Canada's Agri-Food Moment



Canada 2020



The agri-food industry has a massive economic, social, and environmental footprint

\$12tr

Size of food and agribusiness sales across the value chain globally

10%

Food share of global consumer spending

30%

Proportion of greenhouse gas emissions related to agriculture

40%

Share of worldwide employment in agriculture (including 70% of the "bottom billion")

70%

Share of worldwide water consumption used by agriculture

80%

Share of undernourished population that live in rural areas

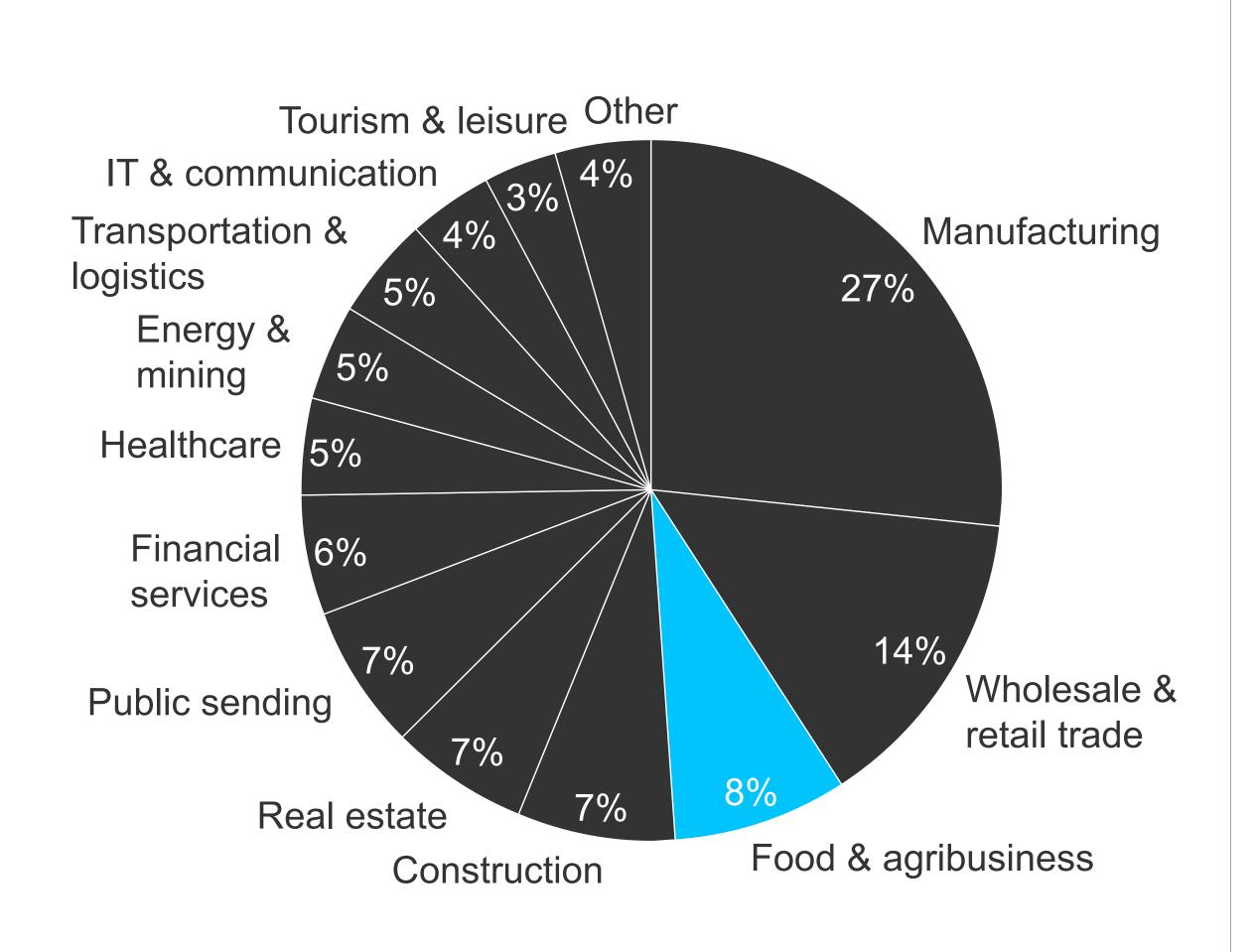
10,000

Years of historical **food production** that must be matched in the next 40 years

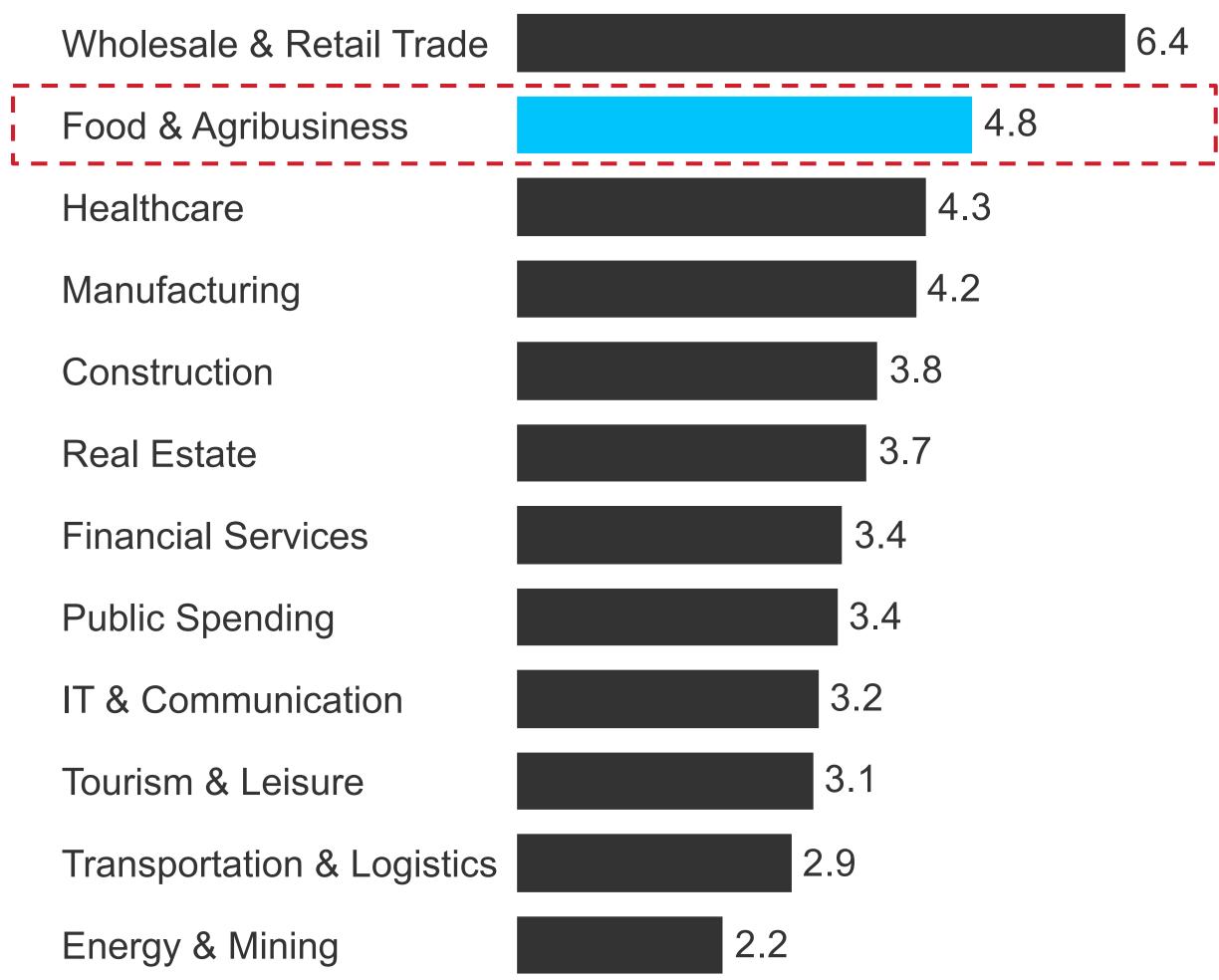


Agri-food is a major industry globally, representing 8% of global GDP and is growing rapidly to meet demand

2017 total global output



10-year trailing CAGR by sector (percent)



SOURCE: IHS Global Insight Industry Database. April 2017.

However, the agri-food sector is also facing several supply-side constraints

1 Water

40% deficit expected by 2030

2 Land

Over 20% of arable land already degraded; require additional 175-220 million hectares of crop land to meet the 2030 demand (11-14% increase)

3 Climate change

Could lead to 3-16% lower productivity by 2080

4 Productivity

Has steadily declined since the 1960s (2.2% average annual yield increase) to today (1.2%)

5 Energy

Over 50% of cash costs are fertilizers and fuels (63% for U.S. corn production)

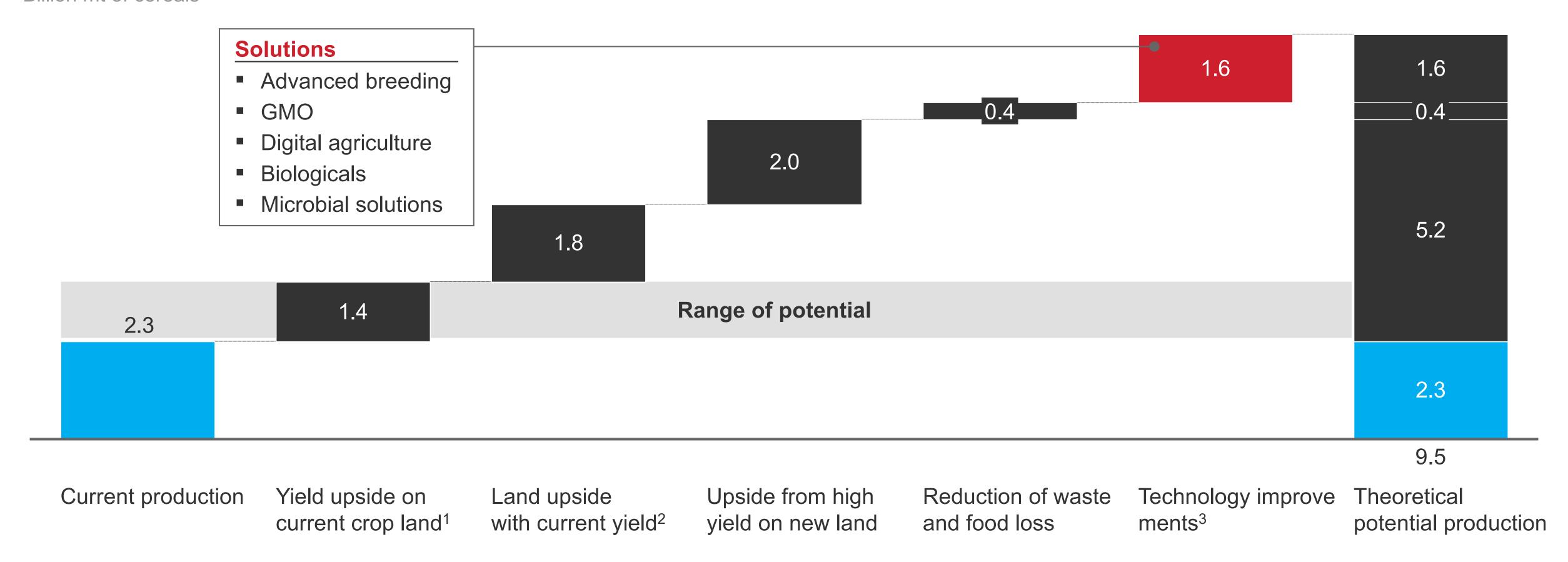


SOURCE: FAO World Food and Agriculture to 2030/2050; FAO Expert Meeting on How to Feed the World in 2050; Sage; PEAT; USDA; UNEP; World Feel Resource Revolution, McKinsey

Meeting future global demand will require investment in a combination of yield improvements, land expansion and loss reduction

Production potential

Billion mt of cereals



¹ Yield upside is estimated as the difference between current yield and IIASA estimated potential yield, where this is higher

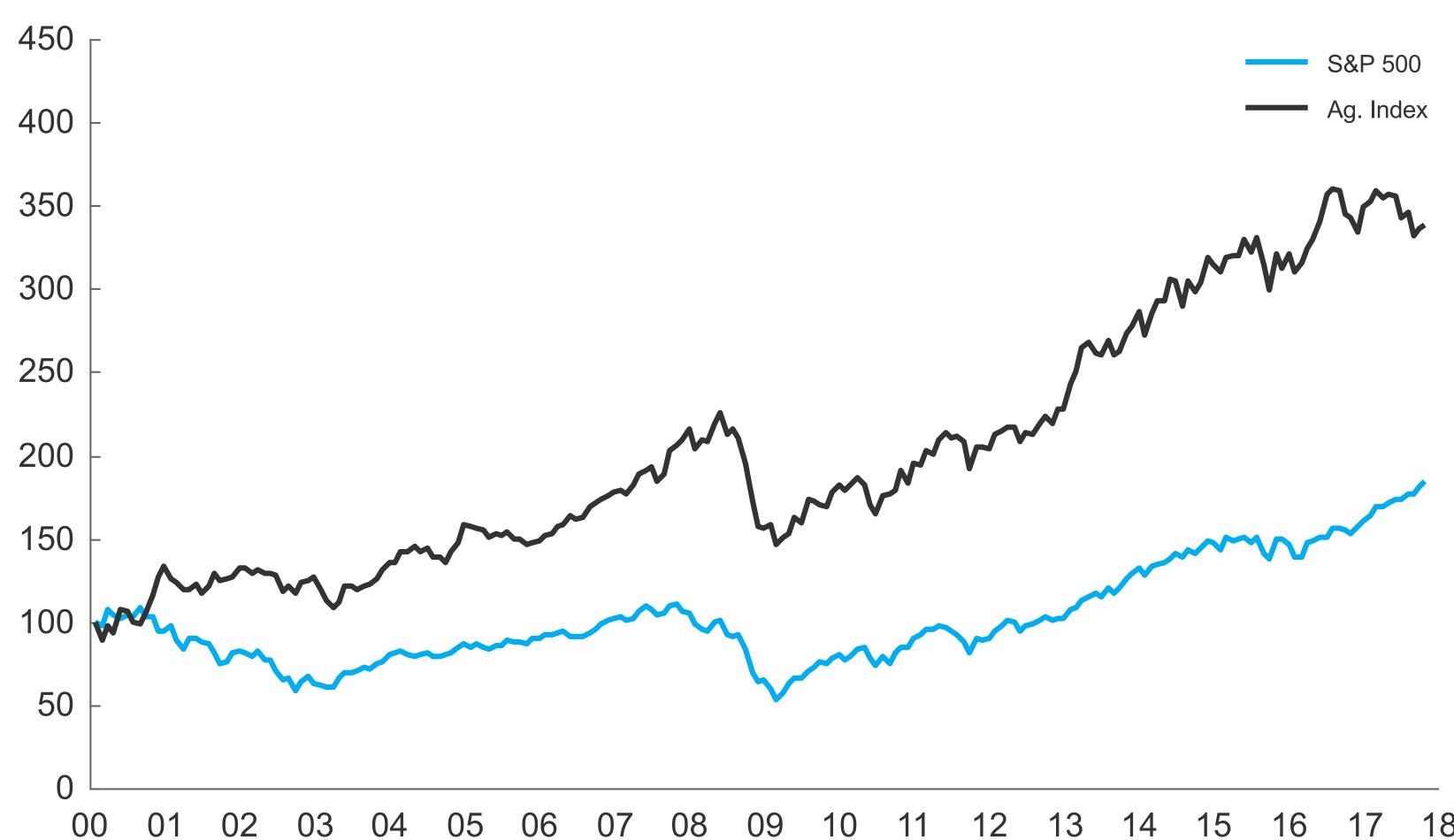
² Land upside is based on IIASA estimated available land, reduced by 30% to account for needs in infrastructure, wood land etc,

³ Technological improvements are based on a IIASA maximum yield increasing by 1.2% a year in developed countries and 0.6% elsewhere

The broader agriculture sector has outperformed the market historically

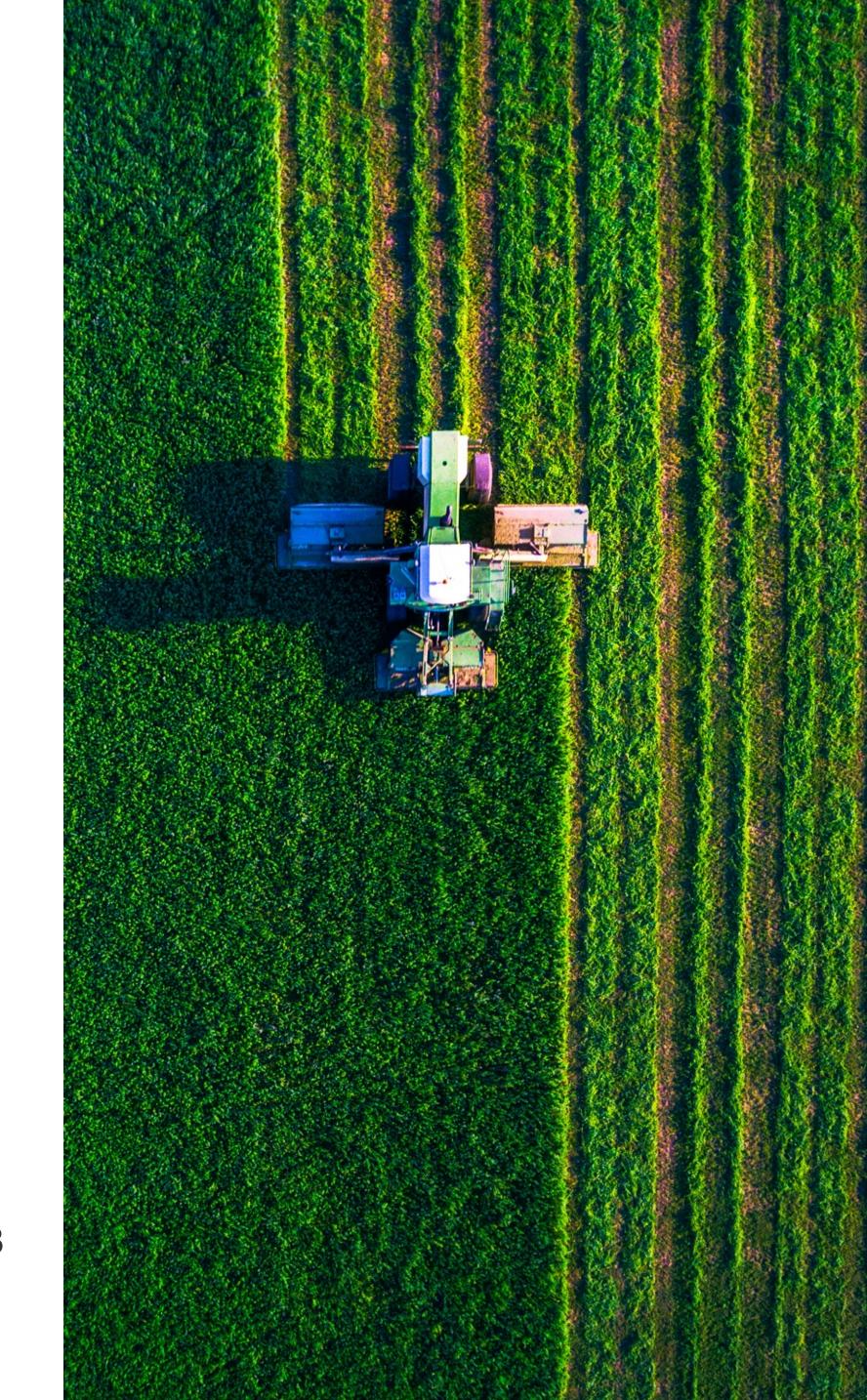
Evolution in the agriculture industry vs broader market¹

USD, Indexed, Jan 2000



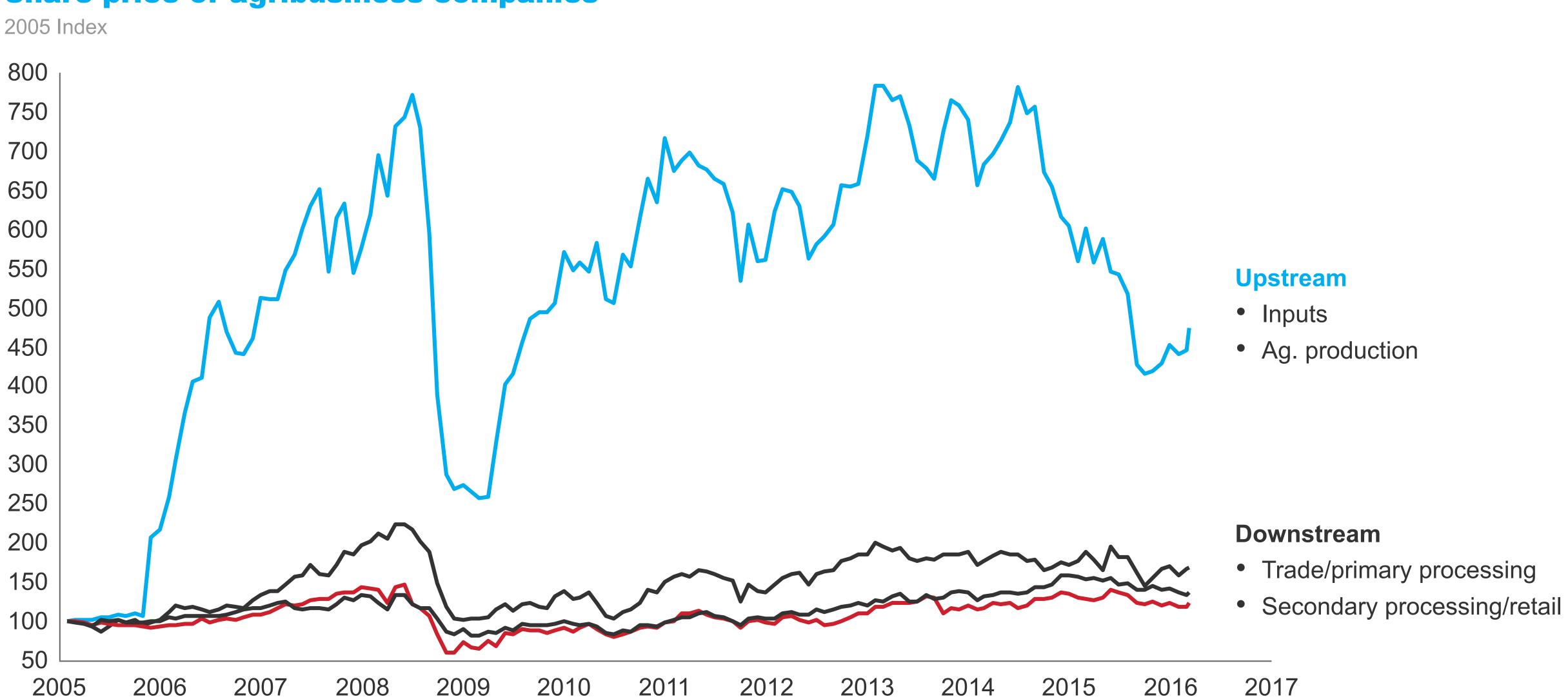
¹ Ag index based on MSCI Agriculture & Food Chain Index

SOURCE: Bloomberg



Upstream players have outperformed downstream firms since 2005

Share price of agribusiness companies¹

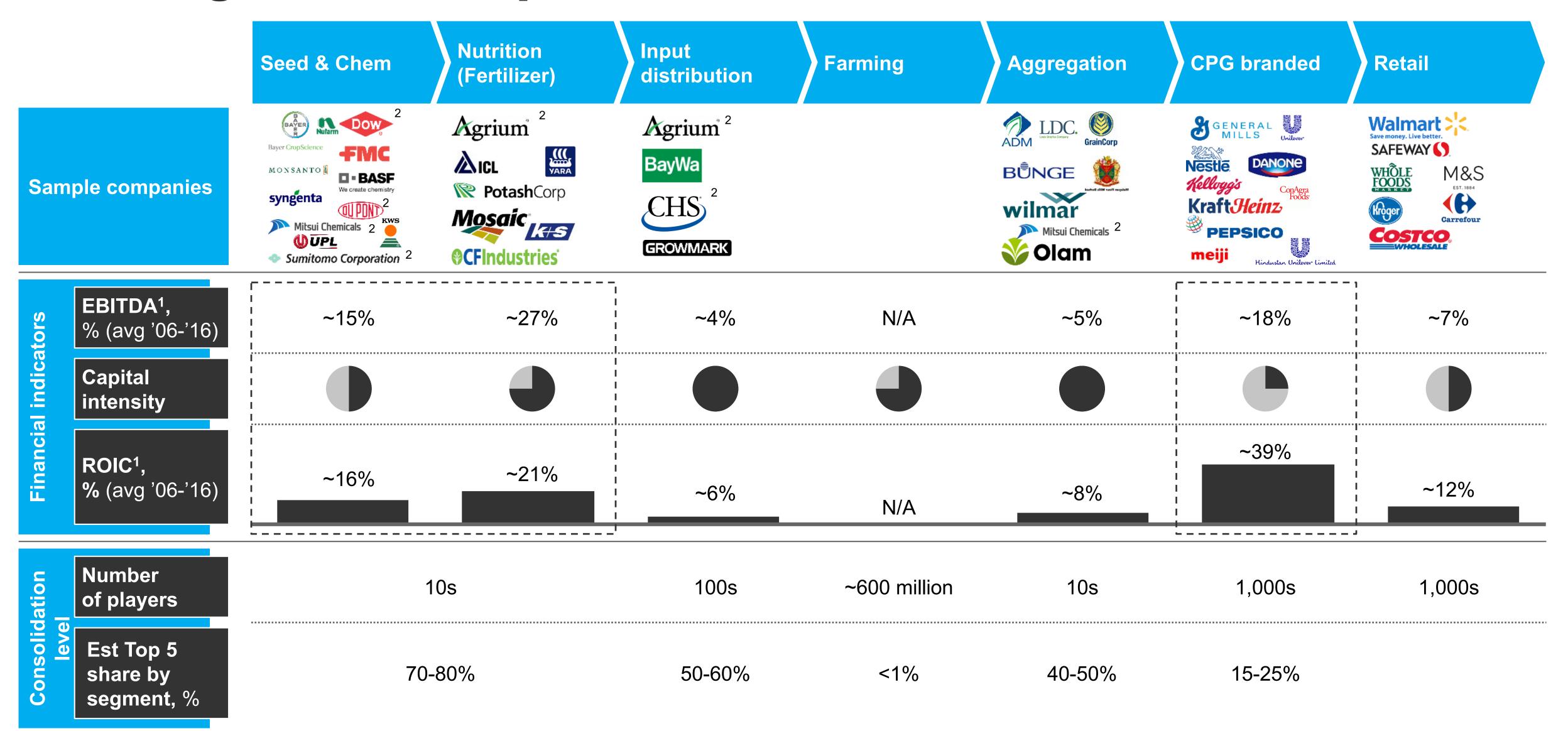


¹ Sample of Agribusiness companies based on custom index created by McKinsey

SOURCE: Capital IQ, McKinsey analysis

Global Ag value chain performance





¹ Average financial performance for publically traded companies for 2006-2016

SOURCE: CAP IQ, Team analysis

² Includes financials for only the relevant businesses in each segment

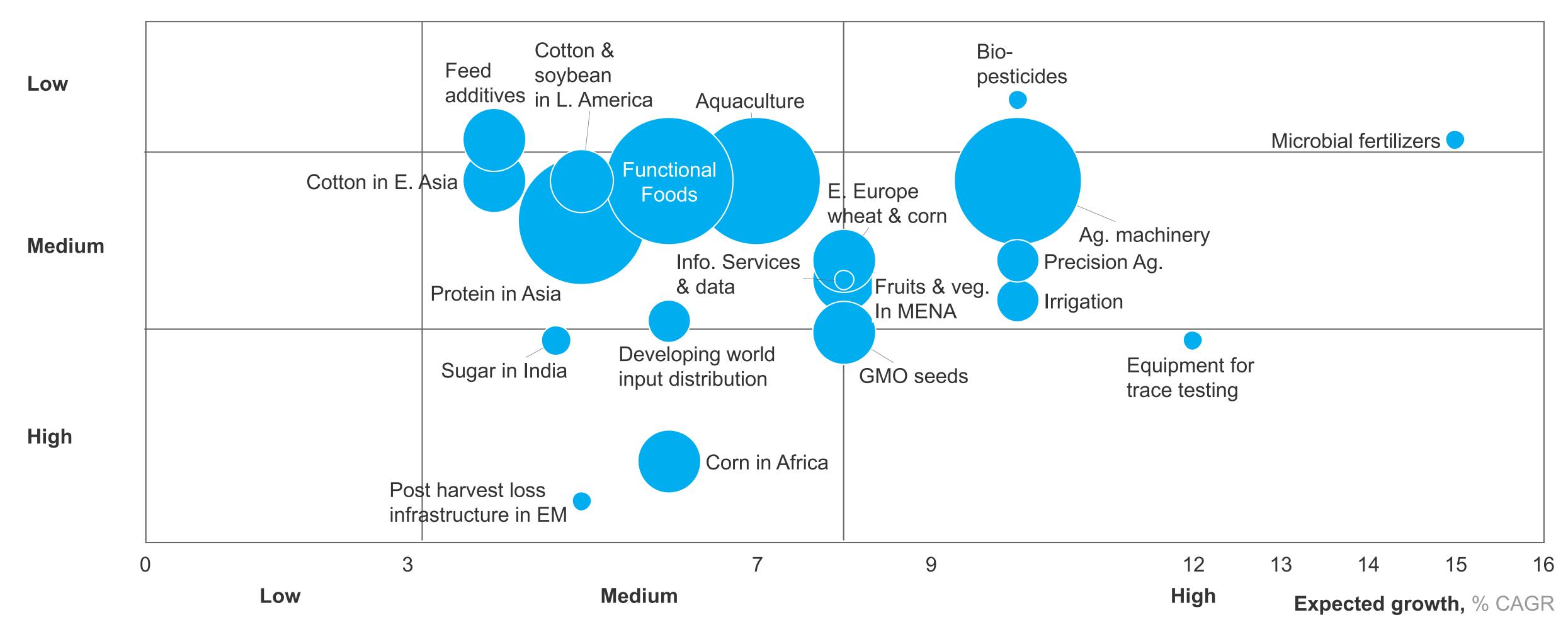
Ag 2025 hotspots

>50 Market size \$ billions

Opportunity matrix

Risk to outcome

Index



¹ Growth: <3% low; 3-7% medium; >7% high; Risk; number obstacles across geopolitical, regulatory, technology and execution risk 2 Additional hotspots not mapped: 8 - private label in emerging markets, 19 – solutions to land scarcity, 29 - futures and risk management

SOURCE: McKinsey analysis

We are poised to capture this opportunity - Canada's endowment

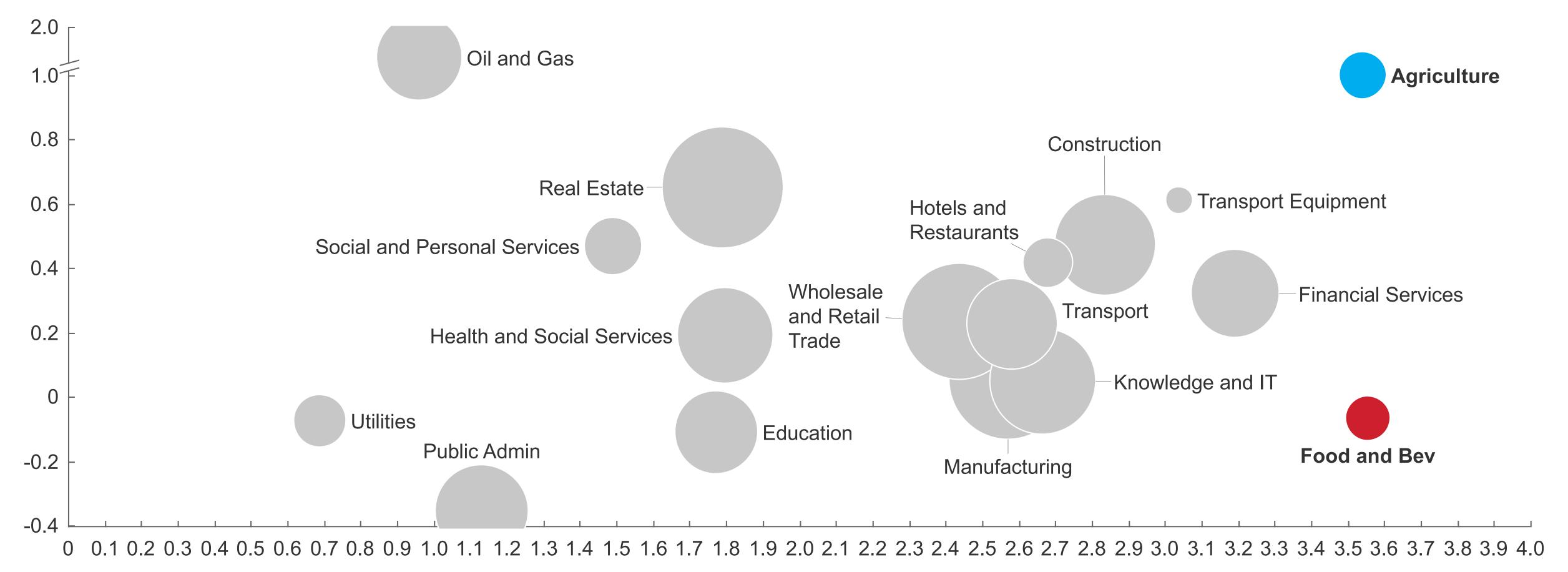
- Abundant natural resources (e.g. freshwater, long coastlines suited to aquaculture, least densely occupied arable land in the world)
- 2 Strong network of R&D facilities and universities
- Sophisticated, ethnically diverse consumer base that stimulates product development
- Early adopters of technology
- Reliable access to capital and inputs (e.g., fertilizers, feed, seeds)
- 6 Lowest use of pesticides per-hectare
- Political stability and goodwill that encourage foreign investment



Agriculture has been our growth star over the past five years

Canada's sector growth momentum relative to global trends, 2010-15

Canadian success in capturing sector growth¹, Canadian GDP growth / global GDP growth



Global sector growth¹, GDP growth, %

SOURCE: IHS Global Insight

Agri-food is Canada's number one job creator ...



Natural resources

Canadian "core strength" sectors	Employment contribution Million jobs, 2015	GDP contribution %, 2015
Agri-food	2.10	6.7
Manufacturing	1.70	10.51
Education	1.00	13.7
Energy and renewables	0.95	6.8
Tourism	0.63	2.0
Forestry	0.30	1.3
Financial services	0.78	5.2
Mining	0.06	3.5

¹ Export-intensive sectors with strong GDP contribution and/or comparative advantages





Widely dispersed across rural and urban areas, these jobs are a force for economic inclusion... the sector has also proven to be a strong employer of New **Canadians** across the value chain

> **Advisory Council on Economic Growth**

However, there a few major barriers to growth

Underdeveloped value chain

- Only processes 50% of agriculture output
 - Lack of investment in processing infrastructure

Low productivity

- Unable to achieve economies of scale on farms in some sub-sectors
- Deployment of productivity-enhancing technologies limited by rural internet bandwidth
 - Government spending primarily on risk management rather than productivity enhancing investments

Trade barriers

- Lack of preferential trade agreements with 3 of 5 biggest potential export markets (China, India, and Japan)
 - Comprehensive Economic and Trade Agreement with EU yet to be fully implemented

Regulation

• Growing regulatory obstacles to trading with the U.S. have added substantial burdens to agri-food companies in the last decade

There are four building blocks to our agri-food growth strategy

Set an ambitious aspiration

Increase annual agri-food exports by US \$30 billion over the next 5-10 years to become a Top 3 agri-food exporter

2 Launch a few bold pilots

Signature initiatives that large and small players can rally behind across key sub-sectors

3 core recommendations in agriculture sector

Specific initiatives to broaden trade agreements, develop infrastructure, enhance immigration and FutureSkills Lab, and accelerate innovation

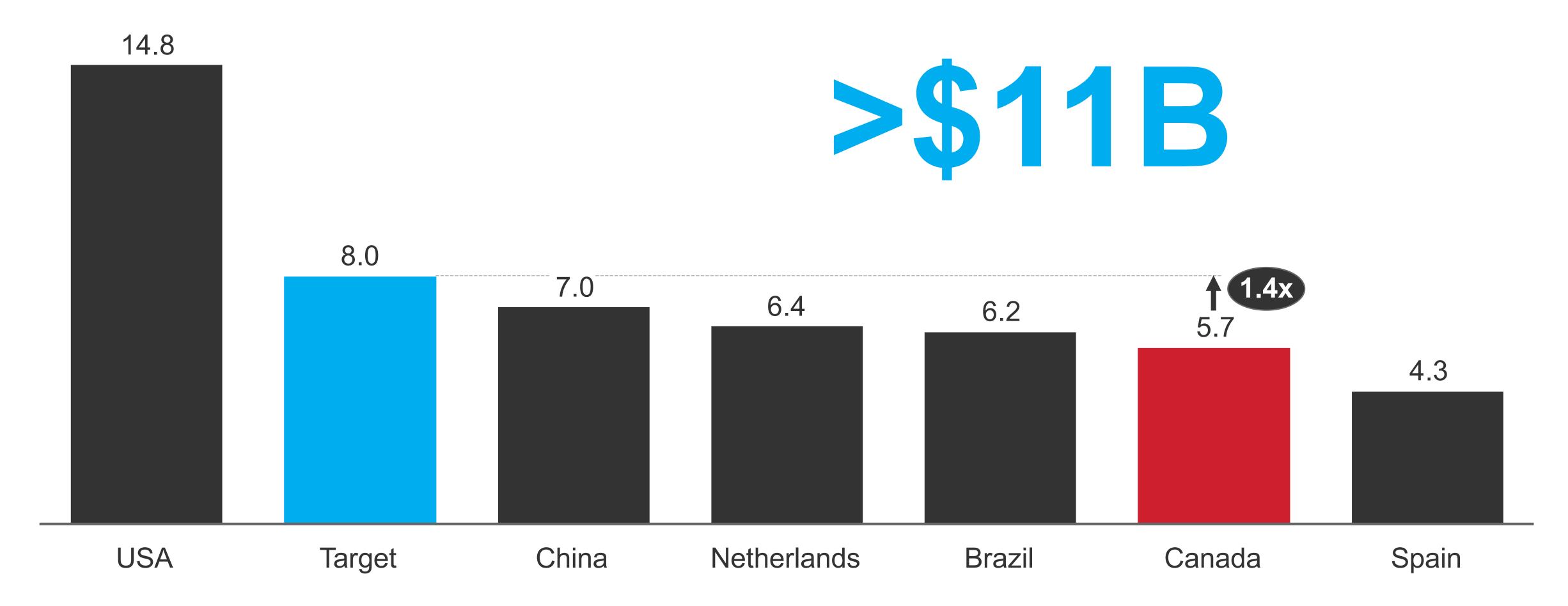
4 Public-private collaboration

Rally private sector and government to work together to drive growth

Potential aspiration for agricultural product exports

Exports of agricultural products¹, 2015

Share of global agricultural exports, %



Canada could target at least an 8 percent global market share in agricultural products by 2027

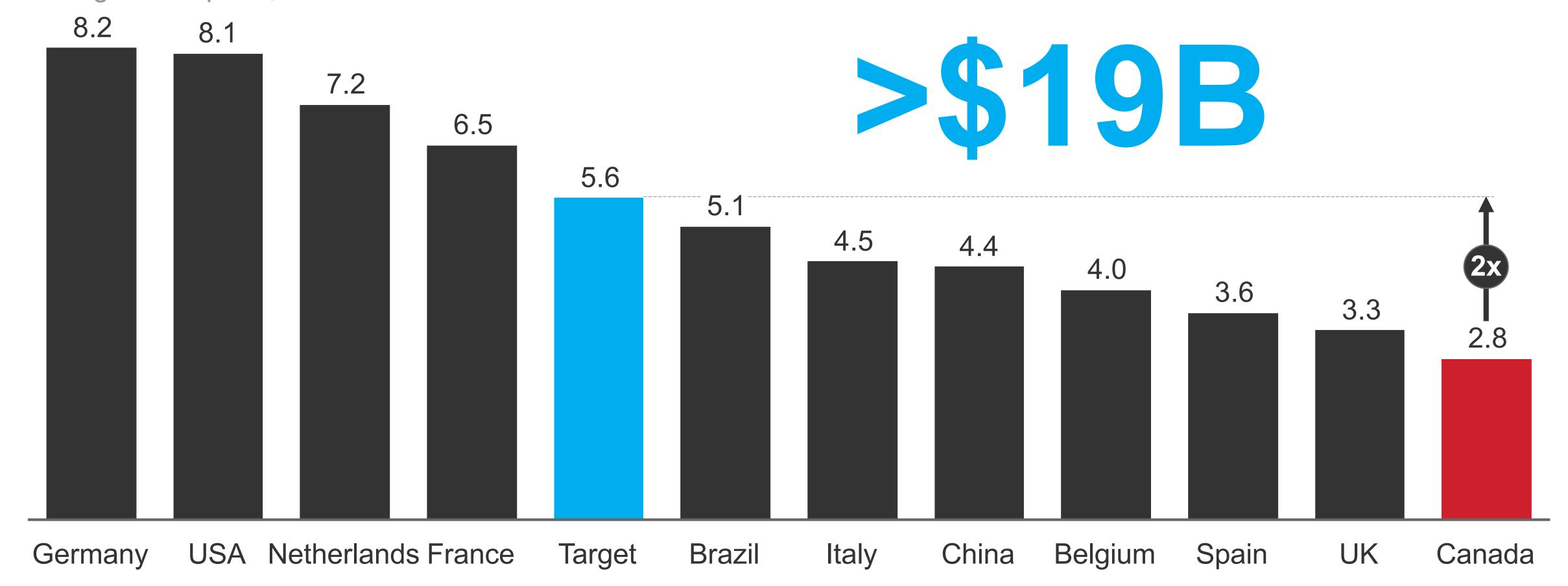
1 Agriculture trade defined as live animals, aquaculture), live plants, edible vegetables, edible fruit, cereals, oilseeds, veg plaiting

SOURCE: Advisory Council for Economic Growth

Potential aspiration for exports of agri-food products

Exports of agri-food products¹, 2015

Share of global exports, %



Canada could aim to at least double its share of processed food exports by 2027

SOURCE: World Trade Organization 23

¹ Agri-food trade defined as dairy, coffee, milled products, lac, gums and resins, fats, preparations of meat, sugars, cocoa, preparations of cereals, preparations of vegetables, miscellaneous edible products, beverage