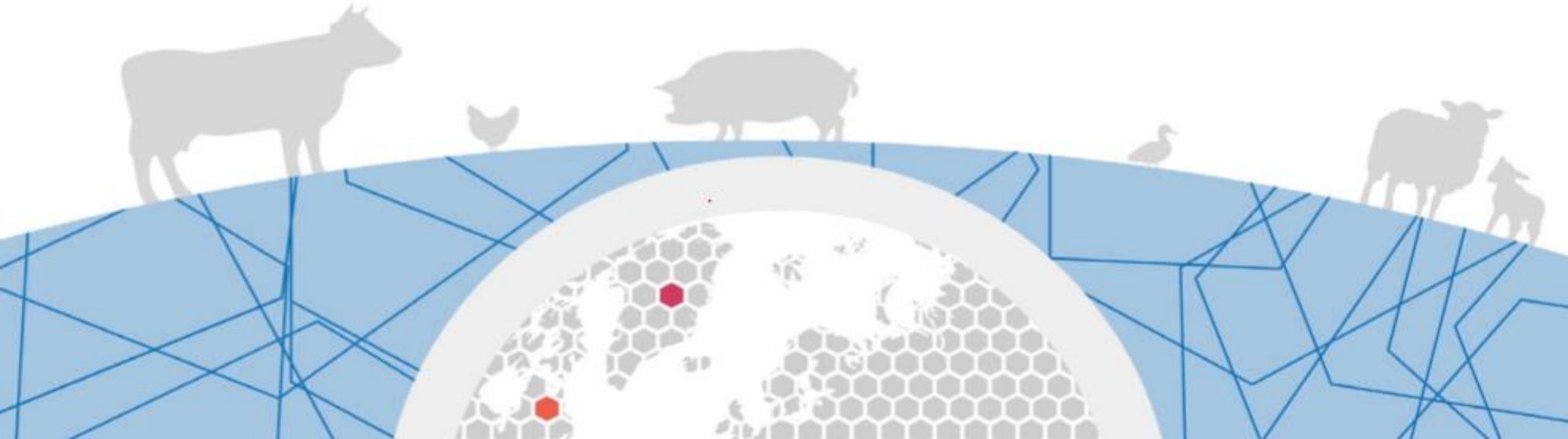


Building Sustainable Protein Supply Chains

The investment case for action

Italian SIF Event, May 9, 2018

Maria Lettini, Director



The four investment risks of intensive farming

Intensive farming may bring short-term profit but contributes to long-term losses



Threatens human health

#1 user of antibiotics worldwide



Contributes to climate change and pollution

Livestock production emits 14.5% of global GHGs – more than the transport sector



Endangers food security

Land used for animal feed could produce food for 4 billion people



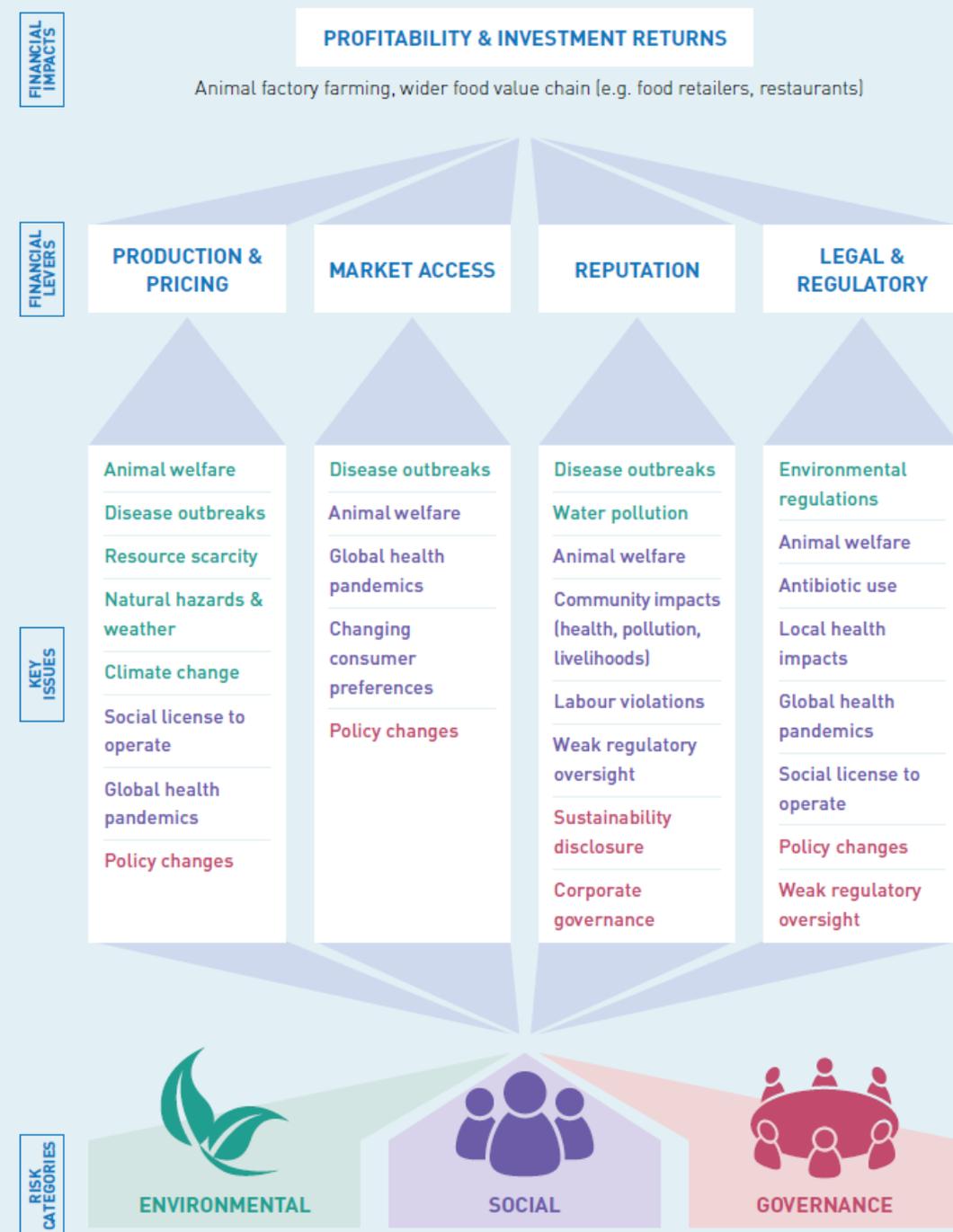
Consumes scarce environmental resources

#1 user of freshwater #1 cause of deforestation

Rotten meat scandal in 2017 impacts share price of world's largest meat producers



- \$3+ billion market value destroyed
- IPOs cancelled
- Fines upwards of \$3 billion
- Access to capital markets financing compromised



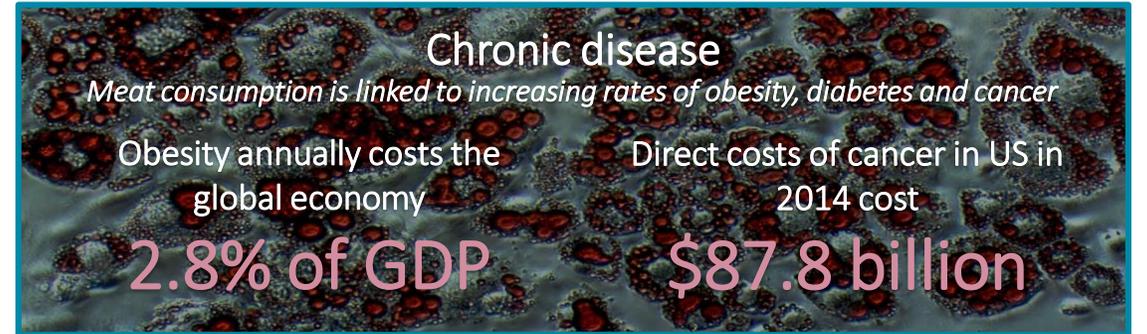
Health risks of intensive farming

Factory farming proliferates pathogens, damages our environment and supplies a substandard food source



Antimicrobial resistance
Making common infections increasingly harder to treat

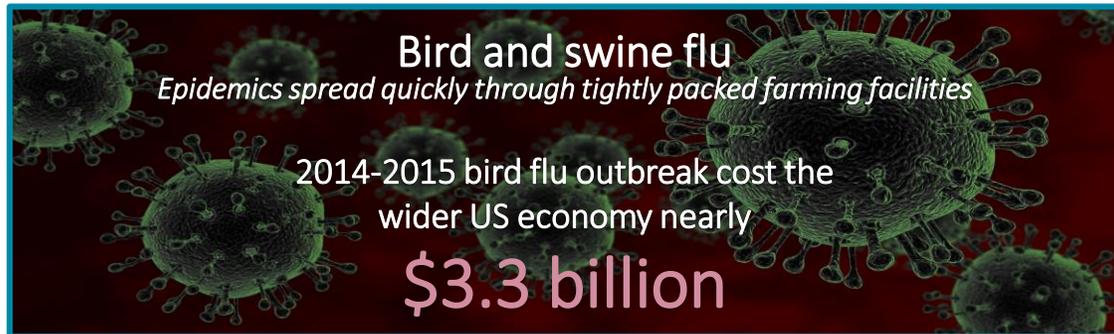
Loss in global output set to cost
\$100 trillion
by 2050



Chronic disease
Meat consumption is linked to increasing rates of obesity, diabetes and cancer

Obesity annually costs the
global economy
2.8% of GDP

Direct costs of cancer in US in
2014 cost
\$87.8 billion



Bird and swine flu
Epidemics spread quickly through tightly packed farming facilities

2014-2015 bird flu outbreak cost the
wider US economy nearly
\$3.3 billion



Environmental contaminants
Intensive farming has consequences for the quality of our air, water and soil

Air pollution alone costs the global economy
\$225 billion
in lost labour

For the food sector, FAIRR has identified four key drivers for protein diversification



Increasing

Regulatory/NGO interest in devising better nutritional and agriculture policies



Positive

Meat reduction is critical to address resource burdens and achieve SDGs



Extensive

Greater consumer demand for “clean” diets



High

Plant-based innovation is accelerating for better taste and texture profiles

Why should investors engage to transform protein supply chains?

RISKS

Reduce exposure to critical ESG risks in animal protein production and consumption.

Respond proactively to advances in food technology innovation that can disrupt the industry.

OPPORTUNITIES

Leverage mainstreaming of plant and alternative protein consumption trends.

Drive portfolio de-carbonisation by reducing reliance on carbon-intensive proteins.

MEETING THE WORLD'S DEMAND FOR PROTEIN SUSTAINABLY IS CRITICAL TO ACHIEVING THE SDGS

2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

6 CLEAN WATER AND SANITATION

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

14 LIFE BELOW WATER

15 LIFE ON LAND

Companies are embracing alternative proteins to drive growth

Acquisitions

- Large food companies are acquiring plant-based and alternative protein companies to expand their offering of non-meat proteins

Example:

- Danone's \$12.5 billion acquisition of WhiteWave, a global manufacturer of branded plant-based foods and beverages.

Venture investments

- Established players have launched venture capital units to buy into, learn from, and eventually help scale up potentially disruptive start-ups offering innovative alternative protein products.

Example:

- Tyson Ventures' 5% stake in Beyond Meat, manufacturer of plant-based meat substitutes.

Product development and R&D

- Across the food value chain, companies are looking to generate growth through innovation and product development within their legacy brands and by creating new product offerings.

Example:

- Unilever's collaboration with Givaudan, Ingredion and the University of Wageningen to develop a plant-based steak using 'shear cell' technology.

Engagement 1: building sustainable protein supply chains

57 institutional investors with nearly \$2.5 trillion AUM

About the engagement

- Targeting **15 international food companies** and looking add up to an **additional 10 new companies** in the next phase
- Reducing exposure to the **material risks** of the livestock industry
- Highlighting the **opportunities** presented by the growing market for plant-based proteins

Current status – Open to new investors

- All companies but one responded; second round of engagement ongoing
- Engaging with companies to develop a metric-driven approach to protein diversification



Engagement 2: routine use of antibiotics in the supply chain

About the engagement

- 76 institutional investors representing over \$2.5 trillion AUM
- Targeting 20 global fast food companies
- Asking companies to phase out the routine use of antibiotics in global supply chains
- Reduces risk linked to antibiotic resistance, which could cause up to \$100 trillion in losses to global economy by 2050

Companies



Investors



Thank you

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