

Acute	Chronic	Legal and policy	Market	Technology	Reputational
Physical risk		Transition risk			

# Bernard Matthews' Balance Sheet and Reputation Struck by Bird Flu

Animal production and processing operate at the intersection of the natural and anthropogenic worlds. This brings heightened and persistent nature risks, as evidenced by the financial and reputational losses incurred by UK poultry producer Bernard Matthews due to an avian influenza outbreak in 2007. Vulnerabilities in the company's biosecurity enabled the virus to enter its UK facilities from abroad, resulting in the mass culling of turkeys. A substantial decline in sales and subsequent brand damage demonstrate the importance of managing meat producer and processors' impacts and dependencies on nature.

**100%** Share of gross value added in the direct operations of the food and agriculture sector that is moderately or highly dependent on nature

**£20 million** Estimated decline in the brand value of companies owned by Bernard Matthews

**165** Number of employees laid off by the company in the four weeks following the outbreak

## Physical risk

Nature dependency exists when the operations of an organization rely on the presence of an ecosystem service to function. These dependencies can present a physical risk to business operations, manifesting through degradation of nature and the resulting loss of ecosystem services.

**Acute risks** are short-term events that change the state of nature and are typically location specific.

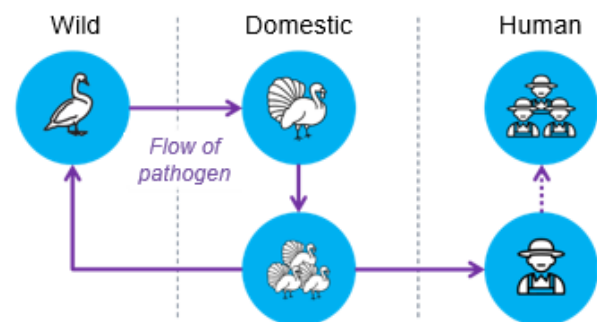
**Chronic risks** are long-term, incremental changes to the state of nature, with consequences that are not anticipated to recede or revert to their prior condition.

## Manifestation of nature risk

Bernard Matthews Foods is a privately held, UK-based farming and food company. The vertically integrated producer and processor specializes in turkey products, which account for 90% of its sales.

On January 30, 2007, an outbreak of the H5N1 subtype of the Influenza A virus was detected at a Bernard Matthews-owned farm in Suffolk. This avian influenza – or bird flu – likely originated in partially processed poultry meat imported from Bernard Matthews' Hungarian subsidiary Saga Foods, according to the UK government's Department for Environment, Food and Rural Affairs (Defra). A third-party abattoir in Hungary used by Saga Foods and other meat companies was also suggested as a candidate for disease transmission. The company denied these allegations at the time. Regardless of its precise origin, a strain of H5N1 99.96% genetically similar to that in Hungary reached Bernard Matthews' UK facility.

## Transmission pathway of H5N1



Source: BloombergNEF. Note: H5N1 is an avian disease. Evidence of human-to-human transmission is limited.

Government investigations were unable to unequivocally confirm the path of avian influenza,

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though familiarity with previous outbreaks of the virus suggests that the strain originated in Hungarian wild birds, whose flocks acted as a disease reservoir. Transmission to poultry stocks then occurred through direct contact with an infected wild bird, its droppings or a contaminated water source. From a single infected farm animal, the pathogens spread quickly to others in the flock, accelerated by the high density of poultry in Saga's farming facilities.

Having entered the processing system, the virus would likely have been able to reach Bernard Matthews' UK facility through its trade in partially processed animals. The Observer reported back in 2007 that the virus' entry may have been associated with a 38-metric-ton shipment of chicken breasts received in the days before the first turkeys exhibited symptoms. Farm workers claimed that scraps produced in meat processing were not hygienically disposed of and were left uncovered in bins open to rats and wild gulls. These scavengers could have provided a vector for the virus to then move into adjacent turkey sheds.

Early tests suggested that avian influenza was responsible for the deaths of 2,600 turkeys. On February 3, following official identification of the highly pathogenic variant, the government imposed a three-kilometer exclusion zone and 10-kilometer monitoring zone around the farm to constrain movement of poultry and wildfowl, and began a cull of all birds on site the same day. Veterinarians dispatched a total of 159,000 turkeys in a slaughterhouse adjacent to the premises.

### Financial and reputational impacts on Bernard Matthews

Consumer perception of Bernard Matthews nosedived in the aftermath of the outbreak. A YouGov BrandIndex survey conducted shortly after the cull deemed Bernard Matthews Britain's least trusted company, ranking last among 1,150 businesses. Another annual assessment of top UK grocery brands saw it fall 38 places, to 98 out of 100. Factors beyond the influenza outbreak, including alleged animal rights violations in 2006 and negative media coverage of its processed food in 2005, also contributed to this perception.

Sales declined sharply. The company posted losses of £77 million (\$159 million in 2007 nominal terms) in the 2007-08 financial year and was forced to begin laying off workers – 165 by February 27. Impacts on the privately held firm's valuation were not readily available, though a consultants' report estimated a £20 million fall in the company's brand value at the time.

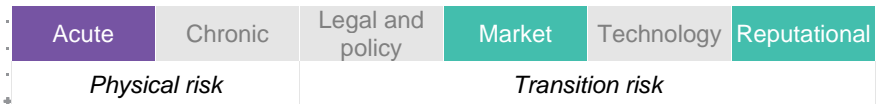
The once iconic brand was unable to recover its reputation after 2007, despite engaging turnaround specialist Rutland, a private equity house, which injected £25 million (\$40.7 million) into the business in 2013, the first outside investment in the firm's 60-year history. Further cash injections did little to stem the financial losses.

In July 2016, Bernard Matthews agreed to sell its German operations to pork and poultry producer Sprehe Gruppe, with the proceeds used to reduce group debt. Two months later, the remainder of the company was acquired by the Boparan Private office in a pre-pack administration deal, strengthening the private investment vehicle's position in the UK poultry market.

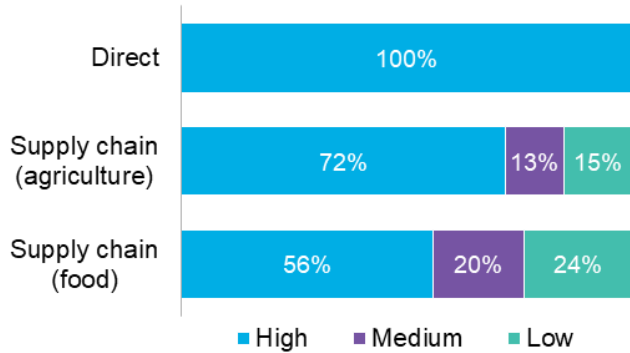
### Nature risk across the food and agriculture industry

Food and agriculture companies derive revenue by extracting value from biotic resources, be it through crops, livestock or processing further downstream. Through this direct interface with the natural world, it is the industry most exposed to nature-related risks. These risks can be physical (such as damage to farmer assets from increased incidence of wildfires), transition (the introduction of more stringent environmental regulation), or systemic (global ecosystem collapse, for example).

Food and agriculture are among the most nature-dependent industries, according to the World Economic Forum. The entirety of the gross value added in the direct operations of both the food and agriculture industries is highly dependent on nature, while 83% of value added in the supply chain is moderately or highly dependent.



## Nature dependency of gross value added in direct operations and supply chain of food and agriculture



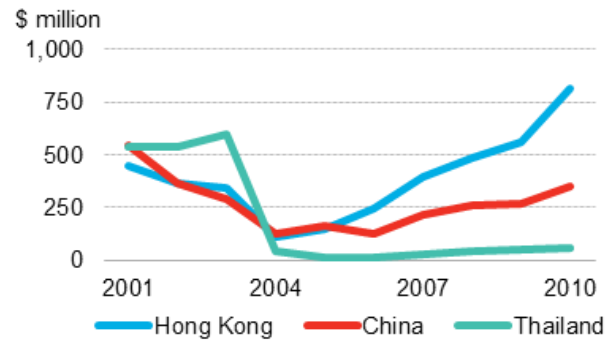
Source: World Economic Forum, BloombergNEF. Note: Food includes beverages and tobacco.

The ENCORE nature materiality matrix likewise emphasizes the depth and breadth of the sector's reliance on nature. It identifies 19 areas on which livestock production depends, covering almost all aspects of nature. The sector also *impacts* the natural world, with operations deemed highly material to water and terrestrial ecosystem use, greenhouse gas emissions and water and soil pollutants.

For poultry producers, avian influenza continues to be a particularly potent source of risk, with repeated outbreaks in recent decades attributed to the H5N1 variant. Before the 1990s, highly pathogenic strains caused mortality in poultry but were sporadic and well contained. In more recent times, increased animal density and larger trade volumes have enabled the virus to spread more quickly, making detection and containment more challenging.

Consumers are highly sensitive to reports of outbreaks. The World Organisation for Animal Health (WOAH) [notes](#) that avian influenza engenders devastating consequences for the poultry industry, impacting farmers' livelihoods and international trade. Following the 2003-04 H5N1 crisis in East Asia, exports from three major poultry producing economies – China, Hong Kong and Thailand – fell to almost zero.

## Decline of chicken meat exports in selected Asian economies following the 2003 H5N1 outbreak

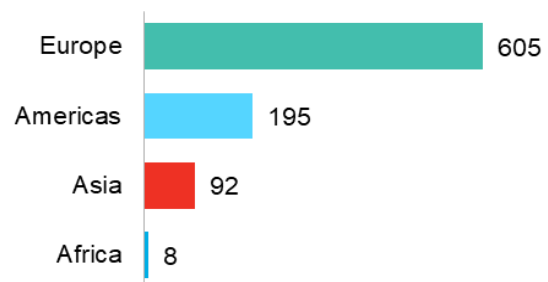


Source: BloombergNEF, FAOSTAT.

A 2014-15 outbreak in the US was one of the largest in history, with significant financial impacts on poultry and egg producers. A total of 51 million birds were culled to limit the spread of the disease, costing the sector \$3 billion with a further \$879 million in public expenditures.

Since 2020, the incidence of avian influenza has become more frequent. Major cases across Europe, the US and Africa have all required large-scale culling of flocks, leading to supply chain issues and subsequent spikes in the prices of meat, eggs and products using them as ingredients. A September 2023 [analysis](#) by FAIRR estimated that the most recent outbreak in the US resulted in animal losses of 40 million and an overall economic cost of \$2.5 billion to \$3 billion.

## Number of new avian influenza outbreaks, September 2022 to May 2023



Source: BloombergNEF, World Organisation for Animal Health.

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Other forms of disease likewise present a considerable source of risk to agriculture. Three of the most prominent outbreaks in recent decades are African swine fever (ASF), foot and mouth disease (FMD), and bovine tuberculosis (bTB), each attaining household name status. No single livestock species is immune to the risk of disease, and new diseases have the potential to emerge at any time. Human encroachment on nature and the intensification of agriculture have led to the increasing incidence of livestock disease.

### Other diseases presenting nature risk to livestock

Disease	Description	Example impact
<b>African swine fever (ASF)</b>	Pig virus spread by ticks	A 2009 global ASF outbreak affected tourism activities. Research <u>calculated</u> the losses incurred by companies in the tourism sector in the UK to be close to £1 billion (\$1.5 billion*).
<b>Foot and mouth disease (FMD)</b>	Viral cattle and sheep disease	The disease spread across the UK in 2001 and remained a threat for seven months, requiring mass culls and enforcement of containment zones. Later <u>estimates</u> placed the total financial impact on the private sector at £5 billion (\$7.2 billion*).
<b>Bovine tuberculosis (bTB)</b>	Bacterial cattle respiratory disease	Controlling bTB <u>cost</u> British farmers £50 million (\$65 million*) in 2018. Losing bTB-free status had a median <u>cost</u> per farmer of £6,600.

Source: BloombergNEF. Note: \*Exchange rates presented in 2009, 2001 and 2018 nominal terms, respectively.

Avian flu, FMD and bTB all exhibit zoonotic potential – the ability to jump from animal hosts to humans. Zoonotic diseases can cause loss of human life and cost to the wider economy. Many zoonotic disease outbreaks originated in the food and agriculture system. The WHO estimates the global economic cost of zoonotic disease Covid-19 to be between \$8.1 trillion and \$15.8 trillion. The bat-borne virus was transmitted to humans, likely following evolution in nature or an as yet unidentified second animal host.

### Managing nature risk in the poultry industry

Best practices for managing risks in the livestock sector are well established. Several supranational groups and public health agencies, including the World Health Organization, World Bank, Centers for Disease Control and Prevention and WOAHA have collaborated to compile disease control guidelines for poultry producers:

1. Effective vaccine implementation
2. Improved disease monitoring and surveillance measures
3. Stringent biosecurity procedures
4. Better zoning and compartmentalization
5. Stronger communication mechanisms between health authorities and industry

Proper implementation of these recommendations first requires companies to fully understand and disclose their interactions and touchpoints with nature.

FAIRR's Emerging Disease Risk Ranking, published in 2022 with updates in September 2023, benchmarks protein companies' exposure to disease risk. Results show that none of the 60 companies assessed attained best practice rankings, while 34 were deemed to operate at high risk. The report analyzed strategies across six risk indicators, including deforestation and biodiversity loss, antibiotics, waste and pollution, working conditions, food safety and animal welfare. It also finds that across the protein production industry, the poultry sector is the worst-performing on pollution and biosecurity. Monitoring and reporting these nature risks are key steps in limiting further outbreaks of disease and minimizing financial loss.

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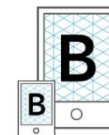
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