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Profit or Planet?

Ahold Delhaize's profits can fund a transition towards sustainable, Paris-aligned food

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About this report

This report has been commissioned by Milieudefensie.

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Authorship

This report was researched and written by Gerard Rijk and Barbara Kuepper, with contributions by Pavel Boev. Correct citation of this document: Rijk, G. and B. Kuepper (2025, March), *Profit or Planet? Ahold Delhaize's profits can fund a transition towards sustainable, Paris-aligned food,* Amsterdam, The Netherlands: Profundo.

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Disclaimer

 Ahold Delhaize has chosen not to answer questions from Profundo during the process of this report. Profundo has approached Ahold Delhaize a total of four times, asking for additional information about potential transition pathways, but the company seemed to choose to delay the research process or hide behind the argument that they can only share public information.

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Summary (English)

Ahold Delhaize (AD), a leading global food retailer, faces two significant environmental risks in its portfolio while generating high profits and handing back significant sums to shareholders. The environmental risks are two-fold: 1) AD's CO_2-equivalent (CO_2e) emissions remain high, owing in large part (estimated at 35%) to animal-based protein food products like meat, dairy, and eggs. Consequently, AD is lagging behind its own CO_2e reduction targets for 2030 as well as the 2030 climate targets derived from the Paris Agreement. 2) AD fails to take responsibility for sustainable food production as only 3% of its food revenues consist of organic food products, lagging behind 2030 targets for the Dutch agricultural area (15% to be organic) and the EU (25%). In the meantime, AD hands back € 2 billion to shareholders annually, which the company could use to meet climate and organic food transition targets.

The report contains two separate narratives and quantitative analyses: a protein transition and an organic transition. The vast majority of AD's emissions come from Scope 3 (96%), which is linked to its supply chain. The current report assesses the emissions and financial implications of the different transition paths from animal-based proteins to plant-based proteins, as well as those of other measures aimed at reducing climate emissions.

As a second narrative, the report calculates the financial implications of the transition paths to a higher percentage of organic food revenues, under the condition of stable prices for consumers.

AD is generous to shareholders but not to the environment

AD hands back € 2 billion to shareholders annually through dividends and share buybacks. Between 2020 and 2023, the retailer distributed 103% of its annual net profits to shareholders - averaging € 2.0 billion per year - evenly split between dividends and buybacks. It also returned 95% of its free cash flow to shareholders. These high payout ratios indicate that AD did not allocate additional resources from its profits to reduce its persistently high CO_2e footprint or to offer a broader organic food assortment at reasonable prices.

AD's necessary acceleration in climate transition

AD could create a Climate Impact Fund with annual additions of € 690 million to reach a Paris-aligned target of -48% CO_2 reduction. After-tax, this would equal to 22% of the annual profits and 26% of annual dividends and share buybacks (2023). AD would need to reduce its 2024 emissions by 27 million tons of CO_2e to reach its own -37% target in 2030, and even 30 million tons of CO_2e reduction to reach the Paris-aligned target (-48% in CO_2 or -43% in Greenhouse Gas (GHG)/CO_2e). A proposed Climate Impact Fund could be used for investments and cover additional measures to reduce AD's carbon footprint in three key areas:

1) **Protein transition**: Approximately 35% of AD's emissions are linked to animal-based proteins. Reducing this share would require additional information/marketing expenditures by AD, as well as support for farmers to transition to alternative business models;

2) **Lowering emissions from remaining animal-based protein suppliers**: AD could support these suppliers in reducing their footprint;

3) **Energy use in the food supply chain**: A significant portion of emissions stems from energy consumption in the food supply chain. AD could both encourage and support a shift to renewable energy in the supply chain.

Based on estimated abatement costs – including a transition to 70% plant-based proteins, emission reductions of the remaining animal-protein suppliers, and the transition to renewable energy in the supply chain - annual funding of € 690 million will be required in a Climate Impact Fund through 2030. Interestingly, the required annual funding is slightly lower than AD's € 700 million annual global marketing spending.

A protein transition could be a big step in CO_2e reduction: based on a current estimate of 33% plant-based protein products across AD's operations, a shift to a 70% scenario would result in an emissions reduction equal to 14% of AD's total 2024 emissions. Based on country-level per capita consumption and AD's retail market share, the retailer's sales of animal products are linked to an estimated total of 23.7 million metric tons of CO_2e emissions. Under the most ambitious scenario, a protein split of 30% animal proteins and 70% plant protein would save 9.7 million tons of CO_2e per year across the retailer's operations. Versus AD's total 2024 CO_2e emissions of 67 million tons, the most ambitious scenario leads to a reduction of 14%. The protein transition net savings of 9.7 million tons would cover 32% of the required 30 million tons of CO_2e reduction in the -48% Paris-aligned CO_2-reduction target.

The protein transition's abatement costs for CO_2e reduction in the most ambitious plant-based protein scenario amount to € 462 million annually. The scenarios for the protein transition from the present assumed 33% plant-based share to 70% require additional information and marketing expenditures. In addition, interest cost relief could be given to farmers switching from animal-based to plant-based protein production. Testimonies point to the need to create partnerships with the condition of good prices to make the protein change possible and that financial support should come from financiers, who should be less focused on high financial returns.

Additional measures to reduce the emission footprint of the remaining dairy protein farmers and emissions in the rest of the supply chain would amount to € 228 million, pre-tax. This annual amount, added to the yearly abatement costs for the protein transition, leads to the € 690 million pre-tax annual addition to the Climate Impact Fund and would be able to reduce emissions by 30 million tons of CO_2e versus 2019 CO_2e emissions (-48% in CO_2/-43% in CO_2e). After-tax, this is equal to 22% of the underlying 2023 net profit. This means that the reward of shareholders, 103% of average net profits in the 2020-2023 period, would need to decline to approximately 80% to enable the climate transition.

AD's necessary transition to organic food products

The transition to an organic product portfolio is a material challenge due to the vast over-pricing of organic products, estimated at 40%. Consumers buying organic products pay € 863 million too much. Due to these artificially high prices, AD generates 16% of its profits. The second material environmental risk for AD is that the non-organic food sales are still 97% of its global food portfolio. While organic products are 40% more expensive at farm-gate prices, they are 56% more expensive at the food retail level. As the value-adding supply chain steps between farmers and food retail should have led to a dilution to only 16% higher prices on the supermarket shelf, the conclusion is that the supply chain levels of food processors and food retailers are over-pricing the organic products by 40%, of which half by the food retailers.

The significant over-pricing is hindering the organic transition. At the same time, the € 431 million extra operating profit - or € 324 million on a net profit level (after a 25% tax rate) – contributes substantially (16%) to the reward for shareholders. The € 2 billion annual dividends and share buybacks are partly possible by keeping organic food prices high. This while the organic transition from the current 3% to scenarios of 15% (Dutch government target 2030), 25% (EU target 2030), and 100% require AD to sell organic products for a price much closer to that of conventional food products.

First, a 100% organic transition in AD's private label dairy, meat, fruits, vegetables and other perishable products could cost 3% of operating profit in 2025 and 66% in 2035. This assumes that organic private label products are not priced higher than conventional private label products. The numbers (translated to an impact versus net profit; see Table 1) show that the costs for AD are below the current and future rewards to shareholders.

Testimonies by suppliers in the chain support the idea that this transformation is possible. This should be based on higher prices paid for organic products at the farm-gate level and on AD providing a stable sourcing environment, ensuring that farmers have a secure client base. If an

organic transformation across all categories is too complex, smaller steps can be taken by fully transforming select sub-categories to 100% organic in one go, rather than gradually.

Conclusion on the impact on net profit and rewards to shareholders

Among the investigated scenarios, the protein transition scenarios clearly entail lower costs compared to the organic food transition scenarios. The two transitions may have some overlap; therefore the percentages cannot be added up. The percentages presented below suggest that shareholders have the financial capacity to pay for every single transition scenario. However, this would imply reduced dividend payouts and lower levels of share buybacks compared to the 'business-as-usual' levels.

Table 1 Potential impact of the investigated scenarios on AD's net profit*

Scenarios	Climate transition	Organic transition
50% plant-based protein	16.6%	
60% plant-based protein	19.5%	
70% plant-based protein	22.3%	
15% organic		13.5%
25% organic		19.3%
100% organic		72.4%

Source: Profundo. *) The % impact on dividend and share buyback payments to shareholders is of the same magnitude as approximately 100% of net profit is returned to shareholders.

Samenvatting (Nederlands)

Ahold Delhaize (AD), een toonaangevende wereldwijde supermarkt groep, kan worden gekoppeld aan twee belangrijke milieurisico's in zijn portefeuille, terwijl het bedrijf hoge winsten genereert en aanzienlijke bedragen teruggeeft aan aandeelhouders. De milieurisico's zijn tweeledig: 1) De CO_2-equivalente (CO_2e) emissies van AD blijven hoog. Dit is grotendeels te wijten aan (geschat op 35%) de verkoop van dierlijke eiwitproducten zoals vlees, zuivel en eieren. Als gevolg hiervan loopt AD achter op zijn eigen CO_2e-reductiedoelstellingen voor 2030 en de klimaatdoelstellingen voor 2030 die voortvloeien uit het Parijs Akkoord. 2) AD neemt geen verantwoordelijkheid voor duurzame voedselproductie, aangezien slechts 3% van zijn voedings-omzet biologisch is, wat achterblijft bij de doelstellingen voor 2030 voor het Nederlandse landbouwgebied (15% moet biologisch zijn) en de EU (25%). Ondanks het tekortschieten van het halen van de doelstellingen, geeft AD jaarlijks € 2 miljard terug aan aandeelhouders. In plaats daarvan zou het bedrijf (een deel) van die € 2 miljard kunnen gebruiken om klimaat- en biologische transitiedoelstellingen te halen.

Dit rapport kwantificeert afzonderlijk zowel de noodzakelijke eiwittransitie als de biologische transitie. Het overgrote deel van de emissies van AD komt uit Scope 3 emissies (96%). Deze emissies ontstaan met name in de toeleveringsketen en voor een klein deel in het gebruik van de producten. Dit rapport beoordeelt de emissies en financiële implicaties van de verschillende transitiepaden van dierlijke eiwitten naar plantaardige eiwitten, evenals die van additionele maatregelen die gericht zijn op het verminderen van klimaatemissies.

Dit rapport berekent ook de financiële implicaties van drie transitiepaden naar een hoger percentage van de omzet uit biologische voeding, onder de voorwaarde van stabiele prijzen voor de consument.

AD is gul voor aandeelhouders, maar niet aan het klimaat en het milieu

AD geeft jaarlijks € 2 miljard terug aan aandeelhouders via dividenden en aandeleninkopen. Tussen 2020 en 2023 verdeelde AD 103% van zijn jaarlijkse nettowinst aan aandeelhouders - gemiddeld € 2,0 miljard per jaar - gelijkmatig verdeeld over dividenden en aandeleninkopen. Deze betalingen waren gelijk aan 95% van de vrije kasstroom. Deze hoge uitkeringsratio's geven aan dat AD geen extra middelen uit zijn winst heeft gebruikt om de blijvend hoge CO_2e-voetafdruk te verkleinen of een betaalbaar biologische assortiment aan te bieden aan consumenten.

De noodzakelijke versnelling in klimaattransitie door AD

AD zou een Klimaat Impact Fonds kunnen creëren met jaarlijkse stortingen van € 690 miljoen om een op het Parijs Akkoord afgestemde doelstelling van -48 CO_2-reductie te bereiken. Na belastingen zou dit gelijk zijn aan 22% van de jaarlijkse winst en 26% van de jaarlijkse dividenden en aandeleninkopen (2023). AD zou zijn 2024 emissies met 27 miljoen ton CO_2e moeten verminderen om zijn eigen doelstelling van -37% in 2030 te bereiken. Een hogere 30 miljoen ton CO_2e-reductie is nodig om de op het Parijs Akkoord afgestemde doelstelling (-48% in CO_2 of -43% in GHG/CO_2e) te bereiken. Een Klimaat Impact Fonds zou kunnen worden gebruikt voor investeringen en extra maatregelen om de CO_2e-voetafdruk van AD op drie belangrijke gebieden te verkleinen:

1) Proteïnetransitie: ongeveer 35% van de emissies van AD komt van dierlijke eiwitten. Om dit aandeel te verminderen, zouden extra marketing/bewustwordings-uitgaven van AD nodig zijn, evenals ondersteuning voor boeren om over te stappen op alternatieve bedrijfsmodellen;

2) Verlagen van emissies van resterende leveranciers van dierlijke eiwitten: AD zou deze leveranciers, met name boeren, kunnen ondersteunen bij het verkleinen van hun voetafdruk;

3) Energiegebruik in de toeleveringsketen: een aanzienlijk deel van AD's Scope 3 emissies is afkomstig van energieverbruik in de toeleveringsketen. AD zou een verschuiving naar hernieuwbare energie in de keten kunnen aanmoedigen en ondersteunen.

Gebaseerd op de geschatte kosten voor emissiereductie - inclusief een overgang naar 70% plantaardige eiwitten, emissiereducties van de resterende leveranciers van dierlijke eiwitten en de overgang naar hernieuwbare energie in de toeleveringsketen - is er tot 2030 een jaarlijkse financiering van € 690 miljoen nodig voor een Klimaat Impact Fonds. Interessant genoeg is de vereiste jaarlijkse financiering iets lager dan de jaarlijkse wereldwijde marketinguitgaven van € 700 miljoen van AD.

Een eiwittransitie zou een grote stap kunnen zijn in CO_2e-reductie: gebaseerd op een huidige schatting van 33% plantaardige eiwitproducten in AD's portefeuille, zou een verschuiving naar een 70%-scenario resulteren in een emissiereductie die gelijk is aan 14% van de totale emissies van AD in 2024. Op basis van de consumptie per hoofd van de bevolking op landenniveau en het marktaandeel van AD in de detailhandel, kunnen de verkopen van dierlijke producten van AD worden gekoppeld aan een geschatte totale CO_2e-uitstoot van 23,7 miljoen metrische ton per jaar. In het meest ambitieuze scenario zou een eiwitverdeling van 30% dierlijke eiwitten en 70% plantaardige eiwitten 9,7 miljoen ton CO_2e per jaar besparen. Vergeleken met de totale CO_2e-uitstoot van AD in 2024 van 67 miljoen ton, leidt het meest ambitieuze scenario tot een reductie van 14%. De netto-besparing van de eiwittransitie van 9,7 miljoen ton zou 32% dekken van de vereiste 30 miljoen ton CO_2e-reductie volgens de -48% Parijs Akkoord-doelstelling (CO_2, -43% in CO_2e).

De kosten van de eiwittransitie in het meest ambitieuze plantaardige eiwitscenario bedragen jaarlijks € 462 miljoen. De scenario's voor de eiwittransitie van het huidige veronderstelde plantaardige aandeel van 33% naar 70% vereisen aanvullende marketing- en bewustwordingsuitgaven. Bovendien, financieringsverlichting zou kunnen worden gegeven aan boeren die overschakelen van dierlijke naar plantaardige eiwitproductie. Experts en leveranciers wijzen op de noodzaak om partnerschappen te creëren met de voorwaarde van 'eerlijke' prijzen voor de boer om de eiwittransitie mogelijk te maken; en zij geven aan dat financiële steun zou moeten komen van met name banken, die minder gericht zouden moeten zijn op hoge winsten.

Aanvullende maatregelen om de emissies van zowel de overblijvende vlees- en zuivelagrariërs als de emissies in de rest van de toeleveringsketen te verminderen, zouden € 228 miljoen, vóór belastingen, kosten. Dit jaarlijkse bedrag, toegevoegd aan de jaarlijkse emissie-reductiekosten voor de eiwittransitie, leidt tot een jaarlijkse toevoeging van € 690 miljoen (vóór belastingen) aan het Klimaat Impact Fonds en zou de emissies met 30 miljoen ton CO_2e kunnen verminderen ten opzichte van de emissies van 2019. Na belastingen is dit gelijk aan 22% van de onderliggende nettowinst in 2023. Dit betekent dat de beloning van aandeelhouders (103% van de gemiddelde nettowinst in de periode 2020-2023) zou moeten dalen tot ongeveer 80% om de klimaattransitie mogelijk te maken.

AD's noodzakelijke transitie naar een biologische voedingsportefeuille

De transitie naar een biologisch assortiment is een enorme uitdaging als gevolg van de huidige extra marge op biologische producten door onder andere supermarkten, geschat op een 40% extra prijsverhoging. Consumenten die biologische producten kopen betalen nu € 863 miljoen te veel. De kunstmatig hoge prijzen genereren 16% van AD's winst. Het tweede grote milieurisico voor AD is dat de verkoop van niet-biologische voeding nog steeds 97% van het AD's wereldwijde omzet uitmaakt. Een groot probleem voor de biologische transitie is de prijs: terwijl biologische producten 40% duurder zijn dan conventionele producten als ze de boerderij verlaten, zijn ze zelfs 56% duurder op het niveau van de supermarkt. Aangezien de waarde-toevoegende stappen in de toeleveringsketen tussen boeren en supermarkt zouden moeten leiden tot een verwatering tot slechts 16% hogere prijzen op het supermarkt-schap, is de conclusie dat de voedselverwerkers en de supermarkten de biologische producten met 40% te hoog prijzen, waarvan de helft door de supermarkten.

De extra hoge marge belemmert de biologische transitie. Tegelijkertijd vormt de extra operationele winst van € 431 miljoen, ofwel € 324 miljoen op nettowinstniveau (na een belastingtarief van 25%) een belangrijke bijdrage (16%) aan de beloning voor aandeelhouders. De

jaarlijkse dividenden en aandeleninkopen van € 2 miljard zijn deels mogelijk door de prijzen van biologisch voeding hoog te houden. Dit terwijl de biologische transitie van het huidige 3% aandeel naar scenario's van 15% (doelstelling Nederlandse overheid 2030), 25% (doelstelling EU 2030) en 100% vereist dat AD biologische producten verkoopt voor een prijs die veel dichter bij die van conventionele voedselproducten ligt.

Als eerste stap zou een geleidelijke overgang (van 2025 tot 2035) naar 100% biologische huismerken in zuivel, vlees, fruit, groenten en andere bederfelijke producten ongeveer 3% van AD's operationele winst kunnen kosten in 2025 en 66% in 2035. Dit veronderstelt dat biologische huismerk-producten niet duurder zijn dan conventionele huismerken. De cijfers (zie onderstaande tabel) laten zien dat de kosten voor AD lager zijn dan de nettowinst.

Experts en leveranciers in de keten geven aan dat deze transformatie mogelijk is. De transitie zou gebaseerd moeten zijn op hogere prijzen voor biologische boeren, terwijl AD een stabiel inkoopvolume biedt waardoor boeren een zekere klantenbasis hebben. Als een biologische transformatie in alle voedingscategorieën tegelijk een te complexe operatie is, zouden kleinere stappen kunnen worden gezet door bepaalde subcategorieën in één keer volledig te transformeren naar 100% biologisch, in plaats van geleidelijk.

Conclusie over de impact op de nettowinst en de beloningen voor aandeelhouders

Van de onderzochte scenario's brengen de eiwittransitiescenario's duidelijk lagere kosten met zich mee in vergelijking met de biologische transitiescenario's. De twee transities kunnen enigszins overlappen; daarom kunnen de percentages niet worden opgeteld. De onderstaande percentages suggereren dat de AD aandeelhouders de financiële mogelijkheid hebben elk van de afzonderlijk transitiescenario te financieren. Dit zou echter lagere dividenduitkeringen en lagere aandeleninkoop-programma's impliceren in vergelijking met de 'business-as-usual'-niveaus.

Table 2 Potentiële impact van de onderzochte scenario's op AD's netto-winst

Scenario's	Klimaattransitie	Biologische transitie
50% plantaardige eiwiiten	16,6%	
60% plantaardige eiwitten	19,5%	
70% plantaardige eiwitten	22,3%	
15% biologische huismerken*		13,5%
25% biologische huismerken*		19,3%
100% biologische huismerken*		72,4%

Bron: Profundo; *) in vlees, zuivel, kaas, groente, fruit, brood en andere versproducten.

Abbreviations and definitions

AD	Ahold Delhaize
AH	Albert Heijn
CO_2e	Carbon Dioxide Equivalent
DCF	Discounted Cash Flow
FAO	Food and Agriculture Organization
FCF	Free Cash Flow
FLAG	Forest, Land, and Agriculture
FMCG	Fast Moving Consumer Goods
GHG	Greenhouse Gas Emissions
GLEAM	Global Livestock Environmental Assessment Model
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LTO	Agricultural and Horticultural Organisation of the Netherlands
Market capitalisation	Number of outstanding shares x share price
NA	Not Available
SBB	Share Buyback
SBTi	Science-Based Targets initiative
Scope 1 emissions	Direct emissions owned or controlled by a company
Scope 2 emissions	Indirect emissions from energy purchases
Scope 3 emissions	Indirect emissions from a company's supply chain

Introduction

Ahold Delhaize (AD) is a leading food retailer in the Netherlands, in various European countries, and in the United States of America (US). The company is not only a leading provider of food and food solutions in these geographies, but it also has a large impact on 1) the global climate, and 2) local pollution by pesticides. AD fails to take responsibility for organic food production as 97% of its revenues are still based on non-organic food products. In both the climate risk and the organic food transition, AD, as one of the dominant leading actors in the food system, could support smaller actors in its value chain.

In recent years, AD's CO_2e emissions have remained high, owing in large part (35%) to animal-based protein food products like meat, dairy and eggs. Consequently, AD is lagging behind its own reduction 2030 targets (-37% in its value chain by 2030, baseline 2020) as well as the climate targets derived from the Paris Agreement (-48% in CO_2, or -43% in GHG emissions by 2030 compared to 2019). The large majority of AD's emissions are Scope 3 emissions (>95%) and are generated by AD's suppliers, of which a major part is related to the sourcing of animal-based protein products from dairy and cheese producers and slaughterhouses.

The impact of pesticide use is related to the dominance of conventional food sales in AD's food portfolio with 97%, while organic-certified sales remain consistently small (3% of food revenues). AD is not accommodating the Dutch government's target of 15% (from 4%) of the agricultural area for organic farming in 2030[1], nor the 2030 target of 25% set by the European Union.[2] AD produces nearly none of its products in-house; however, it makes important procurement decisions and is the crucial link to the consumer. The current business practice is focused on sourcing products for a low price in predictable streams, forcing farmers to produce as much as possible against low margins and with a high risk of local pollution through pesticide application.

While AD continues to generate approximately € 2 billion in annual profits and rewards its shareholders with the same amount, it fails to reduce its emissions and is running behind in an organic transition. Both transitions will need to be funded, and dominant companies in the supply chain should take responsibility.

The current report calculates the financial implications of the potential transition paths for AD that would contribute to lowering its CO_2e footprint. The focus is on changing the current protein split in its assortment to favour plant-based proteins over animal-based products (in three scenarios). Additional measures are needed to reach the target of -48% in CO_2 or -43% GHG emissions by 2030. These measures consist of support to the remaining animal-based protein suppliers to reduce the footprint of their farm practices, and measures to reduce the other GHG emissions in the value chain.

The report's analyses and calculations are based on two clearly divided narratives on the climate transition and the organic transition. Cost elements cannot be added up as there might be overlap.

Chapter 1 shows where AD generates its profits (the Netherlands, Europe, and the US). The analysis gives insights into how the shareholders benefit from the generated profits and which shareholders, geographically, reap the rewards. This output is the input for the financial resources available to AD to become a leading food retailer in driving the change towards diets with a lower CO_2e footprint or containing more organic products.

Chapter 2 provides an overview of the development in AD's reporting on Scope 1, 2 and 3 emissions from its operations in recent years and aims to break down the important Scope 3 emissions, namely in relation to the contribution of animal products. Based on estimates of the retailer's animal protein sales per operating country, and the related greenhouse gas (GHG) emission factors provided in the FAO GLEAM 3.0 assessment of GHG emissions from animal products, the total emissions linked to these sales are estimated. Based on these outcomes, the net emission savings from a reduction of the animal protein share to 50%, 40% and 30% and the replacement of the relevant protein volumes with a mix of plant proteins are estimated.

Chapter 3 calculates the necessary costs for AD to transition its animal-based protein product portfolio to the three scenarios that include a higher percentage of plant-based protein alternatives. These costs consist of information and marketing expenditures to change consumer behaviour, the extra costs of plant-based alternatives, the costs to support farmers to change their business model to plant-based proteins, and other measures to reduce the CO_2e footprint in the supply chain. The sum of these costs is compared to the profits generated by AD. These costs are needed to pay for the reduction of the excess emissions, which is the emission difference between the base scenario (67% animal-based proteins) and the alternative scenarios. The costs can be collected and distributed from a fund, which could be called the Ahold Delhaize Climate Impact Fund. Testimonies from suppliers illustrate how the fund could be applied.

Chapter 4 calculates the costs for AD to transition to organic products in a 15%, 25% and 100% scenario versus the current status of 3%. The costs of upgrading the Dutch/EU/global food supply chains, including meat, dairy, cheese, vegetables, and fruits, to organic chains are given in the three scenarios, under the condition of no additional financial burden for farmers and no cost difference with conventional products for consumers. Testimonies of farmers and suppliers showcase the potential for financial support in realising this transition.

1

Financial data: profits and dividends

This section analyses the regional developments in Ahold Delhaize's (AD) revenues and profit, and the global development of dividends and share buybacks. These key financial numbers show where AD's profits are earned and how they flow back to shareholders. These numbers form the basis for an answer to the question of whether AD has the annual financial resources to fund a transition to a less carbon-intensive protein portfolio and/or a transition to a higher percentage of organic food products without price increases for consumers.

1.1 Introduction - Profile

AD operates under a variety of retail banners in Europe, the US, and Indonesia. In the US, where the largest part of revenues is generated, the company is active on the East Coast. In Europe, the largest activity is in the Netherlands, with smaller activities in Belgium, the Czech Republic, Romania, Serbia, Greece, and Portugal. Since 2020, AD does not give financial details anymore for the Netherlands, Belgium and Central and South-Eastern Europe. Since 2020, only Europe as a whole has been included in AD's Annual Report.[a] Table 3 shows some interesting data points and developments:

- In 2019, the Netherlands generated 22.4% of global revenues, Belgium 7.7% and South-Eastern Europe 9.5%.
- While in 2018 still 59.7% of revenues were generated in the US, this was 61.5% in 2023 and 60.7% in 2024.

Table 3 Revenues by geographies

€ million	2018	2019	2020	2021	2022	2023	2024
US	37,460	40,066	45,470	45,455	55,218	54,536	54,198
Netherlands	14,218	14,810	NA	NA	NA	NA	NA
Belgium	5,095	5,096	NA	NA	NA	NA	NA
Central and South-Eastern Europe	6,018	6,288	NA	NA	NA	NA	NA
Total Europe	25,331	26,194	29,266	30,147	31,767	34,113	35,158
Total	**62,791**	**66,260**	**74,736**	**75,602**	**86,985**	**88,649**	**89,356**

Source: AD Annual Reports.

[a] AD's relatively small Indonesian activities via a 51% stake in Superindo are reported under the European entity. In Portugal, it has a 49% stake in Pingo Doce. The increase in its Romanian footprint via the addition of grocery retailer Profi Rom Food to its portfolio has not yet been considered in the further analysis as the deal was only closed in January 2025.

Of 2023 revenues, 80% was generated in food. This has not materially changed from 2018's 83%. Non-food (generated in all geographies) accounted for 15% of 2023 revenues. The increase from 12% in 2018 was due to the strong growth in its *Amazon*-like web-shop business, *bol.com*, in the Netherlands. Pharmacy and gasoline sales are generated in the US. Data for 2024 did not change materially.[b]

Table 4 Revenues by categories (%)

%	2018	2019	2020	2021	2022	2023
Food: perishable	45%	45%	45%	45%	45%	44%
Food: non-perishable	38%	38%	39%	35%	35%	36%
Non-food	12%	12%	12%	16%	15%	15%
Pharmacy	3%	3%	3%	3%	3%	3%
Gasoline	2%	1%	1%	1%	2%	1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: AD Annual Reports.

The underlying operating profit increased from € 2,760 million in 2018 to € 3,605 million in 2023 (with no material change in 2024). The share of underlying operating profit generated in the US increased from 61.6% in 2018 and 61.7% in 2019 (the last year reporting the separate European regions) to 70.8% in 2023. The share of Europe declined strongly from 42.4%/43.4% in 2018/2019 to 31.1%. There was a negative result for the Global Support Office.

Table 5 Underlying operating profit per geography

€ million	2018	2019	2020	2021	2022	2023
US	1,699	1,712	2,466	2,150	2,603	2,553
Netherlands	748	776	NA	NA	NA	NA
Belgium	142	149	NA	NA	NA	NA
Central and South-Eastern Europe	274	280	NA	NA	NA	NA
Total Europe	1,164	1,205	1,325	1,306	1,131	1,120
Global support office	-103	-143	-158	-160	-10	-68
Total	**2,760**	**2,774**	**3,633**	**3,296**	**3,724**	**3,605**

Source: AD Annual Reports; NA = not available; underlying operating profit = operating profit before exceptional / one-off items.

In the US, the underlying profit as a percentage of revenues increased from 4.5% in 2018 to 4.7% in 2023. In Europe, the margin declined from 4.6% in 2018 to 3.3% in 2023. The decline was due to declining profits in Belgium and the impact of the high growth of *bol.com,* which has lower underlying operating profit margins than the rest of the European activities.

[b] The 2024 Annual Report was published after the analysis for this report was finalised.

Table 6 Underlying operating profit per geography (%)

%	2018	2019	2020	2021	2022	2023
US	4.5%	4.3%	5.4%	4.7%	4.7%	4.7%
Netherlands	5.3%	5.2%	NA	NA	NA	NA
Belgium	2.8%	2.9%	NA	NA	NA	NA
Central and South-Eastern Europe	4.6%	4.5%	NA	NA	NA	NA
Total Europe	4.6%	4.6%	4.5%	4.3%	3.6%	3.3%
Global support office	-0.2%	-0.2%	-0.2%	-0.2%	0.0%	-0.1%
Total	4.4%	4.2%	4.9%	4.4%	4.3%	4.1%

Source: AD Annual Reports.

1.2 Net profit, free cash flow, dividends and share buybacks

The 'route' from operating profit to net profit and payment to shareholders is as follows:

- Operating profit is the operational result when operating expenses like costs of goods sold, labour costs, advertisement costs and depreciation costs are deducted from revenues.
- The 'underlying' operating profit excludes the exceptional or one-off expenses and proceeds.
- The deduction of the balance of interest costs, interest income, and financial charges/income leads to a pre-tax profit. The result of associates (AD has a minority stake and/or no control) is also taken into account.
- Corporate tax deduction leads to the 'group' net profit.
- Minority shareholders in some subsidiaries are accountable for a 'minority interest' deduction. The remaining value is called 'net profit available for shareholders'.
- This flow can be used for acquisitions, or dividends or share buybacks for shareholders. Dividends are paid per share, while share buybacks are executed by buying shares in the market. Through share buybacks, the number of outstanding divided-baring shares can be reduced and the net profit can be divided by a lower number of shares. This can lead to a higher net profit per share and can result in a higher share price.

In fact, Free Cash Flow (FCF) gives a better impression of how much cash is generated for shareholders. It considers working capital changes (inventories, trade debtors, trade creditors), and the relation between depreciation and investments. AD sees FCF as a very critical number for its performance.

AD does not publish separate net profit numbers per region. When needed for regional analysis, this report assumes that the net profit division is equal to the underlying operating profit division.

AD's dividends are paid by the head office in the Netherlands. The head office also pays the share buybacks (SBB). This means that dividend payments and share buybacks are not paid based on the profit distribution per region.

On average, for the period 2020-2023, the total of the annual dividend and share buyback (SBB) is € 1,963 million. The average free cash flow (FCF) is € 2,108 million and the average net profit is € 2,016 million. This means that the total money given back to shareholders is, on average, 95% of the annual FCF and 103% of the average annual net profit. The average value of SBBs (€ 998 million) is slightly higher than the average dividend (€ 965 million).

These outcomes mean that more than 100% of the global net profits after interest payments and taxes were returned to shareholders.

Table 7 Dividend and share buyback versus free cash low and net profit

€ million	2020	2021	2022	2023	Average 2020-2023
Free cash flow (FCF)	2,199	1,618	2,188	2,425	2,108
Net profit	1,397	2,246	2,546	1,874	2,016
Dividend	-1,026	-856	-979	-999	-965
Share Buyback (SBB)	-1,001	-994	-997	-999	-998
Dividend + SBB	-2,027	-1,850	-1,976	-1,998	-1,963
Dividend + SBB as % of FCF	92%	114%	90%	82%	95%
Dividend + SBB as % of net profit	145%	82%	78%	107%	103%

Source: AD Annual Reports.

The dividends and SBBs were paid to shareholders around the world. Shareholders in North America received 32.4% in 2023, shareholders in the Netherlands only 5.2%, and the rest was distributed between shareholders in various countries. The share of UK/Ireland seems high with 17.6%. In total, European shareholders received 47.7%. Of total payments, 17.4% could not be traced. It is worth noting that Dutch pension funds and investors often use the services of asset managers based in other countries. Consequently, the dividends and SBBs reaped by Dutch investors are not fully recorded as such due to the asset management location.

Table 8 Shareholders distribution by geography (%)

January/February	2019	2020	2021	2022	2023	2024
North America	26.9%	29.2%	32.0%	28.0%	30.3%	32.4%
UK/Ireland	16.1%	12.8%	12.4%	15.8%	19.1%	17.6%
France	8.6%	8.5%	6.6%	7.3%	8.6%	8.0%
The Netherlands	4.4%	5.4%	5.5%	5.3%	5.3%	5.2%
Germany	3.5%	3.7%	5.3%	5.5%	5.5%	5.2%
Rest of Europe	9.2%	9.1%	9.5%	9.8%	10.9%	11.7%
Total Europe	41.8%	39.5%	39.3%	43.7%	49.4%	47.7%
Rest of the world	4.5%	4.9%	4.5%	3.4%	2.5%	2.5%
Undisclosed	26.8%	26.4%	24.2%	24.8%	17.8%	17.4%
Total	**100.0%**	**100.0%**	**100.0%**	**99.9%**	**100.0%**	**100.0%**

Source: AD Annual Reports.

1.3 Conclusion

AD nowadays only publishes revenues and operating profits for the US and for Europe. The US generates approximately 60% of revenues and 70% of profits, while Europe generates approximately 40% of revenues and 30% of profits. In 2019, the last year that AD gave separate revenue data for the Netherlands and Belgium, the Dutch activities generated 22% of global revenues and Belgian activities 8%. AD does not provide information on which share of profits generated in each specific region (the Netherlands, the rest of Europe, and the US) is returned to shareholders in the form of dividends and share buybacks.

The Dutch head office consolidates the results from all activities around the world and redistributes these earnings through paying interest to banks and bond investors, paying dividends to shareholders, and buying back shares on the stock market. These streams are not specified by region. In the period 2020-23, AD distributed 103% of its net profits to shareholders, or on average € 2.0 billion per year.

The distribution of shareholders by location gives an indication of where the profits of AD are reaped. With ca. 50%, the largest part is distributed to European shareholders, while 30% is distributed to US shareholders.

2

GHG emission reduction: three pathways

AD has disclosed its GHG emissions footprint since 2016, with methodological changes over the years. This report estimates that animal-based protein product sales contribute approximately 35% of AD's total CO_2e emissions. Based on different scenarios for a shift towards more plant-based proteins, net emission savings can be calculated. As these savings do not close the gap in a necessary reduction to the Paris-aligned 2030 target, additional measures on the farms and in the rest of the supply chain are required.

2.1 Historical developments

2.1.1 Emissions from global operations

AD reported greenhouse gas (GHG) emission data beginning in 2016 (Table 9). However, it initially only described limited Scope 3 emissions ('other indirect emissions') for the period 2016-2020.[c,3] In its 2020 Annual Report, AD provided estimates for GHG Scope 3 absolute emissions (all categories) for the first time.[4] The absolute Scope 3 emissions across all categories were first published in the 2021 Annual Report and later supplemented with data for 2018 and 2020.[5] Moreover, various emission figures were adjusted retrospectively to reflect improved estimates. In 2024, total GHG emissions (location-based) were 67 million tons of CO_2-equivalents (CO_2e).

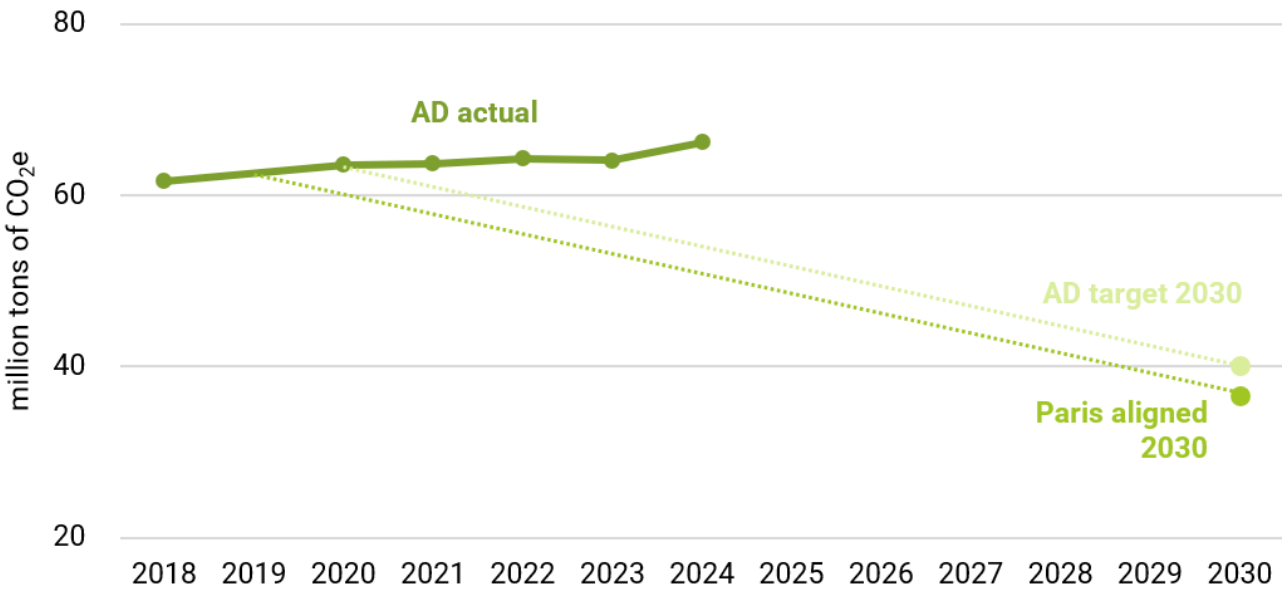
[c] These were limited to emissions from franchise / affiliated stores; emissions from subcontracted trucks that deliver AD products from operated distribution centres to stores, and estimated emissions from franchise stores.

Table 9 Ahold Delhaize's GHG emissions (actual, million tons CO_2e)

Scope	2016	2017	2018*	2019	2020	2021	2022	2023	2024
GHG Scope 1	1.80	1.63	NA	1.70	1.77	1.79	1.84	1.84	1.70
GHG Scope 2 location-based	2.35	2.20	NA	1.93	1.82	1.77	1.67	1.67	1.65
GHG Scope 2 market-based	2.10	1.84	NA	1.77	1.38	1.10	1.02	0.81	0.89
GHG Scope 1&2 location-based	4.15	3.83	NA	3.63	3.59	3.56	3.51	3.51	3.34
GHG Scope 1&2 market-based	3.91	3.47	4.01	3.47	3.15	2.89	2.86	2.65	2.58
GHG Scope 3 (selected categories)	0.22	0.45	0.45	0.43	0.49	NA	NA	NA	NA
GHG Scope 3 absolute (all categories)	NA	NA	57.61	NA**	60.39	60.78	61.31	61.37	63.56
Total all Scopes, location-based	NA	NA	NA	NA	63.98	64.34	64.82	64.88	66.90
Total all Scope, market-based	NA	NA	61.62	NA	63.54	63.67	64.17	64.02	66.14

Note: Market-based scope 2 includes a renewable energy component in electricity consumption, estimated by AD based on renewable energy/low-carbon certificates. It reflects actual purchases. Emission data was sometimes adjusted retrospectively; the table aims to reflect this as far as possible. *Scope 1&2 emissions for 2018 were later readjusted to 4.01 from 3.52 million tons of CO_2e; the resulting split between the scopes remains unclear; **AD initially estimated 2019 Scope 3 emissions at 70.8 million tons of CO_2e; no adjusted volume in line with prior and following years could be identified for that year. NA = not available / emission estimation lacking.
Sources: Ahold Delhaize (2020), *Climate Strategy 2020*, p. 4; Ahold Delhaize (multiple years), *Annual Reports 2017-2024*.

Figure 1 Ahold Delhaize actual GHG emissions versus targets



Source: Ahold Delhaize Annual Reports, IPCC.

AD has set emission reduction targets based on guidance by the Science Based Targets Initiative (SBTi) for its own operations (Scope 1 and 2) and its entire value chain (Scope 3, not yet approved in SBTi validation), with the objective of limiting global warming to 1.5 degrees Celsius in line with the Paris agreement. These commitments included an interim target of a 37% reduction by 2030 and achieving net-zero emissions by 2050, based on the Forest, Land and Agriculture (FLAG) and Energy and Industry (E&I) emissions guidance available at the time.[6] To account for the SBTi

requirements to explicitly separate FLAG and E&I, these targets were subsequently split out (Table 10).[7]

Table 10 Ahold Delhaize long-term targets for FLAG and E&I emissions reduction

Target	2030	2050
FLAG emissions: % reduction of scope 3 FLAG GHG emissions from a 2020 SBTi baseline	30.3%	72.0%
E&I emissions: % reduction of scope 3 Energy and Industrial GHG emissions from a 2020 SBTi baseline	42.0%	90.0%

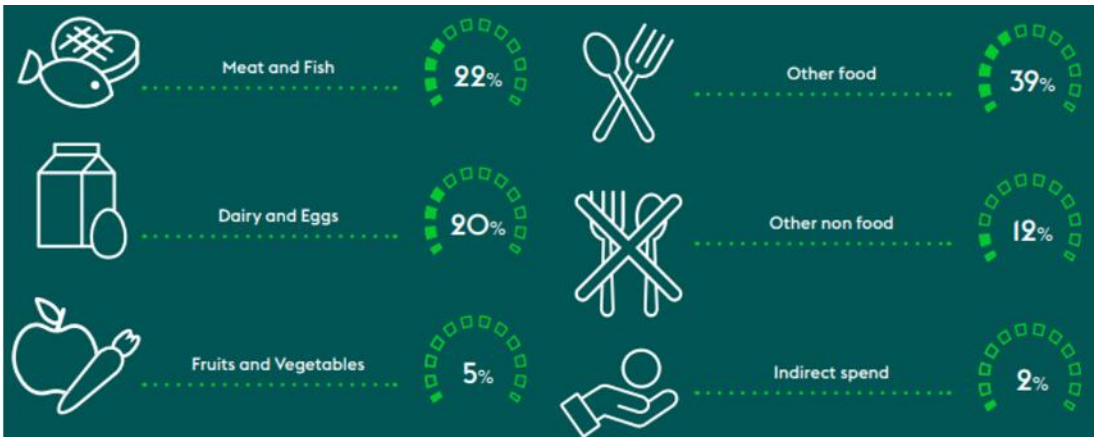
Source: Ahold Delhaize (2025, February), *Annual Report 2024*, p. 102.

The performance check for Scope 3 emissions showed that AD's 2024 FLAG GHG emissions (27.6 million tons, all linked to purchased goods) were 9.9% higher than the 2020 SBTi baseline, while the E&I GHG emissions (35.9 million tons) were 0.2% higher than the 2020 SBTi baseline.[8]

2.1.2 Breakdown of Scope 3 emissions

For 2019, AD published a detailed breakdown of the main category contributing to Scope 3 emissions — purchased goods & services. Of the 90.77% of Scope 3 emissions falling into this category, 42% were attributed to animal products (22% meat and fish, 20% dairy and eggs) (Figure 2).

Figure 2 Ahold Delhaize breakdown of Purchased Goods and Services category (2019)



Note: Percentages refer to the share of the Scope 3 emissions linked to purchased goods & services. When converted to a share of the total Scope 3 emissions, the share of animal products is reduced to 37%.
Source: Ahold Delhaize (2020), *Climate Strategy*, p. 4.

According to AD's 2024 Annual Report, purchased goods & services accounted for 80% of total GHG emissions, or 84% of its total Scope 3 emissions (53 million tons of CO_2e).[9] The emission share of animal products is not separately split out.

2.1.3 Emissions from Dutch grocery retailing

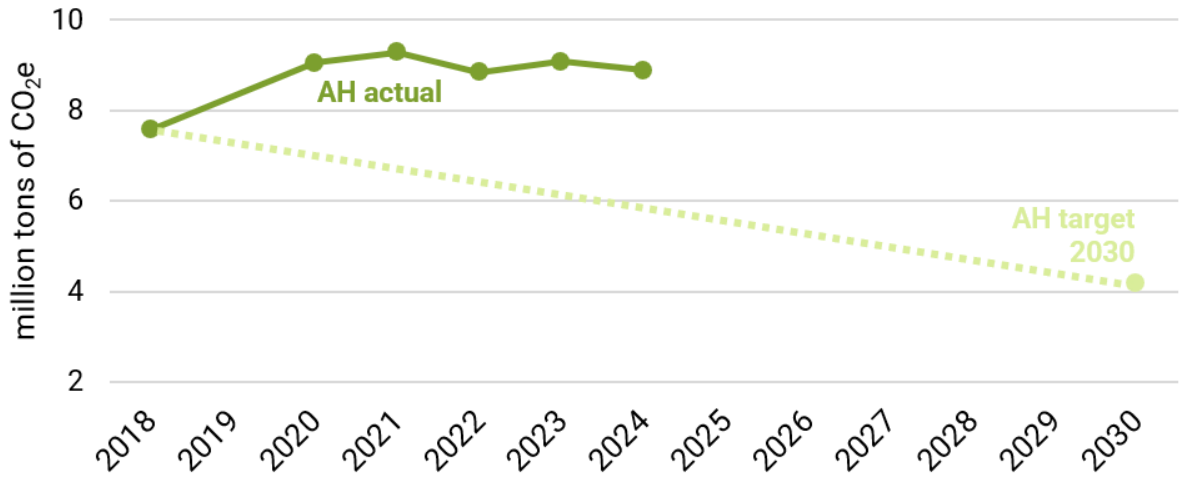
In its latest sustainability report for 2024, Albert Heijn (AH), AD's grocery retailing banner in the Netherlands, shows total Scope 3 emissions of 9.3 million tons of CO_2e in 2024, out of which 8.9 million tons (96%) were accounted for by purchased goods. Its goal to reach -45% GHG emissions against a 2018 baseline is relevant for the total Scope 3 emissions; however, due to the dominant role of purchased goods, AH's efforts focus on this category.[10]

Table 11 Albert Heijn's GHG emissions (1,000 tons CO_2e)

Scope	2018	2020	2021	2022	2023	2024
GHG Scope 1&2	0.29	0.21	0.05	0.04	0.03	0.03
GHG Scope 3 absolute	NA	NA	NA	9.34	9.47	9.29
Of which purchased goods	*7.58*	*9.05*	*9.28*	*8.84*	*9.07*	*8.89*
Total Scope 1, 2 & 3	**NA**	**NA**	**NA**	**9.38**	**9.50**	**9.48**

Source: Albert Heijn (2025), *Duurzaamheidsverslag 2022*, pp. 61; Albert Heijn (2025), *Duurzaamheidsverslag 2024*, pp. 69, 117-119.

Figure 3 Albert Heijn Scope 3 emissions purchased goods, 2018-2024 (million tons CO_2e)



Source: Albert Heijn (2025), *Duurzaamheidsverslag 2024*, pp. 69, 117-119.

The Scope 3 emissions are broken down by product categories. However, these do not clearly separate animal products except for meat (15.6%) and cheese (4.4%).[11] The estimates per product category are based on the *Big Climate Database*[12] and other sources, which explains differences with estimates made in the following section based on the Global Livestock Environmental Assessment Model (GLEAM) 3.0 database by the Food and Agriculture Organization (FAO).

2.2 AD lagging behind its own reduction target and behind the Paris-aligned target

The Paris-aligned 2030 GHG reduction target to keep global warming within the 1.5D level is -48% in CO_2 and -43% in CO_2e/GHG with a base year of 2019. AD's own target is -37% in its Scope 3 (versus base year 2020) and -50% in its Scope 1 and 2 (base year 2018, market-based).

Compared to its 2024 emissions, AD still has to close a gap of 26.8 million tons of CO_2e, and compared to the Paris-aligned 2030 target, the gap is even larger, 30.4 million tons of CO_2e. As location-based emissions increased by 4.6% in the four years between 2020 and 2024, an acceleration of the reduction plan is necessary.

Table 12 Ahold Delhaize: The gap to the climate targets

million tons	Factor	Data
2024 location-based*	A	66.9
Baseline AD Scope 1& 2 2018, Scope 3 2020	B	64.4
Baseline 2019 Paris-aligned**	C	64.0
Own target AD 2030 (-50% Scope 1&2, -37% versus base-line 2018 respectively 2020)	D = B x (100%-50%/37%)	40.1
Reduction needed	E = A – D	26.8
Target 2030 based on Paris-aligned 1.5D (-43% GHG versus baseline)	F = C x (100%-43%)	36.5
Reduction needed	G = A – F	30.4

Source: Profundo is based on the Ahold Delhaize Climate Plan and IPCC. *) Milieudefensie prefers to use location-based data, while AD uses market-based data. The percentage reductions multiplied by the emission levels have nearly no impact on the necessary absolute reductions: as location-based was not available for 2019, the market-based number is applied.

2.3 Emission savings from a shift to plant proteins

AD refers in its publications to the opportunities for Scope 3 emission reductions from gradually replacing animal proteins with plant proteins. In addition to the active promotion of plant-based proteins, it also states to be working with suppliers to reduce the emissions linked to animal protein products.[13] However, its published targets only refer to European food retail brands, with a goal of 50% plant-based protein sales by 2030 across European brands announced in January 2025, and a more ambitious 60% target for the Dutch Albert Heijn brand announced already in 2022.[14] AD does not mention a global baseline from which it is starting this transition.

For AH in the Netherlands, the retailer states that plant-based proteins accounted for 44.2% of the protein mix in 2024, versus 55.8% animal proteins.[15] Given Dutch consumers' comparatively high per capita consumption of plant-based proteins[16] and the significance of the US market for AD, the following calculations assume a split in line with the average protein mix in Western Europe and North America, as reported by the FAO: 67% animal-based protein and 33% plant-based protein.[17]

To estimate current protein volumes from meat, dairy, and egg sales across AD's markets, country-level per capita animal product consumption data were combined with information on the split between food service and retailing - the two main sales channels – along with AD's 2023 retail market share. These calculations provide an estimate of the total volume of animal products sold by AD in each market. Using the FAO GLEAM 3.0 data on the regional emission intensities of different animal products leads to estimates of total annual CO_2e emissions linked to AD's sales of animal proteins (Table 13).[d,18]

[d] GLEAM 3.0 is based on the Global Warming Potential (GWP) values in the IPCC's 6th Assessment Report (AR6) (2021). To arrive at total CO_2e emissions, it applies multipliers that account for the energy absorption ability of 1 ton of CH_4 and N_2O over a given period relative to 1 ton of CO_2. The used GWP 100 applies a time horizon of 100 years.

Table 13 Estimated Ahold Delhaize animal product sales (2022/23)

Product	AD sales (est., 1,000 tons carcass weight)	AD emissions (est., million tons CO_2e)	Protein content in AD sales (est., 1,000 tons)
Meat			
Pork	734	3.6	96
Poultry	709	2.1	101
Beef & veal	443	8.9	70
Other meat	85	0.4	12
Dairy & eggs			
Dairy (in milk eq.)	4,823	8.2	150
Eggs	295	0.5	37
Total		**23.7**	**466**
Share of plant-based protein (current assumed baseline 67% animal / 33% plant protein)			230
Total protein volume (est.)			**696**

Notes: Estimates based on AD's grocery retail market shares (considering partial stakes in Portuguese and Indonesian joint ventures) and per capita consumption of animal products, combined with regional GLEAM 3 emission data.
Sources: see Appendix 1 for details on data references for AD sales; FAOSTAT (2025), "Food balances", online: https://www.fao.org/faostat/en/#data/FBS, viewed in February 2025.

A sanity check of the estimated 23.7 million tons of CO_2e emissions against the Scope 3 emissions breakdown reported for 2019 (Figure 2) results in a small difference of less than 5%.

Applying average protein content per unit of animal product based on FAO figures results in a total volume of protein that would need to be replaced under different scenarios of reducing the animal protein share in diets to 50%, 40% or 30% while concurrently increasing the role of plant-based proteins. The analysis does not consider that in most countries, current protein consumption levels exceed the healthy levels recommended by the World Health Organization (WHO), particularly due to the high level of animal protein in diets.[19]

To arrive at estimates for the net GHG emission savings from increasingly ambitious shifts towards plant-based products, a replacement of the equivalent protein volumes with a mix of plant-based products was assumed. For meat, a replacement with a mix of 15% *Quorn* (mycoprotein mince), 15% *Impossible* burger, sausage and nuggets (heme protein), 35% pulses, and 35% tofu (soy) was assumed. For dairy and eggs, it was assumed that the equivalent protein volume is sourced from soy-based drinks.[e] Applying average GHG emissions per unit of protein for these plant-based products and deducting them from the emission savings from reduced animal protein sales leads to net annual savings of animal product-related GHG emission ranging from 19% in a 50% animal-based/50% plant-based protein scenario to 41% in a 30%/70% scenario (Table 14). The estimated emission savings potential lies between 4.4 and 9.7 million tons.

Compared to AD's total 2024 CO_2e emissions of 67 million tons (location-based), the three scenarios lead to a reduction of 7%, 11%, and 15%.

[e] This product mix is used as a reasonable proxy for a healthy and diverse diet that provides a comparable protein intake.

Table 14 Estimated emission savings under different protein split scenarios

Product	50% animal protein - emission savings (est., million tons CO_2e)	40% animal protein - emission savings (est., million tons CO_2e)	30% animal protein - emission savings (est., million tons CO_2e)
Meat			
Pork	0.9	1.4	2.0
Poultry	0.5	0.8	1.1
Beef & veal	2.2	3.6	4.9
Other meat	0.1	0.1	0.2
Dairy & eggs	*2.2*	*3.5*	*4.8*
Emission reduction	**5.9**	**9.5**	**13.0**
Reduction of animal product emissions (%)	*25%*	*40%*	*55%*
Emissions linked to plant-protein replacement	1.5	2.4	3.3
Net emissions saved	**4.4**	**7.1**	**9.7**
Net reduction of animal product emissions (%)	*19%*	*30%*	*41%*
*Net reduction of total emissions (lb) vs base year**	*7%*	*11%*	*15%*

Sources: Profundo estimates; Ritchie, H. (n.d.), "Carbon footprint of meat substitutes", online: Ritchie, H. (2022, November) https://docs.google.com/spreadsheets/d/1EJAGAIPoST7Rd-rxmCUSwr00yMCphU9VyLCrUAySouQ/, viewed in February 2025; Poore, J. and T. Nemecek (2018, June), "Reducing food's environmental impacts through producers and consumers", *Science*, Vol. 360(6392): 987-992; Kazer, J., G. Orfanos and C. Gallop (2021, July), *Quorn Footprint Comparison Report*, Carbon Trust, pp. 27-28, 31; Khan, S., C. Loyola, J. Dettling, J. Hester and R. Moses (2019), *Comparative Environmental LCA of the Impossible Burger With Conventional Ground Beef Burger*, Quantis, pp. 4, 15; Geburt, K., E.H. Albrecht, M. Pointke et al. (2022), "A Comparative Analysis of Plant-Based Milk Alternatives Part 2: Environmental Impacts", *Sustainability*, Vol.14(14), pp. 5, 12; *) lb = location-based, base year is 2019, for which we used 2020's 64 million ton GHG.

2.4 The remaining emission gap after the protein transition

The GHG reductions versus the base year mentioned in the last line of Table 14 do not fill the gap versus the necessary reduction of 43% in GHG by 2030.

In the most ambitious protein transition scenario, AD still has a reduction challenge of 21 million tons of CO_2e until 2030's IPCC target. The gaps in less ambitious protein scenarios are even bigger. From now on, the gaps to AD's own targets are not discussed any more, although the 17 million is still a large gap.

Table 15 The emission gap after the protein transition

million tons	Factor	Data	50% plant-based	60% plant-based	70% plant-based
2024 location-based	A	66.9			
Baseline AD Scope 1& 2 2018, Scope 3 2020	B	64.4			
Base-line 2019 Paris-aligned	C	64.0			
Own target AD (-50% Scope 1&2, -37% versus base-line 2018 resp. 2020)	D = B x (100%-50%/37%)	40.1			
Reduction needed	E = A - D	26.8			
Target based on IPCC 1.5D (-43% GHG versus baseline)	F = C x (100%-43%)	36.5			
Reduction needed	G = A - F	30.4			
Reduction sources:					
1. Protein transition scenarios	H		4.4	7.1	9.7
2. Still to be reduced by other measures:					
Versus own target	I = E – H		22.4	19.8	17.1
Versus IPCC 1.5D target	***J = G - H***		***26.0***	***23.4***	***20.7***

Source: Profundo.

A recent report by Profundo on the EU food supply chain showed how emissions are divided in the various stages from farm to fork. 53% of the emissions come from farming, and 47% of emissions are generated in the supply chain through transport, plants and stores.[20] Of these 47%, 34%-point are generated in the food processing stage, and 13%-point in the retailing stage including Scope 1 and including the use of products by consumers (see Table 16).

Table 16 The EU food chain - emissions

mln tons CO_2e	Farmers, plantations	FMCGs	Food retail	Sum
EU farmers	378			
non-EU farmers/plantations	338			
Total emissions	716	1,173	1,345	
Addition per chain level	716	457	172	1,345
% division	53%	34%	13%	100%

Source: Profundo, WWF (2024), "The EU Food Chain: where are the most profits made & what are the biggest environmental impacts?".

Based on the preceding two tables, the division of GHG reduction towards the 2030 target is as follows (Table 17):

Table 17 Division of emission reduction

Million ton	Data	Scenario 50%	Scenario 60%	Scenario 70%	% contribution in scenario 70%
Reduction needed	30.4				
From:					
Protein transition		4.4	7.1	9.7	***32%***
Remaining animal-based farming		11.7	9.1	6.4	***21%***
Total contribution farmers (53%)	16.1	16.1	16.1	16.1	***53%***
Rest of supply chain/Renewable energy (47%)	14.3	14.3	14.3	14.3	***47%***

Source: Profundo.

The monetary value of the necessary additions to the Climate Impact Fund is calculated in the next chapter.

3

An Ahold Delhaize Climate Impact Fund

This chapter calculates the necessary additions to an Ahold Delhaize Climate Impact Fund. This fund will finance the necessary costs 1) to transition its animal-based protein product portfolio to the three scenarios that include a higher percentage of plant-based protein alternatives, 2) to support the remaining animal-based protein and other farmers to reduce their CO_2e footprint, and 3) to reduce the emissions in the remainder of the supply chain. The total should lead to a 30 million ton of CO_2e reduction in 2030, in line with the Paris-aligned 48% in CO_2 and 43% in CO_2e reduction.

3.1 Introduction

Food retail is unique in the sense that almost all of its emissions are Scope 3 and then mainly purchased goods and services. And because there is not really one dominant source, the emissions are the sum of many small products and suppliers. Because supermarkets also have to reduce their emissions in line with the Paris Agreement, they have to tackle all those small sources. AD is a dominant player in many markets, and based on these positions it is earning a lot on these products[21]. Therefore, AD has a responsibility to help its smaller suppliers (also financially) to achieve a fair transition. A fund is a workable way to do that.

In 2023, AD's large Dutch competitor Jumbo Food Group, with total emissions of 7.5 million of CO_2e (slightly more than 10% of AD), indicated that it had a 39% share in plant-based proteins and 59% in animal-based. In 2023, the company introduced the 'Jumbo Impact fonds',[22] a fund that will support suppliers to reduce their emissions. The fund is focused on the private label suppliers. In 2024, two 'rounds' with suppliers have taken place to collect ideas, leading to two ideas that will have a noticeable impact on emissions. Jumbo Food Group said on this:

"By replacing the glazing agent on bread with plant-based ingredients, Jumbo's bread is completely plant-based. […]. But the reduction of CO_2 emissions in the process of supplying sunflower oil is also a good idea that we support financially. Our sunflower oil supplier can now use self-generated electricity from sunflower husks to process sunflower seeds with low CO_2 emissions into sunflower oil. We do not make any further statements about the size of the fund or the investments in the ideas."[23] The two actions in this testimony by Jumbo probably take at most a couple of thousands of euros.

Although Jumbo Food Group's initial steps are estimated to be small, this family firm's initiative can serve as an example for AD to roll out globally and then at an accelerated pace with much more detail for every step.

3.2 Abatement costs of AD's excess carbon emissions

3.2.1 Types of abatement costs

The abatement costs consist of information and marketing expenditures to change consumer behaviour to plant-based protein products, the costs to support farmers to change their business model to plant-based proteins, and other measures to reduce the CO_2e footprint in the supply chain.

There are four broad categories of value chain mitigation action that should be funded by AD. By funding these mitigation actions, AD takes responsibility as a large actor in the food system:

1. Consumer side: a re-shape or re-direction of the demand side. This requires information/marketing expenditures.
2. Supplier side: a change of their business model, including setting up soy and protein plant farming and new plant-based protein innovations.
3. Reduction of emissions by animal-protein suppliers.
4. Reduction of non-food emissions in the food supply chain.

Although actions 3 and 4 involve a broader context than the protein transition, they cannot be overlooked because of their potential positive cost/benefit balance.

3.2.2 The abatement costs to re-direct the demand side in the protein transition

The protein transition requires a significant change in customers' purchasing decisions:

- The 50% plant-based scenario means a 25% reduction in animal-based proteins. The 60% and 70% plant-based scenarios require much larger animal-based protein reductions of respectively 40% and 55% (see Table 18). At the same time, the demand for plant-based protein products should rise by 52%, 82% and 112% respectively.
- The time period is short, from 2025 to 2030.
- The large shifts in AD's protein scenarios require extra information and marketing expenditures to convince consumers.

Table 18 Impact of plant-based protein targets on size of shift (in protein volume)

%	Animal-based proteins	Plant-based proteins
Base year	67%	33%
Scenario 50% plant-based	50%	50%
Growth vs base year	-25%	52%
Scenario 60% plant-based	40%	60%
Growth vs base year	-40%	82%
Scenario 70% plant-based	30%	70%
Growth vs base year	-55%	112%

Source: Profundo.

In these intense transformations, information expenditures, marketing (and advertisement) spending and discounts are required to achieve the aim. This study assumes that every € 1 spent by AD on increasing information and marketing costs or in lowering prices has the same impact on volumes. Therefore, the further analysis talks about information/marketing expenditures. AD does not provide a number for current information/marketing expenses. They are included in the € 17.3 billion 'selling expenses' in 2023, which also includes personnel costs[24] (as indicated earlier in the disclaimer, AD did not want to participate in any discussion).

A marketing rule is to spend a total of 5% to 20% of the revenues on marketing, depending on whether you want to sustain or grow the product/category. Generally, 5-10% is enough to sustain, but 11% to 20% is needed to grow. The marketing expenditures differ by sector. Consumer goods might need 18%.[25] This is confirmed by Forbes.[26] Consider that these are expenses in the whole chain, to be divided between farmers, producers and food retailers.

Table 19 calculates that the additional information/marketing expenditure for the whole supply chain, and the additional share that AD has to contribute for a transition:

- A category that needs to grow requires 11-20% marketing spending as a percentage of aspirational revenues. The assumption is 15.5%.
- A category that needs to remain stable needs 5-10%. As meat/dairy needs to decline, a reduction to 5% is assumed.
- Thus, in the 50% scenario, the total annual information/marketing expenditure for the protein category will increase by € 28 million.
- The assumption is that the information/marketing costs are always shared in the chain with the farmers, producers, processors and packagers. The assumption is that AD takes up 50% as it is crucial in the facing to the consumer, meaning that € 14 million has to be paid extra per year by AD.
- **The two other scenarios require much higher additional information and marketing expenditures of respectively € 148 million and € 281 million per year. This compares to € 17,320 million of AD's selling expenses in 2023 which includes marketing costs as well as employee costs[27]. Of these selling expenses, approximately € 700 million are estimated to be marketing costs[28]. Of this € 700 million, an estimated 97% or € 679 million is still spent on less sustainable products[29].**
- These extra costs will be compared to the underlying operating profit in a later phase of this chapter.

Table 19 Information/marketing expenditure for plant-based protein shift

€ million	Base year 2023	Scenario 50% alternative	Scenario 60% alternative	Scenario 70% alternative
Scenarios planted-based protein products (A)	33%	50%	60%	70%
Animal-based protein share (%) (B)	67%	50%	40%	30%
Plant-based protein revenues (C = E - D)	8,394	12,719	15,262	17,806
Animal-based protein revenues (D)	17,043	12,719	10,175	7,631
Total protein category (E = D/70%)	25,437	25,437	25,437	25,437
Information/marketing expenditure				
Plant-based proteins (15.5%) (F = 15.5% x C)	1,301	1,971	2,366	2,760
Animal-based proteins (7.5%) (G = 0.05% x D)	1,278	636	509	382
Total information/marketing spend (H = F + G)	2,579	2,607	2,874	3,142
Change versus base year 2023 (I = H - Base year 2023) – the additional expenditure		28	295	562
50% share for AD (J = 50% x I)		14	148	281

Source: Profundo.

3.2.3 The abatement costs to support suppliers to switch their business model

The route from the assumed current 33% plant-based proteins in AD's sales to 50%, 60% and 70% would mean that AD will face a switch in its portfolio from meat and dairy to plant-based alternatives. Consequently, AD will face a change in various stages of its supplier chain:

- Meat suppliers like slaughterhouse Vion Group may be replaced by other companies as most meat groups are not suppliers of meat alternatives. Companies like Vion Group need to diversify, or they will be replaced by other suppliers to AD.
- This means that suppliers to the slaughterhouses, such as livestock farmers and animal feed companies, will be affected and need to change as well.

- The livestock farmer might need to change to become a plant-based protein supplier cultivating soy and peas instead of livestock.
- Like for the meat supply chain, the dairy supply chain needs to change: milk processors like FrieslandCampina need to make plant-based alternatives, livestock farmers need to switch their business model to soy and peas, if possible, and feed producers would face a large under-utilisation problem.

This report focuses on how a potential Ahold Delhaize Impact Fund could support farmers. Reports and testimonies have been collected to investigate the costs of a change.

The transformation of an animal-based farm to a plant-based farm involves the following costs factors:

a) Initial investment
b) Training and education.
c) Operational costs.
d) Financial assistance and grants.
e) Market access and supply chains.

Specific data on the various factors are not available. One source in the context of operational costs indicates that the profit per acre for pea farming is US$ 14.03 higher than herd farming.[30]

For Denmark, calculations have been made on the cost of protein transition scenarios in the sector. ***"[…] the estimates in this study suggest that they will be low compared to the costs of other suggested approaches. At 100% implementation of the PHD (Planetary Health Diet), the deficit relative to the sector's current contribution margin is between €158.5 and €217.0 million, depending on assumptions for soy replacement. This does not include expenses related directly to the transition, such as replacement of machinery, but also does not include savings resulting from the replacement of imported soy."***[31]

The conclusion is that there is a lack of reports that give a good guidance on the costs or necessary investments linked to the change from animal-based protein farming to plant-based farming. However, various testimonies in the field provide interesting transparency.

On the factors a) and c), initial investments and operational costs, the remarks of Sander Bernaerts, a specialist in plant-based protein agriculture products, might be relevant. He says that "***a switch in the number of hectares from grains, which are mainly used to feed animals, to beans or soy are in fact very easy and would not need much extra costs when the price paid for beans is a good one. In first instance, some farms in new areas where bean cultivation is not regular, need to invest in other equipment*".**[32]

However, there are limitations. It needs to be considered that an easy transition of the Dutch agriculture sector might not be possible. Klaas Johan Osinga from the Agricultural and Horticultural Organisation of the Netherlands (LTO) says: ***"Keep in mind that 1 million hectares of agricultural land in the Netherlands is grassland. Usually these lands are not suitable for arable farming. It concerns heavy (cutting) clay or very peaty soils."*** Currently, there are 2.2 million hectares of agricultural land in the Netherlands, 54% of the Dutch land area. Osinga had a more fundamental remark on support for farmers: **"*Yes, supermarkets could directly reward their dedicated farmers and gardeners/horticulturist for what they do. But then their relationship changes: the farmer/horticulturist is 'employed' by the retailer. Do we want that? […]. A farmer/horticulturist is an entrepreneur and he wants to keep freedom of action*."**[33]

This section in the report is about factor d) and the role of AD in this. However, a challenge for animal-based protein farmers in the Netherlands and other countries is that they often carry a huge amount of bank debt. In this context, Cornelis Mosselman, an organic regenerative farmer in the Southwest of the Netherlands, has an interesting statement: ***"[…] while some supermarkets already take actions (in the transition and on reducing risk for farmers by offering good prices and relationship), the financers of agriculture continue to focus on financial returns."***[34]

How much financial support is needed to reduce the financing costs of the farmers? Table 18 is applied as a starting point and proxy for the change in the farm base. In 2023, Rabobank had € 10.9 billion in outstanding loans to the Dutch animal-based protein sector, with an 80% market share. The net interest margin (received interest from farmers minus paid interest to depositors) was 2.9%-point in 2023.[35] If AD would relieve the farmer by half of this margin, 1.45%, then the € 13.6 billion loans (derived from Rabobank 80% share) to the Dutch animal-protein sector should get support for the share that has to switch to plant-based. That is, for instance, € 3.5 billion in the 50% scenario. AD's Dutch support would be € 19 million. Assuming that the financing structures of farmers do not differ significantly in the industrialized world, the € 19 million can be recalculated in a global context. Then the financial support would be € 83 million.

Table 20 Potential interest rate cost support by AD in protein transition

€ million	Base year 2023	Scenario 50% alternative	Scenario 60% alternative	Scenario 70% alternative
Growth vs base year (A)	0%	-25%	-40%	-55%
Loans to food & agri sector	27,250			
Loans to Dutch animal protein sector (B)	13,645	3,462	5,499	7,535
Support in gross interest rate (C)		1.45%	1.45%	1.45%
Total support (D = B x C)		50	80	109
AD's Dutch share (E)		37.0%	37.0%	37.0%
AD's Dutch support (F = D/E)		19	30	40
AD's Dutch business in global business (2019) (G)		22.4%	22.4%	22.4%
AD: support to global business (H = F/G)		83	132	180

Source: Profundo; van Loon, D. (2024, January), "NielsenIQ: marktaandelen supermarkten 2023".

In relation to the potential support for protein transition costs for farmers, it can be concluded that **there is a lack of research on this subject, and there is a need for further work on this. Testimonies point to the need for creating partnerships with the condition of good prices to make the protein change possible. Although there are some investments involved upfront for the farmers, farmers would likely not mind bearing these costs as long as they can be entrepreneurs with freedom of action. The financial support should come from financiers like the Rabobank, which should be less focused on high financial returns. AD could also contribute to relieving the interest costs of farmers who would like to transition, at a cost of € 83 million to € 180 million annually in a global context.**

3.2.4 The abatement costs per ton CO_2e reduction, summarized

The total of the information/marketing expenditure and the financing support lead to an interesting outcome of abatement cost per ton CO_2e reduction of between € 43.9 for the 50% plant-based scenario and € 95.1 for the 70% plant-based scenario (Table 21).

It is important to consider that the costs per ton of CO_2e reduction for marketing spending are progressive, while slightly regressive for the financing support.

Table 21 Summary of abatement cost per ton CO_2e reduction for the protein transition

€ million	Scenario 50% alternative	Scenario 60% alternative	Scenario 70% alternative
CO_2e reduction (million tons)	4.419	7.060	9.702
Information/marketing expenditure (€ million)	14	148	281
Financing support	83	132	180
Total for AD	97	279	462
AD's share in costs	50%	50%	50%
Total for AD + other partners in the chain	194	558	923
Abatement costs per ton CO_2e reduction (€)	**43.9**	**79.1**	**95.1**
of which Information/marketing expenditure	**6.3**	**41.8**	**57.9**
of which financing support	**37.5**	**37.3**	**37.2**

Source: Profundo.

3.2.5 Abatement cost to support animal-based protein farmers to lower emissions

In all three scenarios for plant-based protein products, AD still generates substantial revenues in animal-based protein products. Substantial further emission reductions can be achieved in this sector.

A starting point for how to spend money to accelerate CO_2e emission reduction in the animal-based protein product is based on a McKinsey study listing 28 measures to reduce emissions and the costs and cost savings per ton of CO_2e.[36] For animal protein production, the study selects four measures that have an above-average contribution to reducing CO_2e emissions, and for crops five measures. Crops are eaten by animals or are used in plant-based protein products.

The weighted average of the most important measures for reducing CO_2e in animal protein is US$ 55.7 per ton CO_2e. In crops, the weighted average is US$ 87.4 per ton CO_2e reduction. The average of the two costs, US$ 71.2 per ton, is assumed to be the prevention cost per ton of CO_2e on-farm.

Table 22 Marginal abatement costs for on-farm emissions

	Global emissions (mln ton CO_2e)	Costs per ton CO_2e (US$)
Animal protein		
Utilize advanced feed additives for livestock	350	99
Apply nitrogen inhibitors and urease inhibitors on pasture	214	35
Improve animal health monitoring and illness prevention	112	0
Employ GHG focused breeding and genetic selection in livestock*	81	0
Weighted average		55.7
Total global emissions of the four measures in animal protein	757	
Crops		
Reduce overapplication of fertilizer on fields	131	-146
Apply nitrogen inhibitors and urease inhibitors on crop fields	126	-37
Employ low- or no-till practices on crops	91	123
a- extra due to sequestration on the farm	218	
Convert from flood to drip/sprinkler irrigation	85	116
Convert to use of enhanced-efficiency fertilizers	73	904
Weighted average		87.4
Total global emissions of the five measures in crop cultivation	724	
Weighted average of the nine measures		**71.2**

Source: Profundo based on McKinsey; *) the selection of measures is based on McKinsey analysis and could contain GMO-linked actions that are not supported by Milieudefensie/FoE. However, GMO-risk actions can be avoided in the list of measures.

Based on Table 17 and Table 22 in the most ambitious scenario, the abatement costs for the remaining necessary farming reductions can be calculated at € 228 million. The assumption is that AD contributes 50% to the costs of these changes and that the other actors in the supply chain (FMCGs, processors, packagers, farmers) pay the other 50%.

Table 23 Total abatement costs of remaining on-farm emissions

	Factor	Data	Scenario 50% alternative	Scenario 60% alternative	Scenario 70% alternative
Remaining animal-based farming (million ton CO2e)	A		11.7	9.1	6.4
Average abatement costs per ton CO2e reduction (€)	B	71.2			
Total abatement costs (€ million)	C = A x B		832.9	644.9	456.8
AD's share (%)	D	50%			
AD's abatement costs (€ million)	E = C x D		416.5	322.4	228.4

Source: Profundo.

3.2.6 Abatement costs to reduce other emissions in the food supply chain

Table 16 showed how non-farm emissions generate 47% of AD's supply chain emissions. These emissions occur in the phases of the processing industry, packaging industry, distribution and transport, and in the food retail Scope 1 and 2. Most of these emissions consist of energy-linked emissions like transport, lighting, and heating.

Abatement costs for power generation (solar instead of gas-powered power plant) are about US$ 60 (€ 57) per ton CO_2e.[37] McKinsey is much more positive about electrifying on-farm processing, pointing to cost savings of US$ 72 (€ 68) per ton CO_2e.[38]

3.3 Total costs and opportunities for the Ahold Delhaize Impact Fund

The abatement actions by AD for the climate transition, which are extra costs on top of existing costs, are equal to 17% to 22% of the underlying 2023 net profit (Table 24) and are (after-tax: € 518 million) 26% of the 2023 dividends and SBB's (€ 1,998 million). The abatement costs, which can be paid through annual additions to an impact fund, are much larger than Jumbo Food Group's Impact Fund.

Table 24 Ahold Delhaize: annual additions to a potential Climate Impact Fund

€ million	Scenario 50% alternative	Scenario 60% alternative	Scenario 70% alternative
Protein transition			
Information/marketing expenditure (€ million)	14	148	281
Financing support	83	132	180
Other measures			
Support remaining animal-protein farmers	416	322	228
Renewable energy transition measures	0	0	0
Total abatement costs	***513***	***602***	***690***
Average net profit 2020-2023	2,016	2,016	2,016
Abatement (net*) costs as % of average net profit 2020-2023	19.1%	22.4%	25.7%
Underlying net profit 2023	2,316	2,316	2,316
Abatement (net*) costs as % of underlying net profit 2023	***16.6%***	***19.5%***	***22.3%***

Source: Profundo; *) after 25% tax rate.

3.4 Climate transition costs per region

If AD chooses a protein transition in the Netherlands only, the abatement costs as a percentage of underlying global operating profit would be 1.5%, 1.8% and 2.1% for the three scenarios (Table 25).

The regional abatement costs have a different impact on each region. The impact on the Dutch underlying operating profit (8.9%, 10.5%, and 12.0%, respectively, in the three scenarios) is smaller than for the other regions as 1) the Dutch protein transition is already high and therefore the gap versus the scenarios is smaller, and 2) the Dutch operating margin is relatively high. In contrast to this, the impact on the regional profit in the rest of Europe is higher as a larger transition is needed from the lower base, and the operating margin is relatively low (Table 25).

Table 25 Ahold Delhaize: Relative abatement costs per region

%	Scenario 50% alternative	Scenario 60% alternative	Scenario 70% alternative
As % of global underlying operating profit*			
Netherland	1.5%	1.8%	2.1%
Rest of Europe	2.7%	3.2%	3.7%
US	9.6%	11.3%	12.9%
As % of regional underlying operating profit*			
Netherland	8.9%	10.5%	12.0%
Rest of Europe	18.6%	21.8%	25.0%
US	14.1%	16.6%	19.0%

Source: Profundo; *) versus underlying operating profit 2025 Profundo estimate of € 3,751 million.

4

Costs for transition to organic products

This section calculates the costs for Ahold Delhaize to gradually change its food product portfolio from a 3% share of organic food products to 15%, 25% and 100%. For this analysis, it requires understanding the whole supply chain of organic foods including their differences in yield, labour costs, certification costs, and route-to-market expenses. The focus of the report is on the private label fresh products/products in the perishable category including meat, dairy, fruits, vegetables and bread.

4.1 Introduction

Although conventional agricultural methods and technologies have created a perception of progress over the last 50 years, organic agriculture is desirable as a way out of the stalled agricultural crisis, a way to work without (fossil) artificial fertilizers (and thus a key element of the net-zero transition for the agricultural sector), and a way to reduce the ingestion of poison by farmers and residents.

AD discloses limited details on the current role of organic products in its sales. Until recently, AD reported on its website that the overall share of organic products in food sales across its international operations remained stable at 3% over the three years from 2021 to 2023.[39] This information is no longer available as of late February 2025. This share is in line with the overall European Union market (3.3%)[40] and slightly behind the number in the US (5.5%).[41]

AD's major Dutch subsidiary, Albert Heijn, reported slightly higher figures at an average product share of 4.1% in 2023 and 4.4% in 2024 and provides a category breakdown (Table 26). Unprocessed fruit and vegetables had a share of 9.1%.[42] The recent announcement of its aim to increase the share of own-brand products in Central and Southeastern Europe, including more plant-based and organic options, did not mention concrete figures on the organic segment.[43]

AD publishes no targets for increasing its organic food share, despite identifying the plant-based transition and a growing organic assortment as 'opportunities' in relation to nature-related risks.[44]

Table 26 Albert Heijn product share of organic foods in the Netherlands (2024)

Category	Total
Vegetables & potatoes	13.0%
Breakfast	12.1%
Dairy, chilled juices & eggs	10.2%
Coffee and Tea	9.4%
Unprocessed vegetables, potatoes and fruit	9.1%
Meat, poultry & fish	6.5%
Alternative proteins	5.6%
Fruit & fresh juices	4.4%
Processed meat & salads	3.8%
Convenience & preserves	3.6%
Cheese & snacks	3.3%
Total	**4.4%**

Source: Albert Heijn (2025), *Duurzaamheidsverslag 2024*, p. 110.

The costs of upgrading AD's Dutch, European and US supply chains for food, including meat, dairy, cheese, vegetables, and fruits, to an organic food chain are calculated per product category at 15%, 25% and 100% levels, under the condition that farmers incur no additional financial burden and consumers face no cost difference with conventional products.

For this, the cost differences between organic and conventional food in the whole supply chain will be analysed. This requires an answer to the following questions:

- Are there yield differences between conventional farming and organic farming, and what are the additional costs for conventional or organic farming?
- Are there differences in costs in the route to wholesalers and how does this impact the pricing by wholesalers?
- What are the differences in costs and pricing from wholesalers to processors, and are there differences in the processing part at fast-moving consumer goods companies?
- What are the differences in costs and pricing among food retailers?

A crucial methodology applied by Profundo in this report is the profit distribution model, which includes the pricing-up of commodities from upstream to downstream, from farm to fork.

- In every step, a product gets more expensive. This is because in this supply chain route, many other cost and profit elements are added to the farm price.
- The fact that many cost and profit items are added to the farm-gate level until the product is on the supermarket shelf should mean that the extra costs for organic farming are calculated into a higher percentage at the farm-gate price level than at the food retail price level (where the products are higher priced).
- This mathematical law is a reflection of a 'dilutive' process.
- The analysis in this section reveals how the higher organic farming costs could work out on the supermarket shelf. This outcome is confronted with the current practices.

4.2 Organic farming costs more than conventional farming

Between organic and conventional farming, there are yield differences and cost differences. What are the differences, and how material are they?

Our observation from the large number of studies that have been published is that lower yields and higher costs for organic products cannot always be split easily in the studies. The following elements are often mentioned as reasons for lower yields and higher costs in organic farming:

- No use of synthetic chemicals. Instead, natural pesticides and fertilisers can be used; these need more spraying, which is adding to labour costs.
- Organic farming is more labour-intensive, for instance, due to the need for weeding.
- Organic farms often lack scale, leading to higher overhead costs per ton of output.
- Farmers may lose crops due to pests and disease infestation, despite spraying natural chemicals. Crop rotation or fallow periods lead to a lower utilisation rate of land.
- Logistics are not as well developed as in conventional products. Organic products cannot be transported in the same vehicle as conventional produce.[45]

4.2.1 Studies on yield and cost differences between organic and conventional products

Yield and productivity differences have been found in various large (meta) studies:

- Meta-analysis of 362 published studies from 43 countries with 67 crops on organic and conventional farm yields concluded that organic farms, on average, yield 20% less than conventional farms, with variations in crops and regions[46].
- Another meta-analysis also concluded that yields from organic farms are lower than conventional farms and went on to explain that the yield gap depends on the farming system, whether it is rain-fed or irrigated, the type of crop, and the type of soil. However, when the organic and conventional farms were most comparable, the yield gap was as high as 34%.[47]
- A more recent study indicates that the yields under organic farming were, on average, 25% lower than the conventional ones, reaching a yield gap of 30% for cereals. The intensity of soil use was also lower in organic systems, and the size of the reduction depended on the type of study: field experiments (7%) or on-farm studies (20%). Combining the yield gap with the reduction in the number of crops harvested in the rotation, a productivity gap of 29% to 44% was estimated depending on the type of crops included in the rotation. These results show that the productivity gap is greater than the yield gap between organic and conventional farming.[48]

Concerning the yield per hectare, C. Badgley of Michigan University (2007) stated the following:

- In developed Europe and North America: with good growing conditions and assuming high use of fertilizer and pesticides, the yield of organic reaches 60 to 100% of conventional farming, depending on the crop. In developing countries with moderate growing conditions and assuming more irregular use of fertilizer and pesticides, the yield of organic is 92 to 100% of conventional farming, depending on the crop.
- In developing countries with adverse growing conditions in areas of subsistence agriculture with low inputs, the yield of organic is 100 to 180% of conventional farming.

The report concluded that if the world converted to modern organic methods, the total worldwide production would grow by 32% because of an increase in production in subsistence areas.[49]

Our conclusion is that organic farming leads to lower yield per hectare in developed markets. This implies that more land is needed to produce the same amount of produce with organic farming as with conventional farming.

In addition to yield, yield stability needs to be considered. Yield stability is the consistency of yield from year-to-year or within one year. A meta-analysis comparing 193 studies concluded that yield stability in organic farms is lower than in conventional farms (15% lower temporal stability per unit yield).[50]

4.2.2 Additional costs: licensing, plastics, marketing

Other extra costs apart from higher labour costs and lower yields are:

- Food labelling to inform the consumer where their food comes from and what it contains, and the certification costs.
- Branding and advertisement spending for organic products' 'superior' characteristics do add further to the total costs.
- Organic products are often packaged in plastic (e.g., to increase shelf life and prevent mixing with conventional produce).
- Organic products are in short supply, leading to higher prices when demand increases.

4.2.3 Differences in profitability between organic and conventional farming

In addition to the above-mentioned yield and cost elements, organic farms might be subject to differences in profit margins versus conventional farming.

A 2009 FAO report states that organic agriculture, in spite of lower yield per area, was still more profitable than conventional production, based on a literature review covering 50 studies. The study states that the *"availability of price premiums seem to be a crucial factor in good economic performances of organic systems and in most cases, make organic farms more profitable. However, […] at least a dozen studies showed that price premiums are not always necessary for organic systems to be more profitable than conventional systems."*[51] As organic farming needs more labour and needs less expensive inputs, this fits well with the situation in developing countries.

However, there are also ample recent examples of organic farming being less profitable than conventional farming and the need for organic farming methods to get support from, for instance, AD to facilitate the sector's growth.

As there are mixed signals of profitability differences between organic and conventional farming, the current report assumes that yield and cost differences are most dominant in the farm-gate prices of organic products versus conventional products.

4.3 Differences in organic and conventional farm-gate prices

The following table has re-calculated the yield differences of various meta-studies and farm-gate prices from various studies on specific countries and products. Subsequently, the outcomes are categorized in meat/fish, dairy/eggs/yellow fats, other perishable (fruits, vegetables, bread), the categories which are also known from AD (the category non-perishable is added later on: farms do not produce non-perishables):

- Although several studies show low single-digit differences in meat and fish prices, a Swiss study showed large price differentials between farm-gate organic and conventional meat prices.
- Various studies also show a large variation in farm-gate price differences for dairy, eggs and yellow fats.
- In other perishables, price differential in fruit and vegetables are consistently high in various studies, and lower in bread.

Table 27 Farm-gate price premium of organic products versus conventional products

%	Average
Meat/fish	30.3%
Dairy/eggs/yellow fats	22.9%
Other perishable	54.1%
Non-perishable	NA

Source: Profundo, based on Fachhochschule NordwWestschweiz, Hochschule für Wirtschaft (2023), *Analyse von Produzenten- und Konsumentenpreisen Schweizer Grossverteiler*; CLAL.it (n.d.), "Europe: Farm-gate prices", online: https://www.clal.it/en/?section=latte_europa; Wageningen University & Research (2024, November 6), "Biologische landbouw", online: https://agrimatie.nl/ThemaResultaat.aspx?subpubID=2232&themaID=2267&indicatorID=2106; Bradgley, C., J. Moghtader, E. Quintero et al. (2007), "Organic agriculture and the global food supply", *Renewable Agriculture and Food Systems*, Vol. 22(2): 86-108 (based on 166 cases with conventional farming and 133 with organic farming); De Ponti, T. et al. (2012), "The crop yield gap between organic and conventional agriculture", *Agricultural Systems*, Vol. 108: 1-9; Durham, T.C. and T. Mizik (2021, March), "Comparative economics of conventional, organic, and alternative agricultural production systems", Vol. 9(64).

4.4 From farm-gate to consumer prices

This section compares the percentage price differences of organic products versus conventional products at farm-gate level with the price differences at the level of wholesale, processor/packager and food retail. The analysis is a stepping-stone to understand the reasons for the price differences between organic and conventional products at food retail and AD level.

The outcomes of Table 27 can be expanded with price differences at the wholesale level (the supply chain level that is buying material from farms) and the food retail price level (food retailers buy from processors, packagers, or wholesalers). The input comes from various sources and from various countries in Europe and North America.

The first column is the well-known farm-gate price from Table 27. The second column represents data for the wholesale level. These are, in fact, not much different than the farm-gate prices. Profundo has added a wholesale price for non-perishables, equal to an average of the three numbers above. This is based on the assumption that non-perishables (like snack foods, spaghetti sauce, orange juice and other beverages) are made from perishable ingredients. The fourth column represents consumer prices. It adds a price differential for the non-perishables. It is important to consider that no data on the price differences between organic and conventional products are available for the level of food processors (FMCG companies) and packagers as price contracts between food retail and processors/packagers are treated as confidential.

In the step from farm-gate and wholesale to food retailer, the price increases continue to be high or get even higher (Table 28). The price differential in meat/fish is 30% at the farm-gate level, 53% at the wholesale level, and even 61% at the retail level.

Table 28 Organic versus conventional prices on various supply chain levels

% price differential*	Farm-gate	Wholesaler	Processor / packager	Food retailer
Meat/fish	30.3%	52.8%	NA	61.2%
Dairy/eggs/yellow fats	22.9%	21.0%	NA	70.1%
Other perishable (including fruits and vegetables)	54.1%	46.8%	NA	51.8%
Non-perishable	NA	40.2%	NA	40.7%
Average	NA	40.2%	NA	55.9%

Source: Profundo; *) % price differential = % difference between organic products and conventional product.

The extra price increases in the route from farm-gate and wholesale to food retail can be explained by a string of factors contributing to extra costs:

- Conventional products produce less waste than organic products.[52] This might be related to preservation. Organic products have a shorter shelf life due to the absence of synthetic preservatives and additives. This requires investments in better storage of organic products.[53]
- The emergence of organic products in the supply chain requires segregated streams.[54]
- More expensive production systems with less economies of scale. If supply would go up, the prices would come down. This is a basic demand-supply relationship.[55] The so-called 'thin markets' also contribute to this effect: a few dominant buyers of the products can set higher prices in retail.
- Higher inelastic demand for organic products as organic products are bought by higher income classes. They are willing to pay more for the perceived health and environmental benefits.
- Organic products require additional certification costs, although these are often paid by the farmers.[56] Conversely, conventional products benefit from high R&D funding paid by governments as well as, for instance, seed producers like Monsanto and Syngenta.
- Extra marketing and labelling requirements.
- Higher route-to-market costs. Organic farms could be, on average, further away from food retail stores.
- Higher packaging costs: Organic food is often packaged in plastic.

In 2017, Euractiv concluded that half of the higher food retail prices in organic products were not experienced by organic farmers in their prices. Supermarket profit margins on, for example, organic apples were 163% higher than on conventional apples.[57] This is confirmed by the analysis in section 4.5.

4.5 Muting impact from farm-gate price to food retail price is absent

Table 28 indicates that the wholesale organic prices are, on average, 40% higher than the conventional prices, and the retail organic prices are 56% higher than the conventional prices. Section 4.4 gives arguments for these differences and why extra costs for processors/packagers and food retailers might occur. However, these include reasons such as economies of scale, segregated streams, and the market power of food retailers, which are factors that might lose their weight when organic food products get a larger weight in the assortment.

In this section, a 'theoretical' food retail price difference will be calculated based on the higher farm-gate costs and the intermediate steps in the supply chain that should dampen the farm-gate cost price differences between organic food prices and conventional food prices.

First, food processors and packagers add a margin to the wholesale price as they add value to the products bought from wholesalers or farmers. The costs they pay to farmers and wholesalers as a percentage of net sales is 36.3% on average (2022 and 2023) for the dairy group FrieslandCampina. This factor will be applied to our model in Table 31 in the dairy product category. The 76.4% for the meat company Vion is applied to the meat category, and the 71.3% for Greenyard is applied to the category of 'other perishables' like fruits and vegetables. Greenyard[58] is a global market leader in fresh, frozen and prepared produce: fruits and vegetables, flowers and plants. The average for Refresco (soft drinks and juices) and JDE Peet's (coffee and tea products) is applied to the non-perishables category.

Table 29 Food processors: Costs of goods sold as % of net sales

€ million	2022	2023	Average
FrieslandCampina			
Net sales	14,076	13,072	
Costs of goods sold	-11,822	-11,290	
Milk from farmers	-5,338	-4,521	
as % of net sales	37.9%	34.6%	36.3%
Vion Food Group			
Net sales	4,848	5,013	
Raw materials and consumables used	-3,647	-3,893	
as % of net sales	75.2%	77.7%	76.4%
Greenyard Group			
Net sales	4,690	5,136	
Raw materials and consumables used	-4,395	-4,804	
Raw materials	-3,324	-3,687	
as % of net sales	70.9%	71.8%	71.3%
Refresco			
Net sales	2,870	5,926	
Raw materials and consumables used	-1,602	-3,048	
Raw materials (excl packaging)	-756	-1,506	
as % of net sales	26.3%	25.4%	25.9%
JDE Peet's			
Net sales	8,151	8,191	
Raw materials	-3,016	-2,781	
as % of net sales	37.0%	33.9%	35.5%

Source: Profundo, based on the Annual Reports 2023 of the various companies.

On their turn, when food retailers buy products from food processors and packagers, they add a margin to the products. This margin is 31.0% and the costs of products as percentage of net sales is 69% (Table 30).

Table 30 Ahold Delhaize: Costs of goods sold as % of net sales

€ million	2022	2023	Average
Net sales	86,964	88,649	
Cost of sales	-63,689	-64,880	
Division:			
Cost of product	-59,965	-61,174	
as % of net sales	69.0%	69.0%	69.0%

Source: Profundo, based on the Annual Reports 2023 of Ahold Delhaize.

Table 29 and Table 30 are the input to the 'theoretical' price premium for organic products. The higher costs of organic products at the wholesale level (40%) would, under 'normal' conditions, be tempered to 16% at the level of food retail. 'Normal' means that the nominal/absolute margin would be equal between organic products and conventional products. It is important to consider that the total muting ratio (x) in meat and 'other perishables' is relatively limited as meat, fruits, and vegetables do need less processing than, for instance, a spaghetti sauce or the production of cheese.

Conclusion: the 53% higher price of organic meat could be muted or diluted to a 28% higher price in food retail (consumer price). For the dairy category, the organic price premium of 21% at the level of farm-gate level could decline to a 5% premium. Other perishables would see a muting/diluting impact from 47% to 23%, and non-perishables from 40% to 9% (Table 31).

Table 31 The theoretical organic price premium in food retail

	Wholesaler	Ratio (x)	Processors	Ratio (x)	Retail*	Total muting ratio (x)
Factor	A	B	C = A x B	D	E = C x D	
Meat/fish	53%	0.76	40%	0.69	28%	0.53
Dairy/eggs/yellow fats	21%	0.36	8%	0.69	5%	0.25
Other perishable	47%	0.71	33%	0.69	23%	0.49
Non-perishable	40%	0.31	12%	0.69	9%	0.21
Average	40%		23%		16%	0.40

Source: Profundo, based on preceding tables.

The conclusion is that there are large differences between the organic price premium in reality and in theory. The gap is visible in the last column of Table 32. **Prices between wholesale and food retail do not increase by a theoretical average of 16%, but by 56%, thus 40% extra. This extra margin is generated by food processors and packagers, and by food retailers.** Currently, no research has determined which actor captures most of this additional price: the food retailer or the food processor/packager.

Table 32 The difference between the organic price premium in reality and theoretically

	Food retail price premium 'real' (%)	Food retail price premium 'theoretical' (%)	Retail - extra margin (%)
Factor	A	B	C = A - B
Meat/fish	61%	28%	33%
Dairy/eggs/yellow fats	70%	5%	65%
Other perishable	52%	23%	29%
Non-perishable	41%	9%	32%
Average	56%	16%	40%

Source: Profundo, based on preceding tables.

The extra margin taken by food retailers is confirmed by Investico research,[59] and emphasized by Ronald van Marlen, a board member of the organic certification scheme Demeter: ***"Supermarkets take up to € 1.50 extra margin on cans of organic canned food".***[60] This is underlined by Klaas Johan Osinga of LTO Nederland: ***"Margins in the chain are calculated as % of the purchase. So that is to the disadvantage of more sustainable products that need an extra price to be produced. The chain parties (industry, trade, retail) make more profit in euros. And the consumer price is higher than it should be. Of course, retailers and trade will say that they also incur additional costs, because organic must be transported and stored separately to prevent fraud."***[61]

4.6 Current profitability of food retail and AD on organic products

The conclusion of the section 4.5 is that the food retailers and processors are taking extra price increases for organic food. This leads to an additional margin in the four categories. Although the extra margins differ per category, the current report assumes that the over-pricing of 40% is a fair indication for the whole organic portfolio of AD.

Currently, 3% of AD's total food revenues are from organic products. Therefore, out of 2023's € 72,341 million food revenues, € 2,170 million was from organic products.

The model in Table 32 indicates that a food retailer and food processor/packager may have a 40% over-pricing in its organic range. In AD's case, such over-pricing would lead to € 863 million in extra revenues (Table 33). The assumption is that the over-pricing occurs at the same rate by food processors/packagers and by AD. **Assuming that the over-pricing by AD leads to extra profits, this extra profit generated 1.8% of AD's total gross profit in 2023, 12% of total operating profit, 14% of total net profit, and 16% of dividends and SBBs.**

Table 33 Profits of organic premium pricing as % of key financials of Ahold Delhaize

€ million	Revenues	Gross profit	Underlying operating profit	Underlying net profit	Dividend + Share Buyback
Total food revenues	72,341	23,769	3,605	2,316	1,998
% organic	3.0%				
Organic food revenues	2,170				
% extra margin	40%				
Total extra margin for AD and its FMCG producers/packagers	863				
Share of AD (%)	50%				
Total extra margin AD (50%)	431				
Organic food extra margin as % of:		1.8%	12.0%	14.0%*	16.2%*

Source: Profundo, based on preceding tables; *) over-pricing profit 2023 net of tax (tax rate assumption 25%).

If AD would change its organic food approach to pricing organic food products in line with conventional products, the company would lose the extra profits from over-pricing organic products. This would add up to the extra costs of a new organic food strategy.

4.7 Impact of gradual organic transition in private label perishables

This section builds on the analysis in the appendix. The appendix contains the bricks to estimate what the costs are to gradually change the private label perishable food products in AD's portfolio from conventional to organic in three scenarios: 15%, 25% and 100% transition.

As perishables contribute 54.2% of AD's global food revenues and private labels account for 38.4% of global food revenues, the perishables that are private labels are 20.8% of the total food revenues. This assumes that the private label percentage is equal in the whole portfolio. Although private labels might have higher percentages in perishables than in branded products, a higher percentage than 20.8% could be applied but AD chose not to cooperate on this report.

When applying this 20.8% on the impact calculated in the Appendix 3, the percentage impacts on AD's global underlying operating profit become much smaller. In a 15% organic scenario, the impact would move up gradually from 2.5% in 2025 to 10.3% in 2030 and 2035 (Table 34). The extra year-on-year profit pressure from an increasing share of organic products would be below 10% in every scenario. Even for the 100% scenario, the profit pressure would be limited to below 7.6% (2026) in the worst year. It needs to be considered that the accumulation of the annual impact still leads to a 65.9% pressure on underlying operating profit in 2023 in the 100% organic transition scenario for private label perishables.

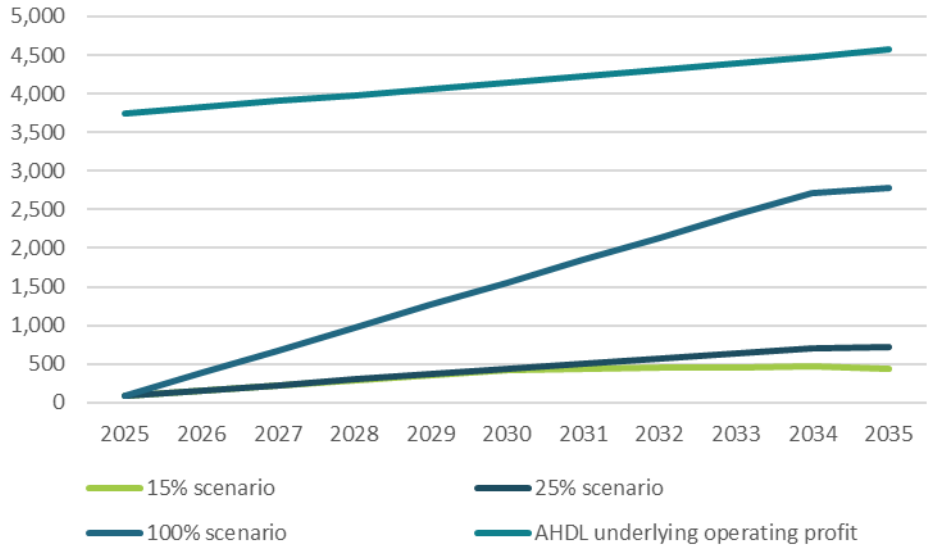
Table 34 Ahold Delhaize: Impact of a gradual organic transition in private label perishables

%	2025	2026	2027	2028	2029	2030	2035
Underlying operating profit AD (global) impact total food:							
15% scenario (A)	12.0%	20.1%	28.0%	35.5%	42.7%	49.7%	49.7%
25% scenario (B)	12.0%	20.2%	28.2%	35.8%	43.1%	50.1%	81.1%
100% scenario (C)	12.0%	48.4%	83.4%	117.0%	149.3%	180.2%	316.7%
Correction factors from total food to perishables-private labels:							
Perishable % (D)	54.2%	54.2%	54.2%	54.2%	54.2%	54.2%	54.2%
Private label % (E)	38.4%	38.4%	38.4%	38.4%	38.4%	38.4%	38.4%
Total correction factor (F = D x E)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Transition costs as % of:							
Underlying operating profit AD (global) impact Perishables private labels							
15% scenario (G = F x A)	2.5%	4.2%	5.8%	7.4%	8.9%	10.3%	10.3%
25% scenario (H = F x B)	2.5%	4.2%	5.9%	7.4%	9.0%	10.4%	16.9%
100% scenario (I = F x C)	2.5%	10.1%	17.3%	24.3%	31.0%	37.5%	65.9%
Additional profit pressure year-on-year							
15% scenario	2.5%	1.7%	1.6%	1.6%	1.5%	1.4%	0.0%
25% scenario	2.5%	1.7%	1.7%	1.6%	1.5%	1.5%	1.3%
100% scenario	2.5%	7.6%	7.3%	7.0%	6.7%	6.4%	5.7%

Source: Profundo, based on preceding tables.

The costs of gradually introducing the organic private label perishables portfolio develop substantially below the level of the underlying operating profit.

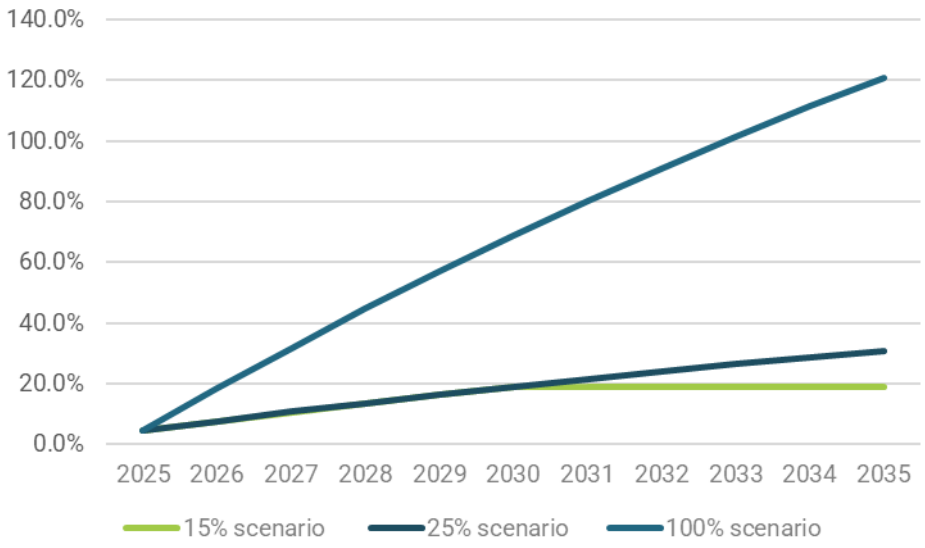
Figure 4 Ahold Delhaize: Global organic transition costs versus operating profit (€ million)



Source: Profundo; transition costs for private label perishables.

Finally, if only the European business would opt for a gradual organic path of the private label perishable food products, the three scenarios lead to above-average pressure versus underlying European profit. The reason is that the private label percentage in Europe is much higher than in the global business (2023: 49.4% in Europe versus 31.5% in the US and 38.4% globally) and the operating margin in Europe is lower than in the US (2023: 3.3% in Europe versus 4.7% in the US). The 100% organic scenario would lead to costs higher than the underlying European profit (Figure 5).

Figure 5 Ahold Delhaize: European organic transition costs as % of operating profit (%)



Source: Profundo; private label perishables.

4.8 The financial impact of the organic scenarios versus net profit and equity value

If the organic targets of 15%, 25%, and 100% are assumed to be achieved in year 1 for the private label perishables, then the impact on average net profit (2000-2023) is relatively large.

Table 35 Ahold Delhaize: Impact of an organic transition in private label perishables from year 1

	Factor	15% scenario	25% scenario	100% scenario
Costs versus average net profit 2000-2023	A	71.2%	116.3%	454.2%
Correction factors from total food to perishables - private labels:				
Perishable % (A)	B	54.2%	54.2%	54.2%
Private label % (B)	C	38.4%	38.4%	38.4%
Total correction factor (C= A x B)	D = B x C	20.8%	20.8%	20.8%
% of costs versus net profit	***E = A x D***	***14.8%***	***24.2%***	***94.4%***

Source: Profundo based on preceding tables.

A better insight into the impact on the value of the shares and consequently the rewards to shareholders can be achieved as follows:

- The introduction is more gradual, so not from year 1 onwards.
- Such a gradual move to a 15%, 25% and 100% organic target (global business) to 2030 (15%), respectively, 2035 (25%, 100%), with costs split between AD and the processing/packaging sectors, can be re-calculated in a total value number per year, from year 1 into eternity.
- These value numbers can be applied to a Discounted Cash Flow model (DCF) with a 7% discount rate and a 25% tax rate. Through this model, the annual extra costs to 2030 and 2035, and the years thereafter, are re-calculated to a present value and are added up in one number. This number is compared to the market capitalisation (or equity value) of AD.

The 15% scenario leads to a present value of all costs of € 4,146 million, which is 13.5% of AD's current market capitalisation. A 100% target in 2035 leads to a total discounted cost value of € 22,236 million, or 72.4% of the current market capitalisation. As impacts versus market capitalisation are a reflection of long-term impact on net profits, this Table 36 provides a better insight into the impact on long-term net profit than Table 35.

The positive outcome of this organic transition calculation, limited to private label perishables, indicates that AD can finance the transition in all scenarios. The negative outcome for shareholders is that they can lose a part of their value.

Table 36 Ahold Delhaize: Organic transition costs private label perishables* versus equity value

	24 Feb 2025	As % of market cap / impact vs net profits**
Share price (€)	33.94	
Number of shares (million)	905.1	
Market capitalisation (€ million)	30,720	
DCF value in 15% scenario 2030	4,146	**13.5%**
DCF value in 25% scenario 2035	5,928	**19.3%**
DCF value in 100% scenario 2035	22,236	**72.4%**

Source: Profundo, based on preceding tables; *) for the global business; **) in the long term, the impact vs market capitalisation is a reflection of impact vs net profits.

4.9 Testimonies

The organic vegetable processor HAK says that ***"[..] the transition in the Netherlands can be boosted with measures such as transition payments for growers, a VAT exemption for organic products and campaigns to make the organic offer attractive and accessible to consumers"***.[62]

Organic farmer Jan Schrijver, with 75 hectares in the Dutch province of Noord-Holland, sees that organic farming has less support from ***"[..] beneficial regulations and subsidies"*** and asks for a ***"[..] level playing field"*** in a context that organic farming is less profitable due to lower proceeds and higher risk as no pesticides are used.[63]

Sander Bernaerts from Naturim indicates that ***"[…] supermarkets can help by making small steps like selling only organic potatoes so that the farmers have a less volatile client base. There is a lot of low-hanging fruit that can be addressed, and that is against low costs. In this context, the relationship between food retailers and organic farmers should be more direct, so there should be a reduction in the role of the middlemen who focus strongly on lowering costs and competition. And consider, organic products are not always more expensive than conventional products".*** About the farmers' transition period and costs from conventional to organic, Sander added that ***"[…] the three-year period of idle land or lower proceeds is a myth. Year 1, for instance, in grain, might have some lower proceeds, but the result is the same as a normal rest year in a crop rotation. In year 2, the products can be sold as input for organic livestock farmers. Year 3 is the first year of organic production. and there is no negative impact anymore".***[64]

Cornelis Mosselman, an organic regenerative farmer in the Southwest of the Netherlands, says that AD ***"[…] already has some initiatives that it does not take an extra margin on organic products and that this kind of steps is crucial. Additionally, supermarkets should work on methodologies or technologies to highlight the nutritional content of, for instance, an organic carrot and that the shape of the carrot is less important"***. He adds that ***"[…] while some supermarkets already take actions, the financers of agriculture continue to focus on financial returns".***[65]

Marian Blom from Bionext, a chain organisation for organic agriculture and food, says that ***"[…] long-term security of supply and a fair price are important for a farmer of organic products. As the traders and other suppliers to supermarkets are an important link in the food system, supermarkets should ask these partners for high standards on ethical policy as well as price policy".*** Marian Blom says that ***"ambition is a crucial word: ambition of supermarkets to reach certain targets of organic sales in a five-year period; ambition to integrate the organic transition in all the supermarkets' policies, including financial; and ambition to think how to accommodate sales of organic products. This means creativity with waste streams and flexibility in product parameters, such as size and shape, for fresh fruit and vegetables, which tend to be more diverse in organic food production than in conventional food production. It is about knowledge and understanding the kind of food that an organic production system delivers***". About the support for larger dairy processors, she says that ***"[…] as dairy is a more uniform product than vegetables and food, economies of scale in processing can be achieved easier. But to guarantee sufficient income at farm level, support from supermarkets in price or long-term contracts are also needed".***

The conclusion from these testimonies is that AD should pay for the higher production costs for organic and provide a stable environment in which organic farmers can work. This can be solved by making the steps of moving one category for 100% to organic. At the same time, there are suggestions to make the products accessible to consumers. This is in line with the objective of this report: selling organic products for the same price as conventional products.

4.10 Conclusion on the organic transition

From the current 3% organic food revenues in AD's global portfolio to scenarios of 15%, 25% and 100% is a large step. This report calculated the costs for AD if it would reach these targets for private label perishables in meat, dairy, bread, vegetables and fruits in 2030 (15%) and 2035 (25% and 100%). The condition is that organic products are not more expensively priced than conventional private label products.

A gradual path to the target dates (2030 in a 15% scenario) leads to a total cost that moves up to 10.3% of AD's underlying operating profit. In a 25% organic scenario, total costs are 16.9% in 2035, and in a 100% scenario 65.9%. When these annual costs are translated into a value number based on a discounted cash flow basis, the value equals 13.5% (15% scenario), 19.3% (25% scenario) and 72.4% (100% scenario) of the current market capitalisation of AD. Testimonies by suppliers in the chain support the idea that this transformation is possible based on higher prices paid for organic products at farm-gate and the condition of a stable sourcing environment by AD so that farmers have a secure client environment. If an organic transformation in all categories is too complicated, small steps can be made by transforming some sub-categories not gradually but completely to 100% in one go.

References

1 Rijksoverheid (2022, December 19), “Van 4% naar 15% biologische landbouw in 2030”, online: https://www.rijksoverheid.nl/actueel/nieuws/2022/12/19/van-4-naar-15-biologische-landbouw-in-2030, viewed January 2025).

2 European Commission, “A Farm to Fork Strategy”, online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0381, viewed January 2025.

3 Ahold Delhaize (2018, March), *Annual Report 2017*, p. 263.

4 Ahold Delhaize (2021, March), *Annual Report 2020*, p. 228.

5 Ahold Delhaize (2022, November), *Climate Plan*, p. 11.

6 Ahold Delhaize (2023, December), *Climate Plan*, p. 4.

7 Ahold Delhaize (2025, February), *Annual Report 2024*, p. 102.

8 Ahold Delhaize (2025, February), *Annual Report 2024*, pp. 102, 175.

9 Ahold Delhaize (2025, February), *Annual Report 2024*, pp. 106, 110.

10 Albert Heijn (2025), *Duurzaamheidsverslag 2024*, pp. 117-119.

11 Albert Heijn (2025), *Duurzaamheidsverslag 2024*, pp. 117-119.

12 Concito (n.d.), “The Big Climate Database”, online: https://concito.dk/en/projekter/store-klimadatabase, viewed in February 2025.

13 Ahold Delhaize (n.d.), “Lower-carbon protein choices”, online: https://www.aholddelhaize.com/sustainability/our-position-on-societal-and-environmental-topics/lower-carbon-protein-choices/, viewed in February 2025.

14 Ahold Delhaize (2025, January 29), “Ahold Delhaize announces protein split target of 50% by 2030 for European food retail brands”, online: https://newsroom.aholddelhaize.com/ahold-delhaize-announces-protein-split-target-of-50-by-2030-for-european-food-retail-brands/, viewed in February 2025.

15 Albert Heijn (2025), *Duurzaamheidsverslag 2024*, p. 120.

16 GFI Europe (n.d.), “Market insights on European plant-based sales 2020-2022”, online: https://gfieurope.org/market-insights-on-european-plant-based-sales-2020-2022, viewed in February 2025.

17 FAOSTAT (2025), "Food balances", online: https://www.fao.org/faostat/en/#data/FBS, viewed in February 2025.

18 FAO (n.d.), “Global Livestock Environmental Assessment Model (GLEAM) 3.0”, online: https://www.fao.org/gleam/dashboard/en/, viewed in February 2025.

19 International Food Policy Research Institute (2016), *2016 Global Food Policy Report*, Washington, DC, US: IFPRI, p. 70.

20 WWF (2024), “The EU Food Chain: where are the most profits made & what are the biggest environmental impacts?“, online: https://wwfeu.awsassets.panda.org/downloads/wwf_factsheet-food_v9.pdf, viewed February 2025.

21 Kuepper, B. and Rijk, G. (2020, October 12), *Who’s profiting from Brazilian soy?*, Amsterdam, Netherlands: Profundo.

22 Koninklijke Jumbo Food Groep BV (2024), *Jaarverslag 2023*;

Jumbo, online: https://www.jumbo.com/leverancier/jumbo-klimaatprogramma?msockid=2174cd5e4d0f676e1a79d9de4ccf66e1, viewed in February 2025.

23 Interview met Eunice Koekoek, senior communication officer at Jumbo on 25 February, 2025.

24 Ahold Delhaize (2024, February), Annual Report 2023, p. 199.

25 HawkSEM (2024, October 31), “You should plan to invest between 5% and 20% of your revenue on marketing, depending on whether you want to sustain or grow. Learn why from top digital marketing agency experts”, online: https://hawksem.com/blog/what-percentage-of-revenue-should-be-spent-on-marketing/, viewed in February 2025.

26 Forbes (2022, April 13), “How much should you spend on marketing”, online: https://www.forbes.com/councils/theyec/2022/04/13/how-much-should-you-spend-on-marketing/, viewed February 2025.

27 Ahold Delhaize (2024, February), *Annual Report 2023*, p. 199.

28 Interview with a sell-side equity analyst who covers Ahold Delhaize already for a long time, on 19 March, 2025.

29 WWF (2024), "The EU Food Chain: where are the most profits made & what are the biggest environmental impacts?", online: https://wwfeu.awsassets.panda.org/downloads/wwf_factsheet-food_v9.pdf, viewed February 2025.

30 Clayton, E.R. (2018, December), "From animal agriculture to the plant-based economy", Good Food Institute, online: https://gfi.org/blog/transitioning-from-animal-agriculture/, viewed in February 2025.

31 Prag, A.A. and Henriksen, C.B. (2020), *Transition from Animal-Based to Plant-Based Food Production to Reduce Greenhouse Gas Emissions from Agriculture—The Case of Denmark*, Copenhagen, Denmark: Department of Plant and Environmental Science, University of Copenhagen.

32 Interview with Sander Bernaerts from Naturim on 26 February, 2025.

33 Interview with Klaas Johan Osinga from LTO (Dutch agriculture and horticulture organisation) on 25 February, 2025.

34 Interview with Cornelis Mosselman from Vooruitboeren – BI-JOVIRA on 26 February, 2025.

35 Based on Rabobank (2024), *Annual Report 2023,* p. 89.

36 McKinsey & Company (2023, June), *The Agricultural Transition: Building A Sustainable Future*, p. 24.

37 Friedmann, Y. S. J. et al, (2020, October), *Levelized cost of carbon abatement: an improved cost-assessment methodology for a net-zero emissions world,* New York, USA: Colombia University, Center Global Energy Policy

38 McKinsey & Company (2023, June), *The Agricultural Transition: Building A Sustainable Future,* p. 24.

39 Ahold Delhaize (n.d.), "Sustainable Agriculture", online: https://www.aholddelhaize.com/sustainability/our-position-on-societal-and-environmental-topics/sustainable-agriculture/, viewed in February 2025.

40 WWF (2024), "The EU Food Chain: where are the most profits made & what are the biggest environmental impacts?", online: https://wwfeu.awsassets.panda.org/downloads/wwf_factsheet-food_v9.pdf, viewed February 2025.

41 USDA (2025, 23 January), "Organic Agriculture", https://www.ers.usda.gov/topics/natural-resources-environment/organic-agriculture, viewed February 2025.

42 Albert Heijn (2025), *Duurzaamheidsverslag 2024*, p. 110.

43 Ahold Delhaize (2025, January 16), *Ahold Delhaize introduces 500 new own brand products in Central and Southeastern Europe region.*

44 Ahold Delhaize (2025, February), *Annual Report 2024*, p. 123.

45 Mookerjee, S. in ScienceABC (2024, October 15), "Why Is Organic Produce More Expensive Than "Conventional" Produce?", online: https://www.scienceabc.com/nature/why-is-organic-produce-more-expensive-than-conventional-produce.html, viewed January 2025.

46 de Ponti, T., Rijk, B., van Ittersum, M.K. (2012), *The crop yield gap between organic and conventional agriculture, Agricultural Systems*, Elsevier, Agricultural Systems, volume 108, 2012, Pages 1-9.

47 Seufert, V., Ramankutty, N., Foley, J.A. in (2012, May 10), *Comparing the yields of organic and conventional agriculture*, Nature, volume 485, page 229.

48 Alvarez, R. `(2021), "Comparing Productivity of Organic and Conventional Farming Systems: A Quantitative Review, in Archives of Agronomy and Soil Science, volume 68, issue 14, p. 1947–1958.

49 Badgley, C., Moghtader, J., Quintero, E., et al. (2007) , "Organic agriculture and the global food supply", Renewable Agriculture and Food Systems, Cambridge University Press, published online: https://www.cambridge.org/core/journals/renewable-agriculture-and-food-systems/article/abs/organic-agriculture-and-the-global-food-supply/93DD2635AC706B08EE68B881D17A143B.

50 Knapp, S., van der Heijden, M.G.A (2018), "A global meta-analysis of yield stability in organic and conservation agriculture", at Commun 9, 3632 (2018). https://doi.org/10.1038/s41467-018-05956-1.

51 Nemes, N. (2009), *Comparative analysis of organic and non-organic farming systems : a critical assessment of farm profitability*, Rome, Italy: FAO.

52 Shraaz (2024, 27 September), "Cost Differences: Is Organic Food Really Worth It?", online: https://shraaz.com/cost-differences-organic-vs-inorganic-food/, viewed February 2025.

53 Eco Life Wise, “Why Are Organic Products Often More Expensive?”, online: https://ecolifewise.com/why-are-organic-products-often-more-expensive/, viewed February 2025.

54 *VRT News* (2024, 3 June), “Organic Week: why is organic food more expensive and is it healthier?”, online: https://www.vrt.be/vrtnws/en/2024/06/03/organic-week-why-is-organic-food-more-expensive-and-is-it-healt/, viewed February 2025.

55 *The Harvard Gazette* (2023, 22 September), “Is organic better?”, online: https://news.harvard.edu/gazette/story/2023/09/is-organic-better/, viewed February 2025.

56 Hirsch, S. (2019, July 31), “Why Is Organic Food More Expensive Than Conventional Food?”, *GreenMatters*, online: https://www.greenmatters.com/p/why-is-organic-food-more-expensive, viewed February 2025.

57 White, S. (2017, September 5), “Growth of organic food sales stifled by ‘unjustified’ prices”, *Euractiv*, online: https://www.euractiv.com/section/agriculture-food/news/growth-of-organic-food-sales-stifled-by-unjustified-prices/, viewed January 2025.

58 Greenyard Group, online: https://www.greenyard.group/about-us, viewed January 2025.

59 Dequeker, S., Bosma, F. (2023, November 8), “Hoe Nederland biologische landbouw verwaarloosde”, *Investico,* online: https://www.platform-investico.nl/onderzoeken/hoe-nederland-biologische-landbouw-verwaarloosde, viewed February 2025.

60 van Marlen, R. (2024, September 13), “Waarom is biologisch nog niet de norm? – Interview met Ronald van Marlen van Demeter”, *Land van Ons*, online: https://landvanons.nl/interviews/waarom-is-biologisch-nog-niet-de-norm-interview-met-ronald-van-marlen-van-demeter/, viewed February 2025.

61 Interview with Klaas Johan Osinga from LTO (Dutch agriculture and horticulture organisation) on 25 February, 2025.

62 HAK (2023, January 18), *HAK gaat over op biologisch voor alle lokale groenten en peulvruchten.*.

63 Veltman, A. (2023, November 10), “Jan Schrijver: 'Investico legt bloot wat bio sector al decennia ervaart'”, *Ekoland*.

64 Interview with Sander Bernaerts from Naturim on 26 February, 2025.

65 Interview with Cornelis Mosselman from Vooruitboeren – BI-JOVIRA on 26 February, 2025.

Appendix 1 Emission estimates for animal protein products

Approximates for AD's Scope 3 emissions from animal products are estimated in two steps.

- Firstly, the volume of animal products sold in each of its operating countries is estimated. These estimates are obtained by combining a) data on the average distribution of food sales in each of the operating countries between the two food sales channels: grocery retailing and food service; b) AD's market share in grocery retailing in each of these countries; and c) the total consumption of animal products in each country. By combining these different data points, an estimate of the volume of meat, dairy, and eggs sold by AD annually is obtained. Where relevant, product volumes are converted from retail weight to carcass weight / dairy product volume to milk equivalents, based on commonly used conversion factors.
- In the second step, these product volumes are combined with regional emission intensity figures per type of product from the FAO Global Livestock Environmental Assessment Model (GLEAM) 3.0 database.

These calculations approximate AD's total emissions linked to sales of animal products. Average protein contents, as reported by the FAO, are then used to estimate the protein volumes linked to these sales (Table 37).

Table 37 AD animal product sales by country (estimates)

Country	AD emissions meat & poultry (est., million tons CO_2e)	AD emissions dairy & eggs (est., million tons CO_2e)	Total AD emissions (est., million tons CO_2e)	Total protein in sales (1,000 tons)
BE	1.2	0.6	1.8	36
CZ	0.6	0.6	1.1	23
GR	0.7	0.4	1.1	21
NL	3.3	2.4	5.6	100
PT*	1.0	0.4	1.4	26
RO	0.6	0.6	1.2	28
RS	0.4	0.2	0.6	14
US	7.1	3.5	10.7	216
ID*	0.1	0.0	0.1	2
Total	**15.0**	**8.7**	**23.7**	**466**

Note: *Considering AD's stake in these operations.

Sources: van Loon, D. (2024, January), "NielsenIQ: marktaandelen supermarkten 2023"; Pinckaers, M. (2024, July), *Retail Foods Annual - Netherlands*, USDA Gain Report NL2024-0008; Dagevos, H. et al.(2024), *Vleesconsumptie per hoofd van de bevolking in Nederland, 2005-2023*, Wageningen, Netherlands: Wageningen Economic Research, p.7; *De Tijd* (2025, January), "Delhaize koopt 325 Louis Delhaize-supermarkten'"; StatBel (2023, September), "Nieuwe resultaten Belgisch huishoudbudgetonderzoek"; StatBel (n.d.), "Supply balance sheets for meat"; Statista (2024, December), "Dairy consumption per capita in Belgium 2019-2029, by milk product"; FAOSTAT (n.d.), "Food Balances (2010-): Food supply quantity: 2022"; National Retail Federation (n.d.), "Top 100 retailers 2024 list"; USDA ERS (2025), "Food service industry - Market segments"; USDA (2024), "Meat supply and disappearance tables historical"; USDA (2022), "Dairy products: Per capita consumption, United States (Annual)"; Yuningsih, N. (2024), *Retail Foods Annual - Indonesia*, USDA Gain Report ID2024-0026, p.8; OECD (n.d.), "Meat consumption: Beef and veal, Sheep meat, Poultry meat, Pork meat, Kilograms/capita - retail weight, 2022 and 2023"; Darmawan, C. (2024, November), *Dairy and Products Annual - Indonesia*, USDA Gain Report ID2024-0038; McHugh, R. (2024, September), "Top 10 Supermarket Retail Chains in Greece", ESM Magazine; Deloitte (2022), *Foodservice Market Monitor*, p.10; Lloyds Bank (n.d.), "Greece: Buying and Selling - The distribution network in Greece"; Medina, A. (2024, October), *Retail Foods 2024 - Portugal*, USDA GAIN report PO2024-0003, p.7; Silva, M. ET AL. (2024), "Eating out of home in Portugal: characterisation and effects on dietary intake", *The British Journal of Nutrition*, 132(2), 169–181; Statistics Portugal (n.d.), "Products Database"; Hlavackova, M. (2023, June), *Retail Foods - Czech Republic*, USDA GAIN report EZ2023-0005; Statista (2024), "Turnover of the food & beverage service industry in Czechia 2013-2022"; Czech Statistical Office, "Food consumption"; Nistor, A. (2024, July), *Exporter Guide Annual - Romania*, USDA GAIN report RO2024-0004, p.7; Institutul National de Statistica (2024), "Disponibilitățile de consum ale populației, în anul 2023"; Serbia Business (2024, July), "Serbian economy profits 972.4 billion dinars in 2023; retail sector leads with 194.4 billion dinars in profit"; Maslac, T. (2024, January), *Exporter Guide - Serbia*, USD GAIN report RB2024-0001, p.3; Statistical Office of the Republic of Serbia (2024), *Household Budget Survey, 2023*, p.69; all sources viewed in February 2025.

Appendix 2 Other approaches to the climate transition

Quantis, in a recent report for Madre Brava, saw three crucial pathways to reduce emissions in the German food retail sector[vi]. The German food retail sector is not so different from the Dutch sector and AD's business model:

- The shift to plant-rich consumption and production: 32% reduction from a baseline of 60 million tons of CO_2e by 2030, with cost savings, and with this value benefits, of € 2 billion for the German food retail market.
- Improving agricultural production practises to reduce emissions and increase carbon sequestration: 5% savings from a baseline of 365 million tons of CO_2e. Costs are more than € 1 billion.
- Reducing food loss and waste at every stage, from production to consumption: 13% savings from a baseline of 2.7 million tons of CO_2e. Costs are more than € 20 million.

What is the relevance of this Quantis analysis for AD's protein transition?

According to Quantis report, the abatement costs from meat to a meat-alternative product are negative, meaning that food retailers will earn from the transition. This is based on the assumption that meat alternatives are cheaper. Milk alternatives do not have positive abatement costs, as the costs per product are higher in the first few years.

Quantis assumes pathways of meat/milk reduction of 15% and 30%, but the 30% reduction still means that meat and milk volumes in 2030 are respectively 66% and 64% of total German retail volumes versus 97% and 92% in 2023 (meaning meat alternatives were still very limited in 2023). The report points to the need for price parity between meat/dairy and their alternatives as this removes cost barriers, which can be supported by exploring incentives and subsidies. The report says that food retailers play an essential role in facilitating a transition by making them affordable, accessible and appealing.

The assumptions in the current report are very different from those in the Quantis analysis:

- Our plant-based protein scenarios are 50%, 60% and 70% and are thus much higher and ambitious. However, our starting point/base scenario of 33% plant-based is also higher. It need to considered that Quantis/Madre Brava's low starting point of <5% for the alternatives consist of meat alternatives, and do not include existing plant-based proteins like tofu and peas.
- Because of the smaller necessary shift, the Quantis/Madre Brava analysis assumes that the demand-side/consumer will follow the offering on the shelf and no extra information/marketing spend is required.
- The food retail sector is active in a competitive environment. It is not possible to keep the lower costs and, thus, potentially extra profits of meat alternatives in the pockets of food retailers.

[vi] Granados, P. et al. (2025, January), Biggest Bang for the Buck: Cost-effective Pathways to Climate Targets in German Food Retail, Quantis research commissioned by Madre Brava.

Appendix 3 Organic transition: the building blocks

This appendix is crucial to understand how the calculations have made for the three scenarios of organic transition in private label perishables, mainly dairy, meat, fruits and vegetables.

The costs of transition to an organic portfolio: three scenarios

This section elaborates on the costs of the three scenarios versus 2023 results in a pro forma setting (see below), and the costs in a scenario of gradual introduction to 2030 (the 15% scenario) and 2035 (the 25% and 100% scenario).

Pro-forma costs and relative costs

This section calculates the costs for AD to transform its food product range from a 3% organic share to a 15%, 25% and 100% organic share. This is calculated for the total food sales, for the perishable food range only, and for the private label share of that. The assumption in the model is that AD is able to purchase organic products from food processors and packagers for the theoretical price premiums of 40% for the meat category, 8% for dairy, 33% for other perishables, and 12% for the non-perishables (Table 38). Then, the transition costs for each scenario are calculated as follows: in a 15% scenario, the transition costs would be € 1,699 million for all food sales and € 1,276 million for only the perishable food sales.

Table 38 Ahold Delhaize: the costs of transition to an organic food range in three scenarios

€ million	Factor	Meat / fish	Dairy, eggs, yellow fats	Other perishable	Non-perishable	Total food	Total perishables
Net sales	A	11,071	5,972	22,143	33,155	72,341	39,186
Division (%)	B	12.5%	6.7%	25.0%	37.4%	81.6%	44.2%
Gross margin (%)	C	31.0%	31.0%	31.0%	31.0%	31.0%	31.0%
Cost of goods sold (%)	D	69.0%	69.0%	69.0%	69.0%	69.0%	69.0%
Cost price	E = A x D	7,640	4,121	15,280	22,879	49,920	27,041
Organic price premium (%)							
Processor level	F	40%	8%	33%	12%		
Transition costs as percentage of cost price (%):							
15% scenario	G = F x 15%	6%	1%	5%	2%		
25% scenario	H = F x 25%	10%	2%	8%	3%		
100% scenario	I = F x 100%	40%	8%	33%	12%		
Transition costs in cost price							
15% scenario	J = G x E	463	47	766	423	***1,699***	***1,276***
25% scenario	K = H x E	771	78	1,276	706	***2,832***	***2,126***
100% scenario	L = I x E	3,086	314	5,105	2,823	***11,327***	***8,504***

Source: Profundo, based on preceding tables.

As already 3% of the food range is organic, € 340 million of extra costs has been expensed for in the current financial data of AD. The extra costs for the 15% scenario, for example, would be € 1,359 million. Compared to the underlying profit in 2023, this would be 37.7%. Versus net profit, the costs would be 47.1%, versus the dividend and share buyback total 54.5%, and versus free cash flow 44.9%. Consider that these numbers assume that the extra costs for organic food sales would be absorbed by AD.

The scenario of 25% organic food sales without higher pricing than conventional food would wipe out a large part of profits, while the costs of a 100% scenario would lead to costs at 3x to 4x the profits.

Table 39 Ahold Delhaize: transition costs to an organic food range in relative terms – all foods

	€ million (2023)	15% scenario	25% scenario	100% scenario
Costs organic food (€ million)		1,699	2,832	11,327
Costs organic food (€ million) for existing 3% share		340	340	340
Extra costs organic food (€ million)		1,359	2,492	10,987
As % of:				
Revenue total food	72,341	1.9%	3.4%	15.2%
Gross profit	23,769	5.7%	10.5%	46.2%
Underlying operating profit	3,605	37.7%	69.1%	304.8%
Underlying net profit	2,316	47.1%	86.3%	380.4%
Dividend + Share Buyback	1,998	54.5%	100.0%	440.9%
Free Cash Flow	2,425	44.9%	82.4%	363.2%

Source: Profundo, based on preceding tables.

If only perishables would be subject to the 15%, 25%, and 100% scenarios, the relative outcomes would be slightly lower.

Table 40 Ahold Delhaize: transition costs to an organic food range in relative terms – perishables

	€ million (2023)	15% scenario	25% scenario	100% scenario
Costs organic food (€ million)		1,276	2,126	8,504
Costs organic food (€ million) for existing 3% share		255	255	255
Extra costs organic food (€ million)		1,020	1,871	8,249
As % of:				
Revenue perishable food	39,186	2.6%	4.8%	21.1%
Gross profit	23,769	4.3%	7.9%	34.7%
Underlying operating profit	3,605	28.3%	51.9%	228.8%
Underlying net profit	2,316	35.3%	64.8%	285.6%

	€ million (2023)	15% scenario	25% scenario	100% scenario
Dividend + Share Buyback	1,998	40.9%	75.1%	331.0%
Free Cash Flow	2,425	33.7%	61.9%	272.7%

Source: Profundo, based on preceding tables.

In the total costs, the loss of the current extra profit (€ 431 million) on the 3% organic food sales should be included. Then the relative cost percentages move up a bit further to 49.7% to 316.7% of underlying operating profit, for instance.

Table 41 Ahold Delhaize: transition costs to an organic food range in relative terms – all foods, including loss of extra profit on current organic range

	€ million (2023)	15% scenario	25% scenario	100% scenario
Extra costs organic food (€ million)		1,359	2,492	10,987
Loss of extra profits on 3% existing organic revenues		431	431	431
Total cash costs		1,791	2,923	11,419
As % of:				
Gross profit	23,769	7.5%	12.3%	48.0%
Underlying operating profit	3,605	49.7%	81.1%	316.7%
Underlying net profit*	2,316	62.0%	101.2%	395.3%
Dividend + Share Buyback*	1,998	71.9%	117.3%	458.2%
Free Cash Flow*	2,425	59.2%	96.7%	377.5%

Source: Profundo, based on preceding tables.

Gradual introduction of target with deadlines in 2030 and 2035

Interestingly is that the Compounded Average Growth Rate (CAGR) of the necessary annual extra price increases - if AD chooses to pass on higher costs to customers - is 0.4%.

A crucial limitation of passing-on cost increases to customers is that price increases for the organic transition are not in line with the report's objective of offering organic products for the same prices as conventional food (the calculations below are first based on ‘all foods’ as from this total level, it is easy to reduce the scope to perishables only and private label).

Table 42 Ahold Delhaize: transition costs to a 15% organic food range – all foods, including loss of extra profit on current organic range

€ million	2025	2026	2027	2028	2029	2030	CAGR
Underlying operating profit AD (global)	3,751	3,826	3,902	3,980	4,060	4,141	
Organic share (%) in food revenues	3%	5%	8%	10%	13%	15%	
Revenues total food	75,263	76,768	78,304	79,870	81,467	83,097	
Organic food revenues	2,258	4,145	6,108	8,147	10,265	12,464	
Costs of organic food	390	703	1,015	1,327	1,639	1,952	
Extra costs of organic food	0	312	625	937	1,249	1,561	
Loss of extra profits on 3% existing organic revenues	449	458	467	476	486	496	
Total cash costs	449	770	1,092	1,413	1,735	2,057	
As % of:							
Underlying operating profit AD (global)	12.0%	20.1%	28.0%	35.5%	42.7%	49.7%	
Revenues total food	0.6%	1.0%	1.4%	1.8%	2.1%	2.5%	
Annual price increases to keep profit intact							0.4%

Source: Profundo, based on preceding tables; CAGR = compounded average growth rate based on the extra costs and loss of 2.5% of 2030 revenues total food.

The 25% and 100% scenarios develop in the same way as the 15% scenario, but with an end date in 2035. If AD wants to protect its profits, it would require respectively 0.4% (25% scenario) and 1.3% annual extra price increases over the whole food range until 2035. Again, this does not fit into the objective of this report of 'no impact on pricing'.

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