 respectively aim to assure the sanitary safety of international trade in terrestrial animals and aquatic animals, and their products. The codes concern animal health, but also include recommendations for animal welfare, mainly with respect to transport, slaughter, and killing animals to prevent the spread of diseases and stray animals.[123]

The welfare standards are based on consensus. As a result of a membership of 181 countries - many with large economic interests at stake – they represent the lowest common denominator, even below those that are set by EU legislation. Although scientifically informed, the use by OIE of available science tends therefore to be conservative. In many instances, the standards are rife with open norms. As such, they are prone to be used for legitimising and condoning unacceptable practices. To give one example, the standards state that the stocking density of broilers should allow for the birds 'to move and adjust their posture normally'. However, they do not define what is to be considered as 'normal' movement – and what the specific corresponding stocking density would look like.[124]

Moreover, the OIE welfare standards are non-binding and implementation is often lacking. The OIE does not monitor the adoption and implementation of the standards by Member States. That some OIE member states resort to burying and burning animals alive (as happens with pigs in South-East Asia), is a dreadful reminder of the lack of teeth of the OIE standards. Finally, the OIE standards do not cover some widely kept species. These include laying hens, ducks, turkeys and rabbits. Hence, whilst the OIE standards could be a valuable tool to help eliminate worst practices in several areas and aspects of industrial farming, they are not sufficient to safeguard farm animal welfare across the board.[125]

3.2.2 OECD guidance

The *OECD Guidelines for Multinational Enterprises* (OECD Guidelines for MNEs) provide principles and standards for responsible business conduct in a global context, consistent with applicable laws and internationally recognised standards. The Guidelines are non-binding for companies, but binding for adhering governments, including the Netherlands. That is to say, the Dutch government is obliged to promote the guidelines and to have a National Contact Point for doing so.

According to the OECD Guidelines for MNEs, enterprises should "carry out risk-based due diligence, for example by incorporating it into their enterprise risk management systems, to identify, prevent and mitigate actual and potential adverse impacts [⋯] and account for how these impacts are addressed."[126] This is applicable to adverse impacts a company could cause or contribute to, but also when there is no direct causation or contribution, but the impact is nevertheless 'directly linked to their operations, products or services by a business relationship.'[127]

For the issue at hand, two specific tools are relevant to implement the OECD Guidelines for MNEs. First of all, the OECD paper on *Responsible Business Conduct for Institutional Investors*, which explains the application of the OECD Guidelines for MNEs in the context of institutional investors.

Secondly, the *OECD-FAO Guidance on Responsible Agricultural Supply Chains*, which is aimed to help enterprises (including financial institutions) to observe standards of responsible business conduct in the agricultural supply chain. As such, it also focuses on animal welfare due diligence, but without prescribing particular animal welfare standards. However, it advices risk mitigation measures such as providing the opportunity to perform types of natural behaviour and the use of breeds appropriate to the environment and circumstances so that they can be reared without production diseases and other intrinsic problems.[128]

3.3 Voluntary standards

Voluntary standards have been developed in a series of countries, industry led and/or initiated by NGOs. Well-known examples of NGO-standards include RSPCA Assured in the UK, and Global Animal Partnership (GAP) in the US. In the Netherlands, the Better Life label (Beter Leven-keurmerk) of the Dierenbescherming has become prominent, as well as supermarket standards on broilers. These voluntary standards usually have third-party accreditation, which often ensures much better compliance than by law enforcement.[129]

Table 22 provides an overview of the standards set for the systems mentioned in the previous sections regarding outdoor access, space allowance and minimum slaughter age.

Table 22 Voluntary standards for broiler chickens compared to legal minimum standards[130]

Standard	Outdoor access	Minimum space allowance indoor	Minimum space allowance outdoor	Enrichment	Minimum slaughter age (days)
Legal minimum standard	No	No maximum number of birds per m2, but maximum 42 kg liveweight per m2 (21 birds at slaughter weight)	-	No	No minimum requirement, but in practice 36 - 42
RSPCA Assured Indoor	No	Maximum 19 birds per m2 and maximum 30 kg liveweight per m2	-	Yes	No minimum requirement
GAP 5-Step Animal Welfare Rating Program - Step 1	No	No maximum number of birds per m2, but a maximum 29-32 kg liveweight per m2	-	Yes	Will be based on the outcomes of a study by the University of Guelph
Albert Heijn Nieuwe AH Kip	No	Maximum 16 birds per m2	-	Yes	45
Jumbo Nieuwe Standaard Kip	No	Maximum 13.5 birds per m2	-	Yes	49
Beter Leven 1 ster	No	Maximum 12 birds per m2 and maximum 25 kg liveweight per m2	-	Yes	56
Beter leven 2 sterren	Yes	Maximum 13 birds per m2 and maximum 27.5 kg liveweight per m2	1 m2 per bird	Yes	56

Standard	Outdoor access	Minimum space allowance indoor	Minimum space allowance outdoor	Enrichment	Minimum slaughter age (days)
Beter Leven 3 sterren	Yes	Maximum 11 birds per m2 and maximum 25 kg liveweight per m2	4 m2 per bird	Yes	81
Label Rouge	Yes	Maximum 11 birds per m2	2 m2 per bird for 'free range', unlimited space for 'total freedom'	Yes	81-110
GAP 5-Step Animal Welfare Rating Program - Step 3	Yes	No maximum number of birds per m2, but a maximum 29 kg liveweight per m2	Equal to or greater than 75% of the total indoor floor space	Yes	Will be based on the outcomes of a study by the University of Guelph

NB. RSPCA Assured also certifies free range and organic systems, based on legal requirements as presented in Table 21.

The following sections provide more information of the standards presented in the table.

3.3.1 Beter Leven (Better Life)

The Dierenbescherming introduced the Beter Leven-keurmerk in 2007, a three-tier standard varying from some basic improvements (one star) to substantial improvements (three stars). Currently, this trademark is available for pork, eggs, chicken meat, beef and veal. Market share has been steadily rising and in the ten years of its existence, the scheme has safeguarded a better life for approximately 100 million farm animals in total.[131] For example, almost all pork sold by Albert Heijn has been certified with one star of the Better Life scheme.[132]

3.3.2 New Standard Chicken

In recent years, the Dutch market has also seen the rise of successful industry standards for broilers. In October 2014, Jumbo supermarkets introduced their 'Nieuwe Standaard Kip' (New Standard Chicken). By April 2016, all their fresh chicken complied to this new standard. It includes a slower growing breed, a lower stocking density, natural light and enrichment. The standard is checked by a third-party auditor (Isacert).[133] Other supermarkets have followed with similar (albeit sometimes weaker) policies for chicken meat. Market leader Albert Heijn for example has introduced 'Nieuwe AH Kip' (New AH Chicken).[134]

3.3.3 Label Rouge

Whilst Jumbo's new standard chicken remains slightly below the one-star level of the Better Life trademark of the Dierenbescherming, industry standards can sometimes also provide higher welfare. Label Rouge in France is the prime example.[135] Set up in the early 1960s, Label Rouge was a response against the industrialisation of poultry production. To cater for a French consumer taste for traditionally raised chicken, the initiative developed standards to safeguard such farming practices. This means that – although high animal welfare standards are part of the program – the prime focus is taste. This is exemplified by the fact that regular taste-testing is a certification requirement to prove that these products are 'vividly distinguishable' from conventional chicken.[136] In France, Label Rouge has developed a sizable market share of about 20% of chicken sales. Besides for chickens, the certification is available for other kinds of poultry: turkeys, ducks, quails, guinea fowl.[137]

3.3.4 RSPCA Assured

RSPCA Assured was introduced as Freedom Food in 1994 and ranks as most comprehensive private certification scheme to date. The label covers broilers, laying hens, pigs, dairy cows, calves, beef cattle, turkeys, salmon and trout. Sheep are expected to be covered soon. [138] In 2016, 270 million animals lived under the RSPCA Assured scheme, which means that, since its start, it has assured a better life for well over a billion farm animals.[139] All farms under the RSPCA Assured scheme are inspected annually and in addition at least 30% receive an (unannounced) monitoring visit by an RSPCA farm livestock officer. One of its recent successes was the 2016 announcement by McDonalds UK to use 100% RSPCA Assured labelled pork across its entire UK menu.[140]

3.3.5 Global Animal Partnership

Global Animal Partnership is an NGO in which scientists, farmers, retailers and animal advocates have joined forces. Initiated by US based retailer Wholefoods in 2008, it works with a 5-step certification scheme, ranging from very basic requirements (step 1: no cages and overcrowding) to elaborate requirements that are fully animal centred (step 5). To date, it has developed 5-steps criteria for broilers, laying hens, pigs, turkeys, sheep, bisons and beef cattle. The programme covers more than 3.800 farms, totalling 416 million animals.[141]

Especially Step 1 for broilers is gaining ground quickly in North America. More than 130 companies, including Restaurant Brands International (owner of Burger King), Sodexo, Starbucks, Unilever and Nestlé USA have all committed to adhere to GAP broiler standards by 2024 for the US and in some cases Canada.[142]

3.4 Financial sector initiatives

3.4.1 IFC Good Practice Note

In the series of Performance Standards by the International Finance Corporation (part of the World Bank Group), animal welfare is missing. However, in its Performance Standard (PS) 6 on Biodiversity Conservation and Sustainable Management of Living Natural Resources, the IFC states the following about animal husbandry: [143]

"Clients who are engaged in such industries [i.e. the primary production of living natural resources, including natural and plantation forestry, agriculture, animal husbandry, aquaculture, and fisheries] will manage living natural resources in a sustainable manner, through the application of industry-specific good management practices and available technologies. Where such primary production practices are codified in globally, regionally, or nationally recognized standards, the client will implement sustainable management practices to one or more relevant and credible standards as demonstrated by independent verification or certification. […] Where relevant and credible standard(s) exist, but the client has not yet obtained independent verification or certification to such standard(s), the client will conduct a pre-assessment of its conformity to the applicable standard(s) and take actions to achieve such verification or certification over an appropriate period of time."

This wording leaves room for the application of a variety of standards: OIE animal welfare standards, EU minimum animal welfare standards, EU organic animal welfare standards, national minimum animal welfare standards or widely acknowledged voluntary standards. To provide further guidance, the IFC developed a Good Practice Note (GPN) *Improving Animal Welfare in Livestock Operations*. This note was prepared in collaboration with the IFC's Manufacturing, Agribusiness, and Services (MAS) department. The GPN describes a range of animal welfare good practices and describes IFC's approach to animal welfare, including details on IFC's approach to due diligence and monitoring based on OIE's standards.[144]

The GPN lists a number of principles for good animal welfare. In itself, these are sound principles, but since they contain many open norms, they have proven to be vulnerable for greenwashing. Moreover, the principles are explicitly presented as mere 'recommendations' and are non-binding. To counter these shortcomings, the FARMS initiative has developed Responsible Minimum Standards based on the IFC principles – more on this below.

3.4.2 World Bank's better practice standards

With support of FAO, OIE and Wageningen University, the World Bank is in the process of establishing 'better practice standards'. By the time of writing, these have not been launched yet, but the better practice standards for pigs are expected to be published in the second half of 2019.[145]

3.4.3 FAIRR

Initiatives aimed at the financial sector are not limited to the IFC GPN. The Farm Animal Investment Risk and Return (FAIRR) initiative was established by Jeremy Coller, the Founder and Chief Investment Officer of Coller Capital, to increase awareness amongst investors about the risks associated with their investments in factory farming companies and meat producers. The organisation provides resources and platform to investors for understanding and improving animal welfare and other risks associated with livestock farming.[146]

In its report *Factory Farming: Assessing Investment Risks*, FAIRR states that "animal factory farming is exposed to at least twenty-eight environmental, social and governance issues that could significantly damage financial value over the short or long-term. Many of these risks are currently hidden from investors".[147] Investors can join FAIRR and opt for committing to its three principles:[148]

- Principle 1 Transparency: We will support transparency on standards of livestock production by the entities in which we invest.
- Principle 2 Investment Decisions: We will consider the ESG implications of livestock production in our investment decision-making.

- Principle 3 Stewardship: We will include the ESG implications of livestock production in our monitoring and engagements.

Investors can be a part of the FAIRR engagement initiatives with the largest meat companies on sustainable protein supply chains and antibiotics.[149] As such, FAIRR is aimed at putting animal welfare (and other industrial farming related issues) on the investment agenda, not to provide guidance about specific standards.

3.4.4 Business Benchmark on Farm Animal Welfare and The Pecking Order

Initiated by NGO's (World Animal Protection and Compassion in World Farming), the Business Benchmark on Farm Animal Welfare (BBFAW) has been specifically designed to support investors in their engagement with companies, and to help investors to integrate farm animal welfare into their investment research and decision-making. By annually scoring food companies on their animal welfare policy and performance, the BBFAW provides a tool for investors seeking to evaluate the relative position and performance of food companies on farm animal welfare management and disclosure. The BBFAW differentiates between four areas: 1. Management Commitment and Policy; 2. Governance and Management; 3. Innovation and Leadership; 4. Performance Reporting and Impact.

Specifically, World Animal Protection also launched a benchmark on broiler welfare and global fast food chains, The Pecking Order.[150]

3.4.5 Farm Animal Responsible Minimum Standards, FARMS initiative

Farm Animal Responsible Minimum Standards (FARMS) is an initiative by leading international animal welfare NGO's (Humane Society International, World Animal Protection and Compassion in World Farming) to provide a toolbox for the financial sector to mitigate animal welfare risks in its finance and investment portfolios.[151]

FARMS are based on the welfare risks and accompanying mitigation strategies identified by the IFC Good Practice Note – and as such is based on widely recognized international standards and principles. They provide species specific sets of requirements for a number of farmed species. These sets of requirements cover the most prominent welfare risks, without going into elaborate detail – thus providing financial institutions with a tool that is both meaningful and manageable.[152]

These requirements are SMART (Specific, Measurable, Ambitious, Realistic and Time-bound), including timelines for full implementation. As such, they can be used in all steps of the due diligence process of financial institutions and are designed to drive real change on the ground.

Table 23 show the farm animal responsible minimum standards for chickens raised for meat[153]. These correspond to the so called 'Better Chicken Ask', to which many companies have already committed regionally, including M&S, Nestlé and Unilever's brand Knorr in Europe and KFC in Germany, the UK, Ireland, Sweden, Belgium and The Netherlands.

Table 23 Responsible minimum standards for chickens raised for meat

Welfare Risk 1: Limitations on Space

Mitigation

- Implement a maximum stocking density of 30 kg/m2 or less.
- Thinning is discouraged and if practised must be limited to one thin per flock.
- No cages or multi-tiered systems for either broilers or broiler breeders.

Welfare Risk 2: Barren and Unsuitable Environments

Mitigation

- At least 2 meters of usable perch space and two pecking substrates per 1,000 birds.
- At least 50 lux of light, including natural light.
- On air quality, the concentration of ammonia (NH_3) must not exceed 20 ppm and the concentration of carbon dioxide (CO_2) must not exceed 3 000 ppm measured at the level of the chickens' heads.

Welfare Risk 3: Genetics and Breeding

Mitigation

- Adopt breeds that demonstrate higher welfare outcomes, including the Hubbard JA757, 787, 957, or 987, Rambler Ranger, Ranger Classic, and Ranger Gold, or others that meet the criteria of the Royal Society for the Prevention of Cruelty to Animals' Broiler Breed Welfare Assessment Protocol.

Welfare Risk 4: Slaughter

Mitigation

- Adopt controlled atmospheric stunning using inert gas or multi-phase systems, or effective electrical stunning without live inversion.

Welfare Risk 5: Compliance and Transparency

Mitigation

- Demonstrate compliance with the above standards via annual third-party auditing and annual public reporting on progress towards this commitment.

Timeline for compliance

Broiler requirements	**Year of full implementation**					
	Africa	**Asia**	**Australia**	**Europe**	**Latin-America**	**North America**
Limitations on Space: Implement a maximum stocking density of 30 kg/m2 or less. No cages or multi-tiered systems.	tbc	2030	tbc	2026	tbc	2024

Barren and Unsuitable Environments: At least 2 meters of usable perch space and two pecking substrates per 1,000 birds. At least 50 lux of light, including natural light. On air quality, the concentration of ammonia (NH3) not exceed 20 ppm and the concentration of carbon dioxide (CO2) must not exceed 3 000 ppm measured at the level of the chickens' heads.	tbc	2030	tbc	2026	tbc	2024
Genetics and Breeding: Adopt breeds that demonstrate higher welfare outcomes	tbc	2030	tbc	2026	tbc	2024
Slaughter: Adopt controlled atmospheric stunning using inert gas or multi-phase systems, or effective electrical stunning without live inversion.	tbc	2030	tbc	2026	tbc	2024

Table 24 elaborates farm animal responsible minimum standards for pigs raised for meat.

Table 24 Responsible minimum standards for pigs raised for meat

Welfare Risk 1: Limitations on Space

Mitigation Standard 1

1.1. Sow gestation stalls or crates must not be used.
1.2. Dry sows and gilts must be housed in groups and may only be kept in stalls or crates for a maximum of four days after insemination and must be given at least 3 m2 of floor space per individual.
1.3. Farrowing crates must not be used.
1.4. If needed, the sow may be temporarily confined for a maximum of the first three days following farrowing to reduce the risk of piglet crushing.
1.5. Weaners, fattening and finishing pigs must be housed in groups.
1.6. Sufficient space must be provided for all pigs to stand, stretch, turn around, sit, engage in social behaviour and/or lie down comfortably at the same time with defined areas for resting, feeding, activity and elimination.
1.7. The minimum space allowances for growing pigs are set out in the following table:

Weight of pig (kg)	Minimum Lying Area (m2)	Minimum Total Area (m2)
10	0.27	0.41
20	0.37	0.56
30-40	0.43	0.65
50	0.49	0.74
60-100	0.62	0.93
110	0.67	1.00
120	0.75	1.10

Welfare Risk 2: Barren and Unsuitable Environments
Mitigation Standard 2

2.1 Enrichment materials must be provided to enable proper investigation and manipulation activities for all stages of pig production.
2.2 Materials must be ingestible, chewable, destructible and odorous, regularly replaced to sustain interest, accessible to all pigs, and clean and hygienic.
2.3 Depending on climatic conditions, bedding substrates, such as straw, are strongly encouraged for additional physical and thermal comfort.
2.4 Fully slatted floors must not be used; at least 50% of the floor must be solid.

Welfare Risk 3: Inappropriate Diets

Mitigation Standard 3

3.1 To prevent hunger and digestive problems breeding gilts and sows on a restricted diet must be provided with a sufficient quantity of bulky high-fibre forage (e.g. straw) in addition to their ration of energy-rich food.

Welfare Risk 4: Painful Procedures

Mitigation Standard 4

4.1 Tail docking must not be carried out routinely.
4.2 Tail docking may be used only as a last resort when all risk factor mitigation measures have failed to prevent tail biting behaviour.
4.3 Producers must have a management plan to prevent and address tail biting without resorting to tail docking.
4.4 Surgical castration must not be carried out.
4.5 Instead, immunocastration must be used or intact males must be raised.
4.6 Teeth clipping and teeth grinding must not be performed routinely.
4.7 Teeth clipping or grinding may be used only as a last resort when all other measures to avoid lesions in the sow and other piglets have been implemented without success.
4.8 Producers must have a management plan to prevent and address piglets injuring the sow or other piglets without resorting to teeth clipping or grinding.

Welfare Risk 5: Breeding and Genetics

Mitigation Standard 5

5.1 Sows should not be selectively bred to increase litter sizes to beyond the number a sow can raise.

Welfare Risk 6: Early Weaning

Mitigation Standard 6

6.1 Piglets must not be weaned until the age of 28 days or later.

Welfare Risk 7: Transport over Long Distances

Mitigation Standard 7

7.1 Transport time must be limited to 8 hours.
7.2 Pigs transported by sea must be accompanied by a veterinarian and must reach their destination within 24 hours.
7.3 Pigs must be fit for the journey.
7.4 Non-ambulatory pigs must never be transported, unless to a veterinarian for treatment.
7.5 Non-ambulatory pigs must not be dragged by their limbs, head or tail, and must only be moved if pulled on a purpose-build conveyance.

7.6 Electric goads or prods should not be used when catching, loading, unloading or moving pigs.
7.7 Pigs should be moved with a flat "pig board" rather than with a stick.

Welfare Risk 8: Slaughter

Mitigation Standard 8

8.1 Facilities for handling and restraining pigs must take into account the size and age of the animals and be designed, constructed and maintained to minimize stress and risk of injury.
8.2 Pigs must be stunned before slaughter using a non-aversive method that causes instantaneous unconsciousness lasting until death, or if unconsciousness is induced gradually, the process must be non-aversive.
8.3 High concentration CO2 gas must not be used for stunning.

Welfare Risk 9: Compliance and Transparency

Mitigation Standard 9

9.1 Demonstrate compliance with the above standards via annual third-party auditing and annual public reporting on progress towards this commitment.

Timeline for compliance

Pigs requirements	**Year of full implementation**					
	Africa	**Asia**	**Australia**	**Europe**	**Latin-America**	**North America**
Limitations on Space: Sow gestation stalls or crates must not be used.	2028	2028	2028	immediately	2028	2025
Limitations on Space: Farrowing crates must not be used.	2035	2035	2035	2030	2035	2035
Limitations on Space: Weaners, fattening and finishing pigs must be housed in groups with minimum space allowances as are set out in the Table.	tbc	tbc	tbc	tbc	tbc	tbc
Barren and Unsuitable Environments: Enrichment materials must be provided to enable proper investigation and manipulation activities for all stages of pig production.	2028	2028	2028	immediately	2028	2028
Barren and Unsuitable Environments: Fully slatted floors must not be used; at least 50% of the floor must be solid.	tbc	tbc	tbc	tbc	tbc	tbc

Inappropriate Diets: To prevent hunger breeding gilts and sows on a restricted diet must be provided with a sufficient quantity of bulky high-fibre forage (e.g. straw) in addition to their ration of energy-rich food.	tbc	tbc	tbc	2024	tbc	tbc
Painful Procedures: Tail docking must not be carried out routinely.	2028	2028	2028	immediate	2028	2028
Painful Procedures: Surgical castration must not be carried out.	2028	2028	2028	2024	2028	2028
Breeding and Genetics: Avoid selective breeding to increase litter sizes to beyond the number a sow can raise.	tbc	tbc	tbc	tbc	tbc	tbc
Early Weaning: Piglets must not be weaned until the age of 28 days or later.	tbc	tbc	tbc	2024	tbc	tbc
Transport: Limit transport time to 8 hours.	tbc	tbc	tbc	2025	tbc	tbc
Slaughter: Animals must be stunned before slaughter using a method that causes instantaneous unconsciousness lasting until death.	tbc	tbc	tbc	2025	tbc	tbc

Appendix 1 provides an overview of how the welfare policies of a selected group of companies in which Dutch pension funds are invested, compare to EU and responsible minimum standards.

Chapter 4 Conclusions and recommendations

Pension funds are among the largest institutional investors. Through their investments in chicken and pig meat companies, restaurant companies and food retailers, Dutch pension funds are exposed to high animal welfare risks besides many other environmental, social, and governance (ESG) risks encompassing these sectors.

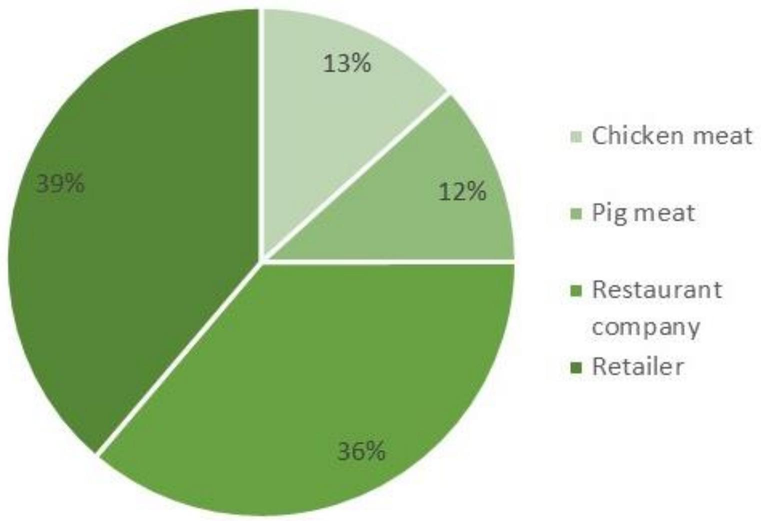
This research provides a point of departure to address these risks. It shows that all the ten Dutch pension funds invest in one or more companies selected for this study. Investments were found in 21 of the 28 selected companies. ABP, BpfBOUW, and PFZW had the highest number of investment links. Each of the three pension funds had links with 17 companies out of 28 selected companies. Restaurant McDonalds, and the retailers Tesco and Carrefour had investment links with all the ten pension funds.

StiPP's investment links are indicative through its asset manager Van Lanschot Kempen. The pension fund had investment links with six companies.

Six pension funds namely ABP, BpfBOUW, PFZW, PH&C, PME, and PMT invested about € 3.4 billion in the selected companies. ABP accounts for the largest share of this value and invested about € 1.7 billion (50%) followed by PFZW that invested € 693 million (20%) in the selected companies as of 31st December 2018.

The Dutch pension funds are mostly exposed to chicken and pig meat animal welfare risks through their investments in food retailers and restaurant companies. The investments in chicken and pig meat producers was relatively small. As Figure 11 shows, the six Dutch pension funds invest about 39% of the identified investments in the selected retail companies and about 36% in restaurant companies. The chicken and pig meat companies accounted for 13% and 12% respectively of the total identified investments by Dutch pension funds. This trend is also visible in the investment links of StiPP's asset manager Van Lanschot Kempen.

Figure 11 Share of six Dutch pension funds' investments per value segment*[154]



* most recent filings, as of February 2019.

The pilot FFGI policy assessment under EPL showed that the ten Dutch pension funds did not have any animal welfare policy with respect to their investments in meat producing companies.[155]

As Chapter 1 and Chapter 3 pointed out, the welfare issues of chickens and pigs in industrial livestock production cannot adequately be addressed by adhering to legislation, whilst international tools like the OIE standards and the IFC Good Practice Note on animal welfare are too open for interpretation to safeguard animal welfare standards at a level that fulfils responsible business conduct. Moreover, enforcement of legislation or OIE-standards is either problematic or absent.

At the same time, transitioning to better welfare food supply chains goes step by step. If too drastic changes cannot be accommodated by the dominant food system, they will fail – and consequently the animals are not helped. Accordingly, chicken and pig welfare requirements which are realistic to achieve and modestly ambitious compared to higher welfare standards, would still bring important improvements.

Taking into account current practices, the Dutch Fair Pension Fund Label therefore calls upon pension funds investing in the value chain of chicken and pig meat to adhere to the Farm Animal Responsible Minimum Standards by:

1. Making a public commitment/policy that not only adheres to general principles of animal welfare but further details the expectations from investee companies across value chain, reflecting the minimum requirements.
2. Enforcing animal welfare policy on their external asset managers, in case assets are managed externally.
3. Applying the animal welfare commitment to actively and passively managed assets and uniformly on shareholdings and bondholdings.
4. Supporting investee companies in their efforts towards a transition to using industry standards that bring animal welfare practices in the industrial livestock sector to a higher level, starting with the level as laid down in the minimum requirements.
5. Engaging with companies across the chicken and pig meat value chains with clear and time-bound targets to achieve the minimum requirements by clients and the industry as a whole.
6. Ending investments in companies that do not show any improvement in meeting the engagement targets within a given timeframe.
7. Improving transparency on investments, engagements, and outcomes with the companies involved at the various stages of the meat industry value chain.

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Appendix 1 Gap analysis of selected company policies versus responsible business conduct

Table 25 provides a comparison between some of the selected companies' policies, EU legislation, the Responsible Minimum Standards (RMS), and a higher welfare standard (HWS: in this case, Beter Leven 3 – BL 3).

Colour code:

1. Green = in alignment with the Responsible Minimum Standards;
2. Blue: exceeding the Responsible Minimum Standards; and
3. Red = not meeting the Responsible Minimum Standards.

Legend: NP = no policy; IP = in practice; NA = not allowed; NC = no cages; GL = global; NL = the Netherlands; UK = United Kingdom; pa = per animal; aw = animal weight; GH = group housing; gc = gestation crates; req. = required.

Table 25 Policy assessment of selected companies

	EU legislation	RMS	HWS (BL 3)	McDonald's	Tyson Foods	Costco	Ahold Delhaize	WH Group	Tesco	Carrefour
Broiler Chickens										
Stocking density	38-42 kg/m2	30 kg/m2	25 kg/m2	NP	44 kg/m2	44 kg/m2	GL: NP NL: 38 kg/m2	NP	GL: NP UK: 38 kg/m2	NP
Cages	IP	NC	NC	NC	NP	NP	NP	NP	GL: NP UK: NC	NP
Outdoor access	No	No	2 m2 pa	NP	NP	NP	NP	NP	No	No
Enrichment	No	Yes	Yes	Yes, per 2024	No	NP	NP	NP	GL: NP UK: yes	NP
Better welfare breed	No	Yes	Yes	NP	No	NP	GL: NP NL: yes	NP	NP	NP
Natural light	No	Yes	Yes	NP	No	NP	NP	NP	GL: NP UK: yes	NP
Pigs										
Stocking density	1 m2 (aw 110 kg)	1 m2 (aw 110 kg)	1.3 m2	NP	NP	NP	GL: NP NL: 1 m2 (aw 80 kg)	NP	NP	NP
Outdoor access	No	No	1 m2 pa	NP	NP	NP	NP	NP	No	NP

	EU legislation	RMS	HWS (BL 3)	McDonald’s	Tyson Foods	Costco	Ahold Delhaize	WH Group	Tesco	Carrefour
Gestation crates	GH (but gc allowed until 4 weeks after insemination)	GH	GH	GL: NP EU: GH US: GH per 2022.	Allowed	GL: NP US: GH (100% per 2022)	GL: NP NL: GH	GL: NP EU: GH; US: GH per 2022	GL: NP UK: GH	GL: NP France: GH (but gc allowed until 4 weeks after insemination)
Farrowing crates	Allowed	NA	NA	NP	Allowed	Allowed	GL: NP NL: allowed	Allowed	NP	Allowed
Enrichment	Req[1]	Req	Req	NP	NP	NP	GL: NP NL: req	NP	GL: NP UK: req	NP
Tail docking	Routine use NA[2]	Routine use NA	Not allowed	NP	NP	NP	GL: NP NL: Routine use NA[2]	NP	GL: NP UK: Routine use NA	NP
Weaning	28 days[3]	28 days	42 days	NP	NP	NP	GL: NP NL: 28 days[4]	NP	GL: NP UK: 28 days[3]	NP

1 In practice, enrichment is often below standard

2 In practice, routine tail docking is common

3 Note that an exemption is common to decrease weaning to minimal 21 days

4 Note that an exemption is possible to decrease weaning to minimal 23 days

Appendix 2 Methodology

This section provides an overview of the financial research methodology used for this study including pension funds that are under the scope of this case study, selection of chicken and pig meat value chain companies, financial research approach and type of financial link that this study focusses on.

Selected pension funds

This case study focuses on the ten Dutch pension funds that are the part of the Fair Pension Label. These pension funds are:

• Algemeen Burgerlijk Pensioenfonds (ABP)	Government and education
• Bedrijfstakpensioenfonds voor de Bouwnijverheid (BpfBOUW)	Construction
• BPL Pensioen	Agriculture
• Pensioenfonds Detailhandel	Retail
• Pensioenfonds Horeca & Catering (PH&C)	Hotel and catering
• Pensioenfonds Metaal en Techniek (PMT)	Metalworking and engineering
• Pensioenfonds van de Metalektro (PME)	Metalworking and engineering
• Pensioenfonds Vervoer	Freight and passenger transport
• Pensioenfonds Zorg en Welzijn (PFZW)	Social welfare and healthcare
• Stichting Pensioenfonds voor Personeelsdiensten (StiPP)	Temporary workers, pay rollers

The industrial or intensive livestock production follows a business model based on exploiting economies of scale, with the main objective to maximize profitability and is characterised by highly specialised genetic selection, high stocking densities and a lack of natural light and environmental enrichment. As a result of breeding, housing conditions and management practices animal welfare is at risk in the industrial livestock production. As this risk is *systematic* and *inherent* to the sector, the selection of companies to be linked with Dutch pension funds through investments is not based on cases of violations of animal welfare, but on size of companies.

Selection of companies

- **Chicken meat producing companies**

  The chicken meat value chain comprises input providers (feed and machinery), hatchery, agricultural farms, slaughterhouses, food processing companies, retailers, and restaurants. Most of the largest chicken meat producing companies are vertically integrated and own majority of the stages in the value chain i.e. feed manufacturing, hatchery, chicken farms, slaughterhouses, and food processing.

  The selection of chicken meat companies is based on the Poultry International's Leading Poultry Companies database. The companies for this case study are selected by taking into account the following considerations:

  - The ranking is based on number of birds slaughtered annually in a country. Therefore, if a company has the highest number of birds slaughtered in two countries, we have added the two numbers to get a bigger picture. It is possible that a company is active in other countries and the actual number of birds slaughtered is much higher than what is shown in the database.

  - The companies selected includes mostly chicken producers, but they also produce turkey, ducks, and eggs. It is also possible that these companies are active in other meat products such as beef or pork.

- Only public companies are considered.

Table 26 presents the outcome of the selection of chicken meat companies.

Table 26 Selected chicken meat companies

No.	Company	Country
1	Guangdong Wen's Food Group	China
2	Industrias Bachoco	Mexico
3	LDC	France
4	MHP	Ukraine
5	Pilgrim's and JBS Aves Brazil (JBS)	US and Brazil
6	Sanderson Farms	US
7	Tyson Foods	US

Source: WATTAgNet (2019, February), *Top Poultry Companies*.

- **Pig meat producing companies**

The pig meat production value chain comprises input providers such as feed, machinery, and veterinary services; production companies that breed and raise piglets; processing companies that slaughter and process meat into various forms, and at the end there are retailers and restaurants. The case study focuses on the top producers and processors of pig meat given their direct links. The input providers are out of scope for this study. Retailers and restaurants are selected separately as they are not classified based on species.

The selection is based on the ranking of top 40 pig meat producers and top 40 pig meat processors published in Pig International in November 2016. For top pig meat producers, the number of sows under control or contract is considered, as usually the grown pigs are sold to the processors for slaughtering and processing. For the meat processors, the ranking is done considering number of heads slaughtered annually. From the available two rankings, a selection of nine pig meat companies is done to ensure a good mix of producers and processors as shown in Table 27. The companies for this case study are selected taking into account the following considerations:

- Smithfield (since 2013 part of WH Group, which was previously known as Shuanghui Group) is the biggest player in both the pig meat producers and processors rankings.
- From top pig meat producers ranking, Guangdong Wen's Food Group from the second position is removed as it is included in chicken meat companies.
- From top pig meat processors, JBS Foods International (parent JBS SA) at the second position is removed from this selection as it is included in chicken meat companies list.
- Other companies such as Cofco Meat, RusAgro, and Ningbo were added.

Table 27 Selected pig meat companies

No.	Company	Country
1	BRF	Brazil
2	Cofco meat holdings	China
3	Hormel Foods	United States

No.	Company	Country
4	Ningbo Tech-bank	China
5	RusAgro	Russia
6	Seaboard Corp.	United States
7	Thai Foods Group	Thailand
8	WH Group	United States
9	Yurun Group	China

Source: Plantz, B. (2016), "World's 40 leading pig producers and processors", *Pig International*, volume 46(7): 6-17., p. 6.

- **Retailers and restaurants**

The retailers and restaurants are at the end of the value chain of chicken and pig meat. These are the largest retailers and restaurants in the world and offer many other products besides chicken and pig meat products. However, given their strong bargaining power with the suppliers in the value chain, they can play a very influential role in making the production of meat free from any animal cruelty. Being closest to the end consumer of the products they are exposed to huge reputational risk, and thus have a strong business case for animal welfare.

The selection of retailers has been taken from the 2018 Global Powers of Retailing report from Deloitte Touche Tohmatsu. Table 28 lists the seven retailers selected for this case study.

Table 28 Selected food retailers

No.	Company	Country
1	Ahold Delhaize	Netherlands
2	Carrefour	France
3	Cotsco	United States
4	Groupe Casino	France
5	The Kroger Co.	United States
6	Tesco	UK
7	Walmart Stores	United States

Source: Deloitte (2018, January 12), *Global Powers of Retailing 2018,* p. 19 onwards.

For selecting the largest fast food restaurants, the World Atlas ranking of the largest fast food restaurant chains based on the number of outlets is considered. However, private company Subway is excluded, and Starbucks is excluded as it is focused on coffee brewing business. Further, the brands in the ranking were consolidated and the parent company is considered for the selection. For KFC and Pizza Hut, parent company Yum! Brands is considered. Burger King's parent Restaurant Brands International is considered. Table 29 presents the selected restaurant companies for this study.

Table 29 Selected restaurant companies

No.	Company	Country
1	Domino's Pizza Group	UK
2	McDonald's	United States

No.	Company	Country
3	Restaurant Brands International	United States
4	Wendy's	United States
5	Yum! Brands	United States

Source: Chepkemoi. J. (2017, April 25), "The World's Largest Fast Food Restaurant Chains", World Atlas.

Financial research approach

All investments (bondholdings and shareholdings) that are reported by the pension funds are included in this research.

There are differences in the level of detail that pension funds disclose about their investment portfolios. Some pension funds disclose their full portfolios, including details on the values of their investments and the companies they invest in. Other pension funds disclose only the names of the companies they invest in but not the values. Finally, some pension funds do not disclose their portfolio at all. The difference between the pension funds' disclosures has led to three different research approaches:

1. **For pension funds that publish the invested companies and the investment values, the information is complete.**

   For six of the ten pension fund, the total investment values can be calculated, and the values between the pension funds can be compared based on their reporting. These pension funds are:

   - Algemeen Burgerlijk Pensioenfonds (ABP);
   - Pensioenfonds Zorg en Welzijn (PFZW);
   - Pensioenfonds Horeca & Catering (PH&C);
   - Pensioenfonds van de Metalektro (PME);
   - Pensioenfonds Metaal en Techniek (PMT); and
   - Stichting Bedrijfstakpensioenfonds voor de Bouwnijverheid (BpfBOUW).

   For these pension funds the disclosed investment portfolios were looked into. The invested companies and the investment values were noted and put in a dataset. This pension funds dataset is composed of data from the published investment portfolios of the individual pension funds on their investment portfolios.

2. **For pension fund that only publish the names of their invested companies, the financial links are certain, but values are not known.**

   Three pension funds only publish the names of the companies they are invested in. Therefore, the investment links are certain, but the values are not known. These pension funds are:

   - BPL Pensioen
   - Pensioenfonds Detailhandel
   - Pensioenfonds Vervoer

   For these pension funds the disclosed investment portfolios were looked into. The invested companies were noted and put in the same dataset as mentioned before.

3. **For pension funds that do not disclose any investment information, but have known asset managers, only a suggestive investment link is identified. The investment values are known for the full managed funds of the asset managers.**

Only Stichting Pensioenfonds voor Personeelsdiensten (StiPP) did not disclose its holdings and investment values. An indicative link to the selected companies is identified through its external asset managers investment links to the selected companies.

In this research approach, the invested companies and investment values are determined for the whole investment portfolio of the asset managers that are contracted by the pension funds. In all cases, the asset manager is managing assets for multiple clients. There is no information available on the proportion of the investment value of the pension fund asset relative to the investment value of the total managed assets. The investment value that is presented in this report is the total investment amount, representing the assets of all clients of the asset manager invested in the selected companies. That means the presented investment value does not represent the investment by the individual pension funds and must not be interpreted as such.
However, the invested companies by the asset managers, are potentially companies that the pension funds invested in through its asset manager. Only in cases where a pension fund explicitly excludes the participation of a managed fund in a specific company (exclusion), the investment portfolio of the pension fund differs from the investment portfolio of the asset manager.

The financial data for the asset managers of the pension funds has been gathered through financial database Thomson Reuters Eikon.

For the final results, this research methodology means that in all three approaches the invested companies are (assumed to be) known. With respect to the investment values, in the first approach, the actual investment values by the individual pension funds are known. In the second approach, the investment links are known but values are not known. In the third approach, the investment links are indicative while the values by the individual pension funds are not known. The total investment value in the selected companies of the asset managers is available, however this figure includes investments on behalf of other clients as well.

The three different approaches are treated separately in the presentation of the financial results. The investment values of the different approaches may not be summed up or mutually compared.

Types of financing

The selected companies can be financed through two main types of financing: credit and investment. When financial institutions provide credit, it can be through loans or the underwriting of share and/or bond issuances. Investment, on the other hand, is when financial institutions invest in the equity and debt of a company by holding shares and/or bonds.

In this research only investments in shares and bonds are researched:

- (Managing) shareholdings

  Institutional investors, such as banks, insurance groups, pension funds and asset managers, can, through the funds they are managing, buy shares of a certain company making them part-owners of the company. This gives the bank a direct influence on the company's strategy. The magnitude of this influence depends on the size of the shareholding.

  As financial institutions actively decide in which sectors and companies to invest, and are able to influence the company's business strategy, this research will investigate the shareholdings of financial institutions of the selected companies. Shareholdings are only relevant for stock listed companies. All companies in the study are listed on a stock exchange.

Shareholdings have a number of peculiarities that have implications for the research strategy. Firstly, shares can be bought and sold on the stock exchange from one moment to the next. Financial databases keep track of shareholdings through snapshots, or filings. This means that when a particular shareholding is recorded in the financial database, the actual holding, or a portion of it, might have been sold, or more shares purchased. Secondly, share prices vary from one moment to the next. Given these peculiarities, shareholdings are analysed at the most recent filing dates.

- (Managing) investments in bonds

  Institutional investors can also buy bonds of a certain company. The main difference between owning shares and bonds is that an owner of a bond is not a co-owner of the issuing company; the owner is a creditor of the company. The buyer of each bond is entitled to repayment after a certain number of years, and to a certain interest during each of these years.

  Similarly, to shares, bonds can be bought and sold from one moment to the next. Bondholdings are also reported by the holding investor through regular filings. However, historical filings are not kept within the financial databases; only the most recent bondholding information is available. Bondholdings are therefore always analysed at the most recent filing date.

Time frame

Bond- and shareholdings published through investment portfolios and bond- and shareholdings managed by asset managers, were researched at their most recent filing dates as of February 2019. During the feedback round with the pension funds, PH&C indicated its recent portfolio disclosure as of March 2019, which was adjusted in this report.

This research is written, edited and reviewed by:

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