

MARKET OPEN



Ringling the opening bell of the LSE June 2014

London
Stock Exchange

Gabriel Thoumi, CFA, FRM, LEED AP

Gabriel Thoumi, CFA, FRM, is Director of Financial Markets, Planet Tracker; Chair, 2 Degrees Investing Initiative US Board; and Adjunct Johns Hopkins University.

He is a global investment research manager specializing in sustainability and environmental, social, and governance (ESG) issues. He has 15 years of experience with extensive technical knowledge on integrating scientific and ESG data into financial models to determine pricing signals and asset allocation strategies. He has participated in many successful funds including green bond funds, water funds, renewable energy funds, and others.

He was co-winner of the 2015 Global Innovation Lab for Climate Finance. He has written hundreds of investment research articles and spoken at hundreds of events.

He has an MBA and MSc from the University of Michigan where he was a Consortium and Erb Institute fellow. He has taught ESG Integration since 2010 as a lecturer or guest at 7+ universities.

He has been a member of Arlington County E2C2 since 2013 and ACPAC since 2016.

Institutions I Have Engaged (sample)



The Ecological Society of America



2 Degrees Investing Initiative



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Aligning financial markets with climate goals

Working globally with offices in Paris, New York, Berlin, and London, we coordinate the world's largest research projects on climate metrics in financial markets.

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2 Degrees Investing Initiative

[BlackRock's Larry Fink on Climate Change Risk](#)



2 Degrees Investing Initiative: MWCOG Tool Available for Free

Paris Agreement Capital Transition Assessment (PACTA)

TOOL

PACTA

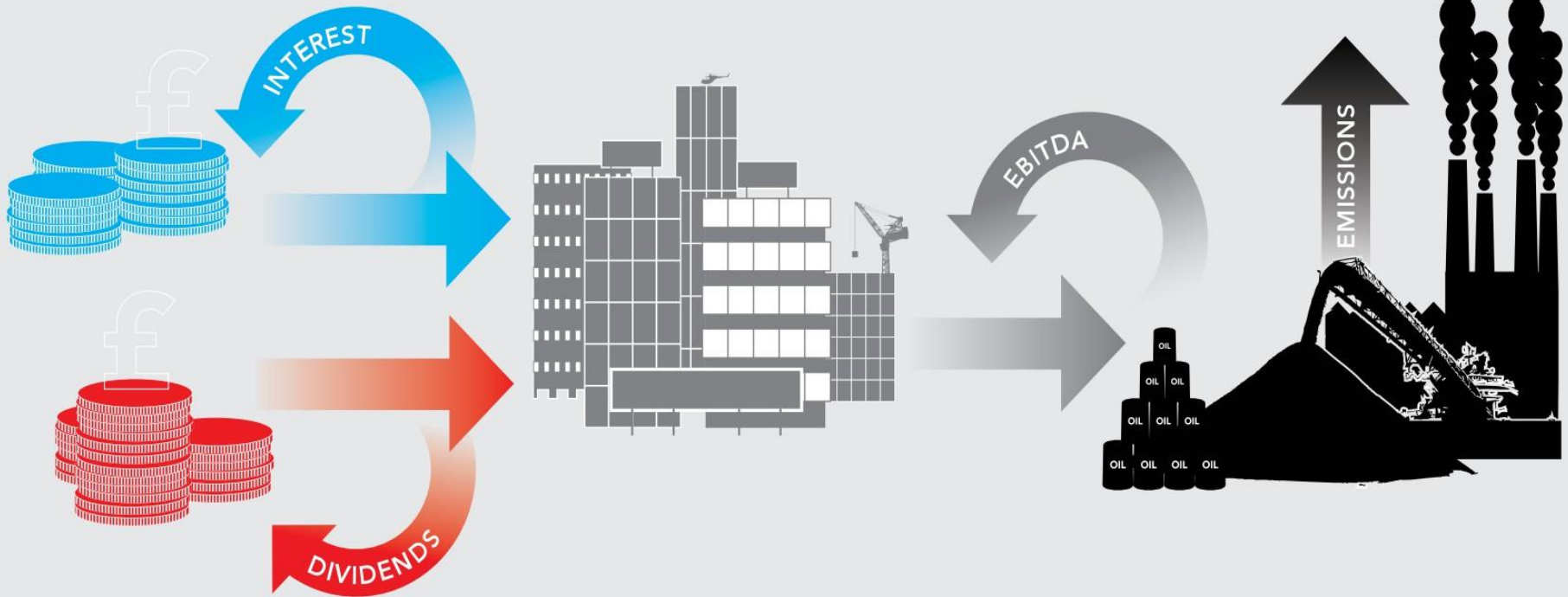
FINANCIAL INSTITUTIONS

INSURANCE

[ALL TAGS](#)

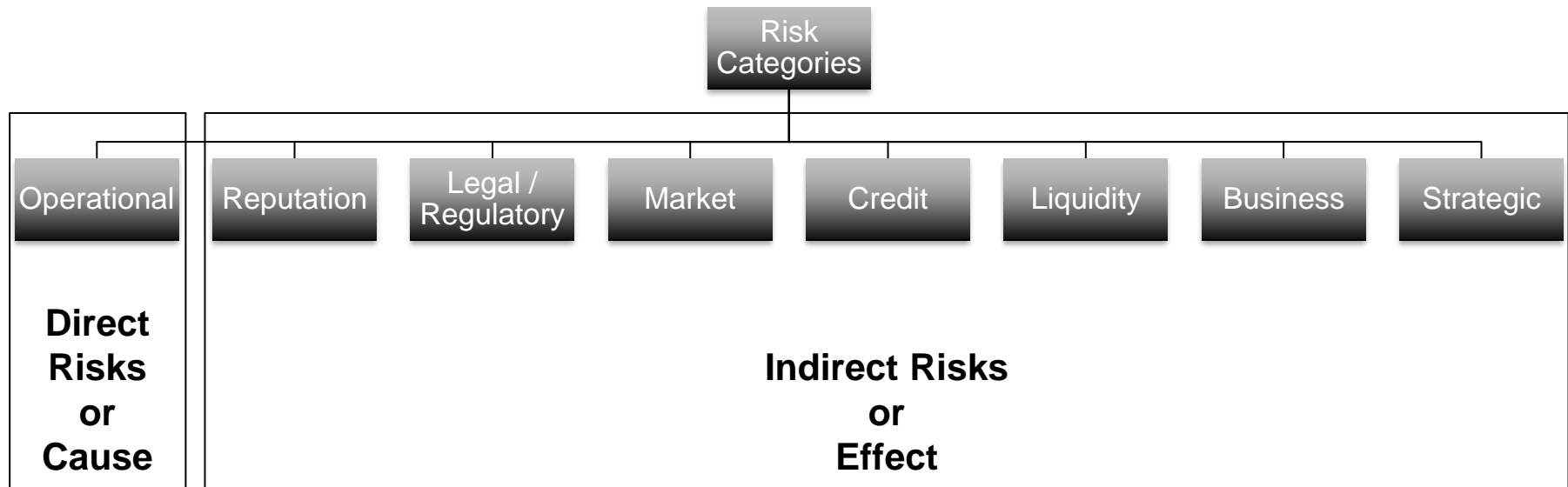
PACTA is a free, first-of-its kind software that analyzes the alignment of equity, bond, or lending portfolios with various climate scenarios.

Finance can Influence Externalities



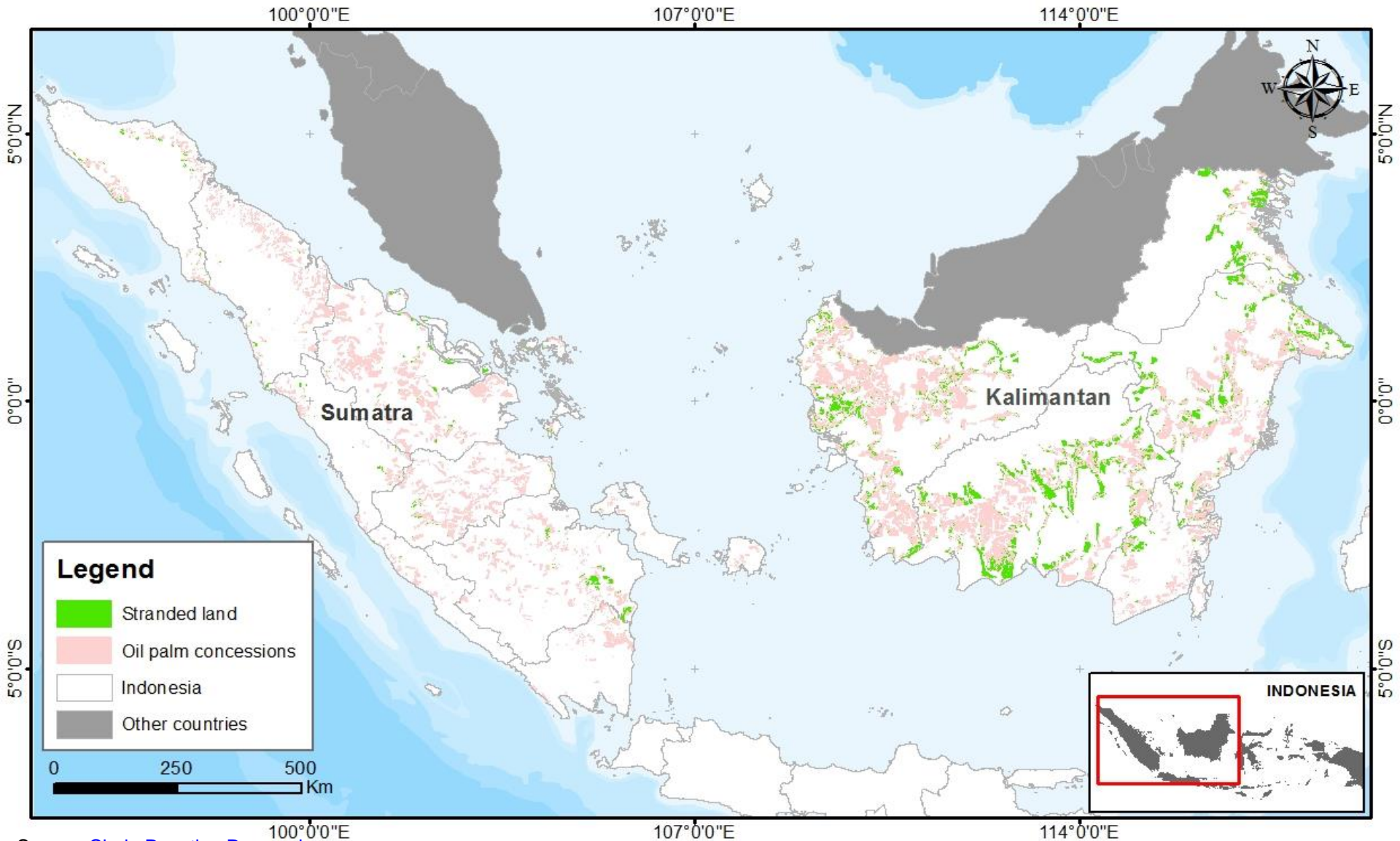
Examples

RISK STARTS IN OPERATIONS, THEN MATERIAL FINANCIAL RISKS



- Operational risks are direct, and other seven risks are indirect
 - *“Cutting trees illegally, accounting fraud, lying to auditors, misusing public funds, cross-boarding, or harming people is a direct operational risk”*
- Risk control is imperative, drives financial results
- Executive and board of directors risk management is key to equity performance
- Global Association of Risk Professionals’ (GARP) model (above)

PALM OIL STRANDED ASSETS IN INDONESIA: 3% LAND “STRANDED ASSETS”



EXAMPLE: MATERIAL FINANCIAL RISKS 2016-17

Operational Risk: Sime Darby grows oil palm on 4% of 220K ha Liberian plantation due to 55 communities concerns, **Q2 '17 \$48 million impairment**

Reputation Risk: JBS caught with 59K cattle from illegal deforested properties, bribed food inspectors, other issues, **Cancels Q2 '17 IPO of international division, shares down 35%**

Legal / Regulatory Risk: Felda Global Ventures violates RSPO rules and laws with illegal deforestation on 2K ha, **\$5 million restoration liability equals Q2 '17 net income**

Market Risk: Sawit Sumbermas Sarana violates Unilever's deforestation policy, Unilever ceases procurement Q2 '17, **Sawit loses 8% revenue, shares down 15% Q2 '17**

Credit Risk: Noble Group misstates palm oil assets value used for loan collateral, deforests 70K ha, **\$60 million impairment Q2 '17**

Liquidity Risk: IOI Corporation lost 27 corporate buyers after RSPO suspension because of illegal deforestation on 11,750 ha, **Q2 '16 earnings negative \$14.8 million**

Business Risk: United Cacao's illegal deforestation caused executive turmoil and fraudulent payments, then delisted by LSE, **investors lose \$42 million Q1 '17**

Strategic Risk: MP Evans fights off bid from KLK for Evans' RSPO certified plantations, Evans sells plantations for \$100 million at premium per ha, **shares up 58% Q4 '16 - Q1 '17**

Strategic Risk: Unilever achieves palm oil commitment, sells part of its palm oil business to KKR, KKR pledges 100 percent sustainable CPO by 2019, **sale initially priced at \$7B sold Q4 '17 at \$8B**

EXAMPLE: NOBLE GROUP IFRS 41

Deforestation risks are observed in financial accounting statements

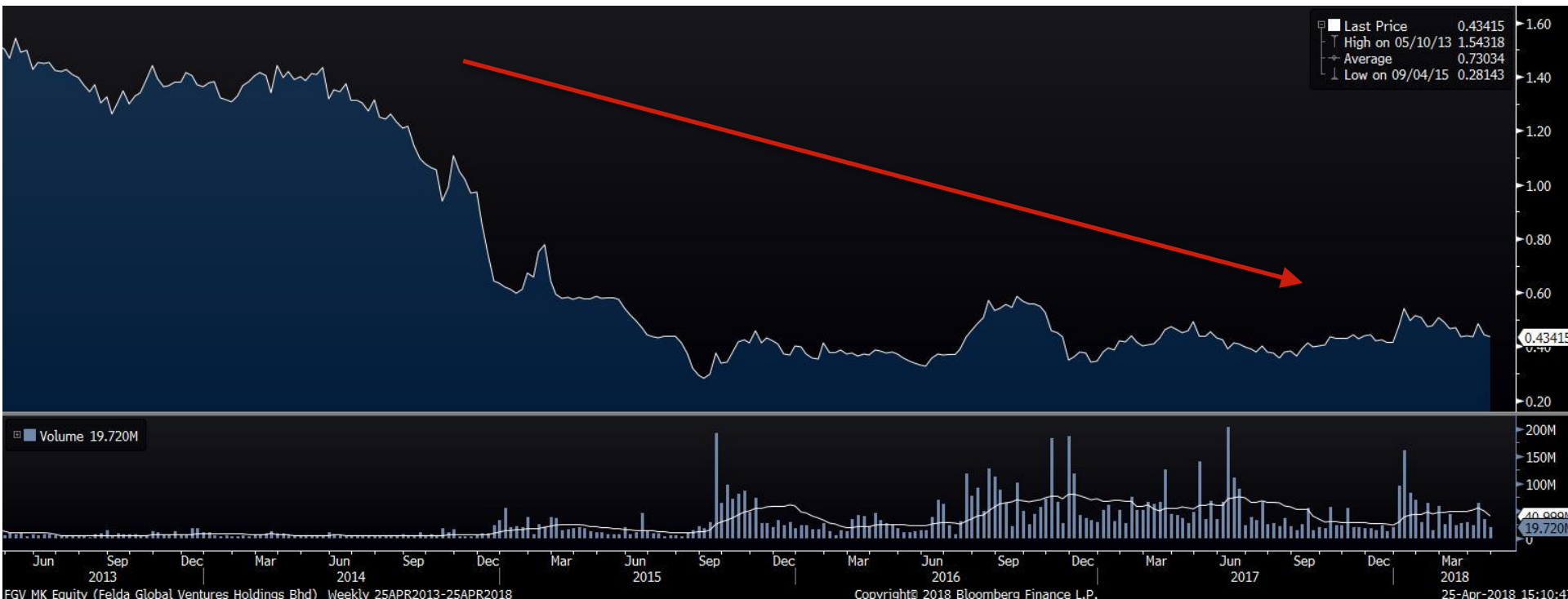
- Balance sheet
- Financial accounting errors
 - IAS 41 (biological assets) applied wrongly to increase value of 70,000 hectare concession; possibly fraudulently used as collateral by COFCO in loan from ABN AMRO
- The Chain: Noble Group's Palm Oil Investments Value Decreased by USD 60 Million



EXAMPLE: FGV HOLDINGS DEFORESTATION

Deforestation risks are observed in the Income statement, has long-term management risks

- Future expense associated with known alleged illegal deforestation
- Alleged 2,000 hectares illegally deforestation resulted in potential USD 5 million penalty under Roundtable of Sustainable Finance
- The Chain: Felda Global Ventures Stops Peat Clearance, Faces Potential Deforestation Liability Equal Q2 2017 Net Income

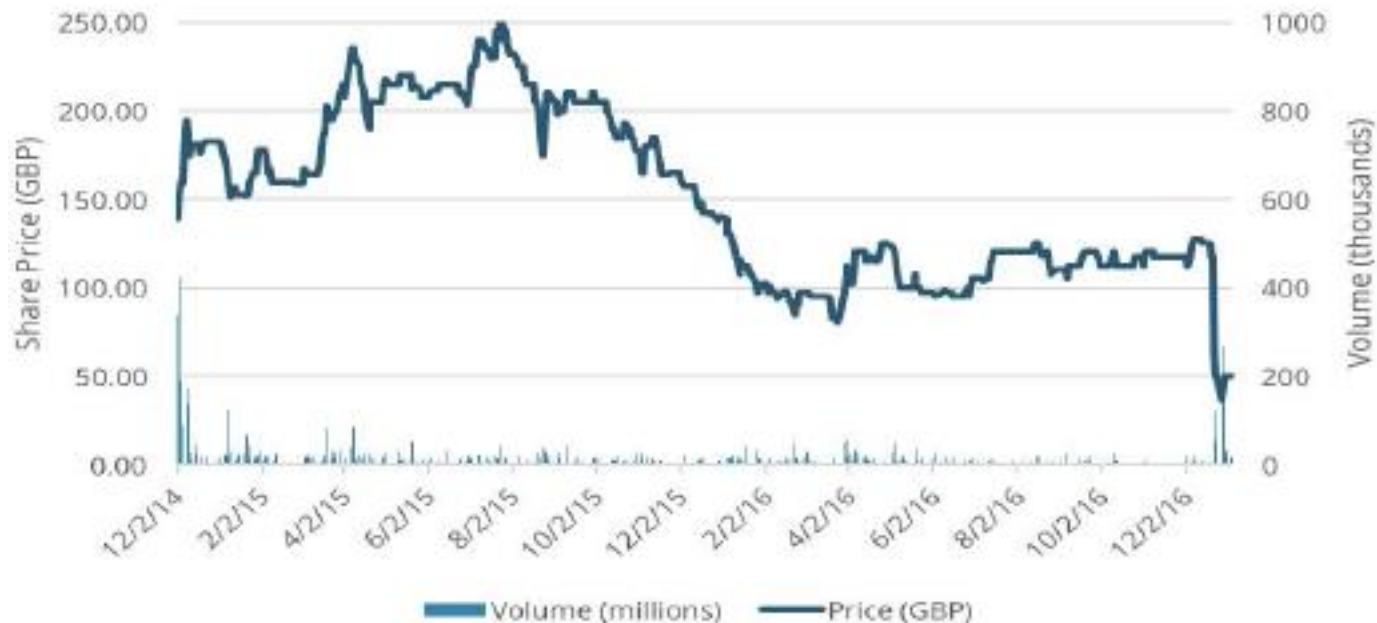


EXAMPLE: UNITED CACAO - CORPORATE GOVERNANCE

United Cacao's illegal deforestation was a leading indicator of the broader corporate governance issues, culminating in its winding-up in July 2017.

Its expansion plans conflicted directly with government regulations against deforestation - a risk the company itself identified in its bond issuance.

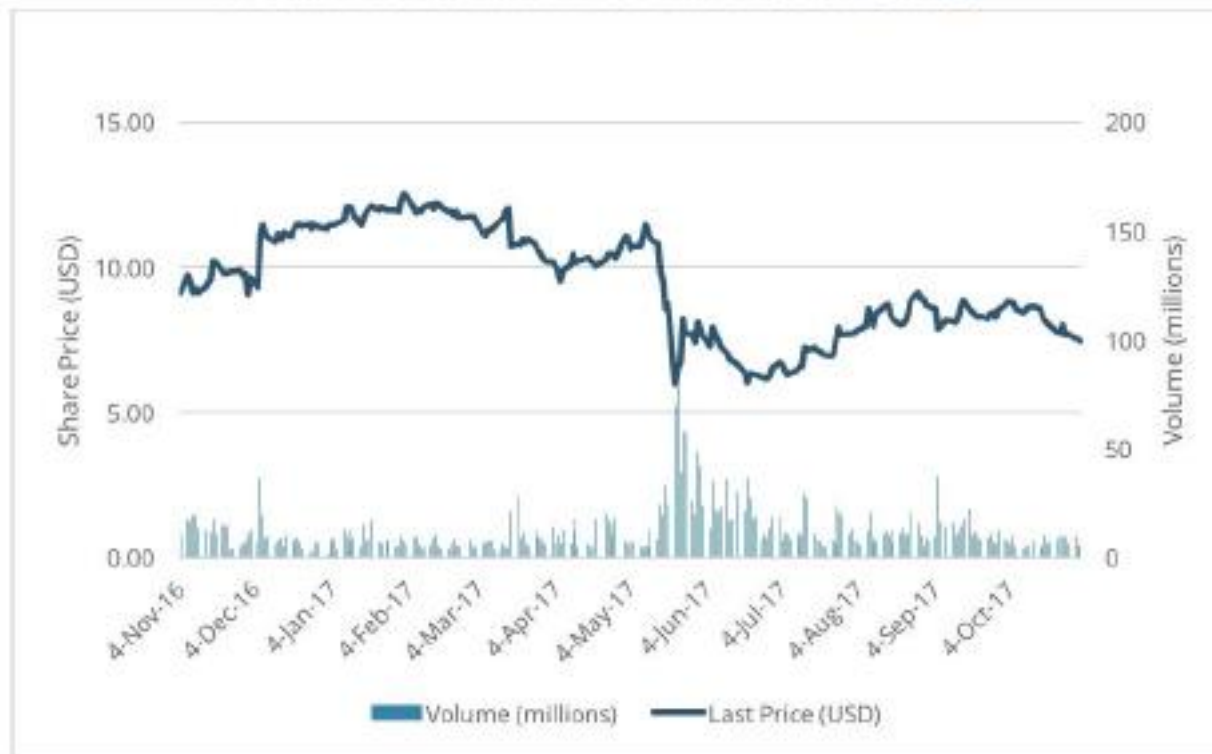
On January 4, 2017, United Cacao's nominated adviser resigned its role, leading to the suspension of trading of its equity on AIM and its bond on the NEX Exchange, and the delisting of United Cacao from the AIM on February 6, 2017.



EXAMPLE: JBS - CORPORATE GOVERNANCE

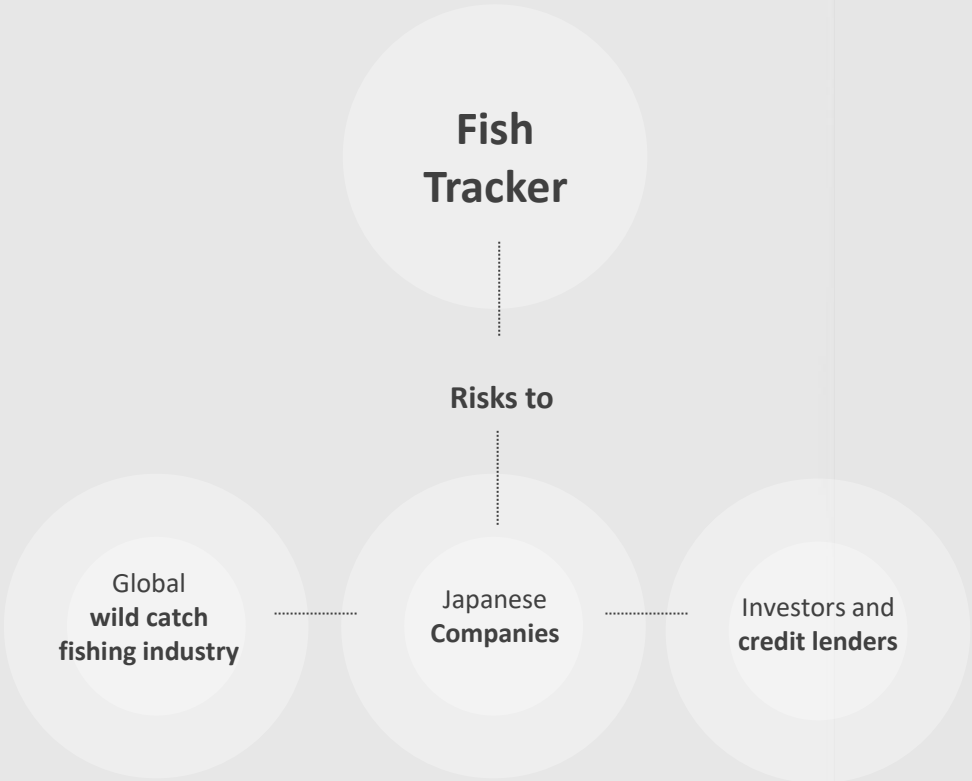
The case of JBS demonstrates the cascading effect of uncovering actions that generate reputational risk.

Investigations by Brazilian authorities into JBS have produced accusations of bribery, financial and accounting violations, labor standards and illegal deforestation. The accusations of deforestation provided additional reasons for investors and trading partners to be suspicious of JBS' reputation. The cascade of scandals forced JBS to delay its initial public offering (IPO) for its foreign operations through JBS Foods International.



EXAMPLE: WILD-CAUGHT FISH

Perfect Storm



THE SCALE OF THE CHALLENGE



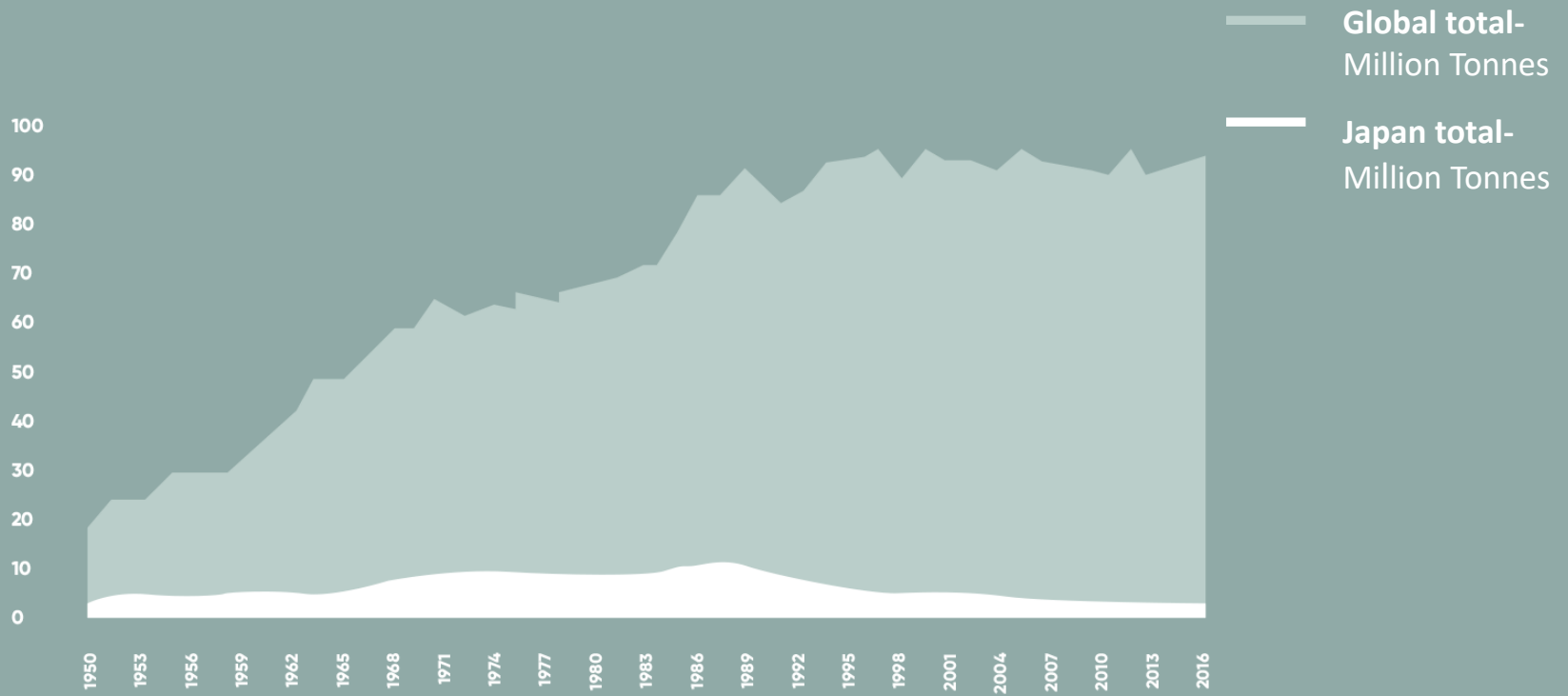
JAPAN

A LEADING GLOBAL FORCE

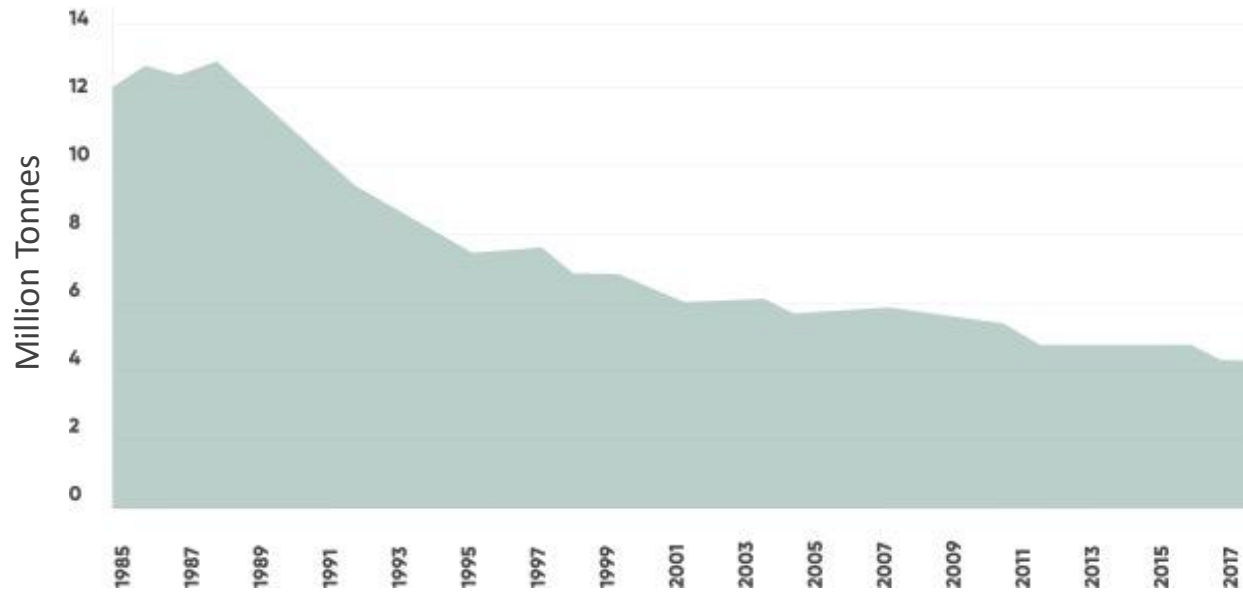
#1



Wild-catch Fish Catch (Million Tonnes)



DECLINING JAPANESE SEAFOOD PRODUCTION



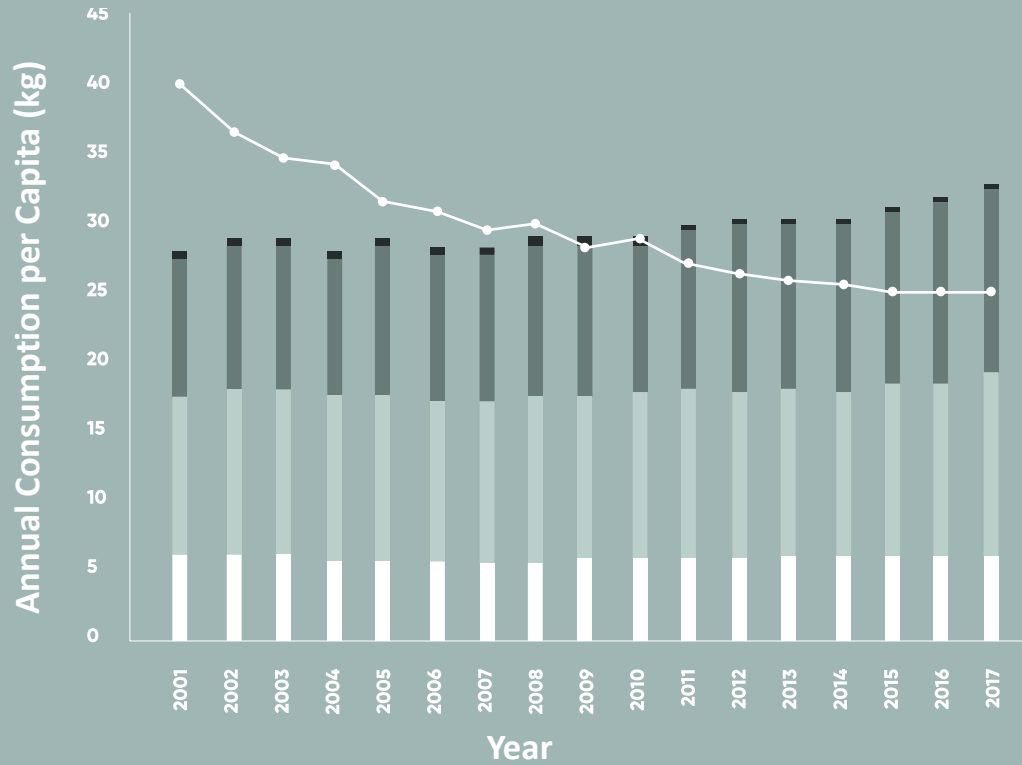
70%

OF JAPANESE SEAFOOD
IS IMPORTED



MEAT CONSUMPTION SURPASSED FISH IN 2011

- Fish
- Other Meat
- Chicken
- Pork
- Beef

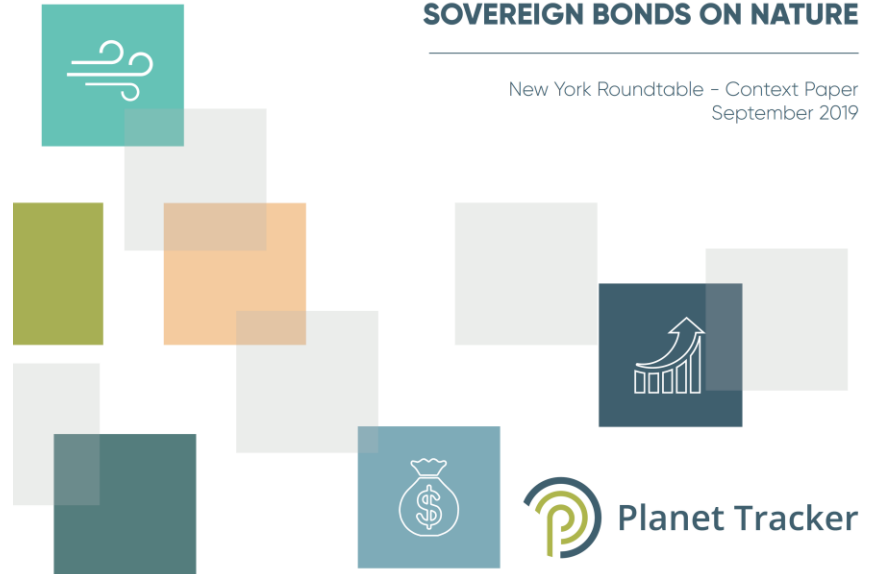


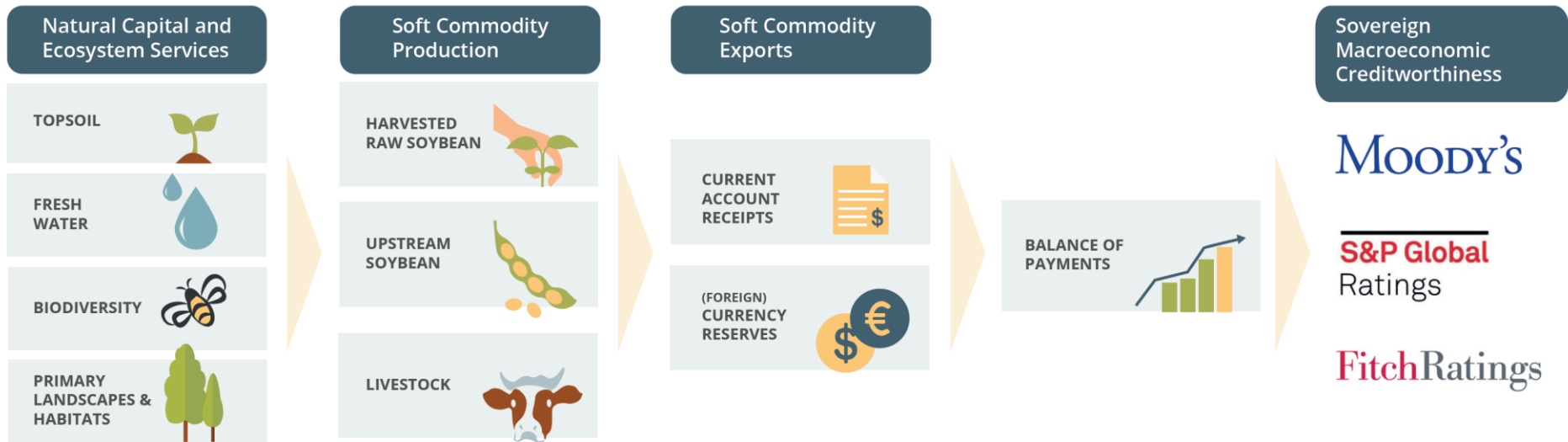
EXAMPLE: SOVEREIGN BONDS

THE SOVEREIGN TRANSITION TO SUSTAINABILITY

**UNDERSTANDING THE DEPENDENCE OF
SOVEREIGN BONDS ON NATURE**

New York Roundtable - Context Paper
September 2019



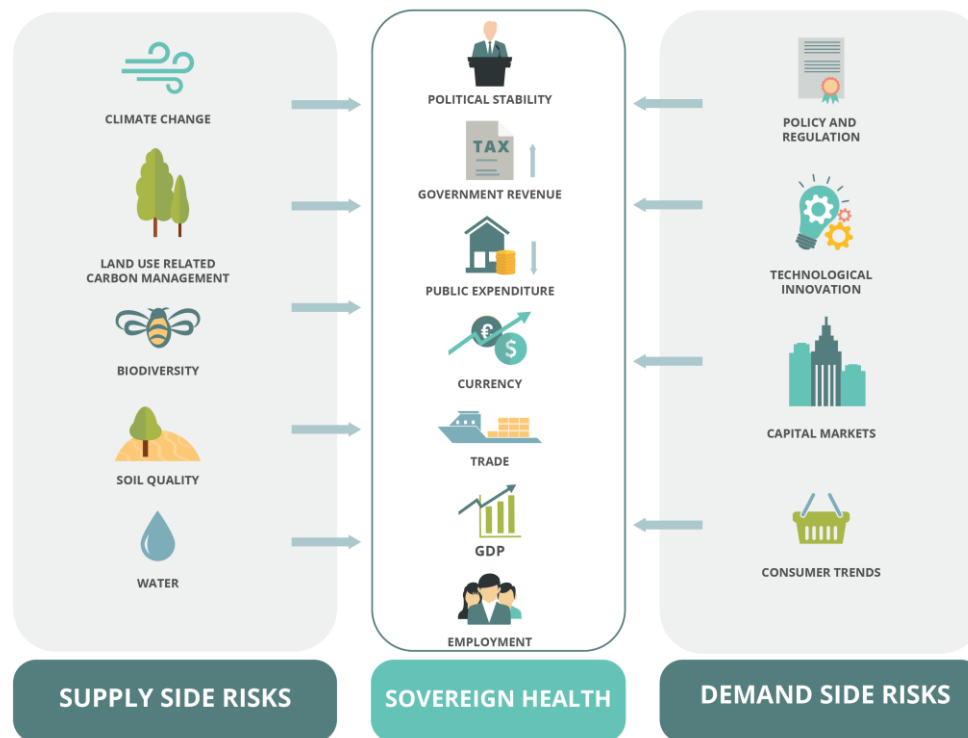


CHAIN OF IMPACT

FROM NATURE DEPENDENT SOFT COMMODITY PRODUCTION

TO MACROECONOMIC BALANCE OF PAYMENT CONTRIBUTIONS



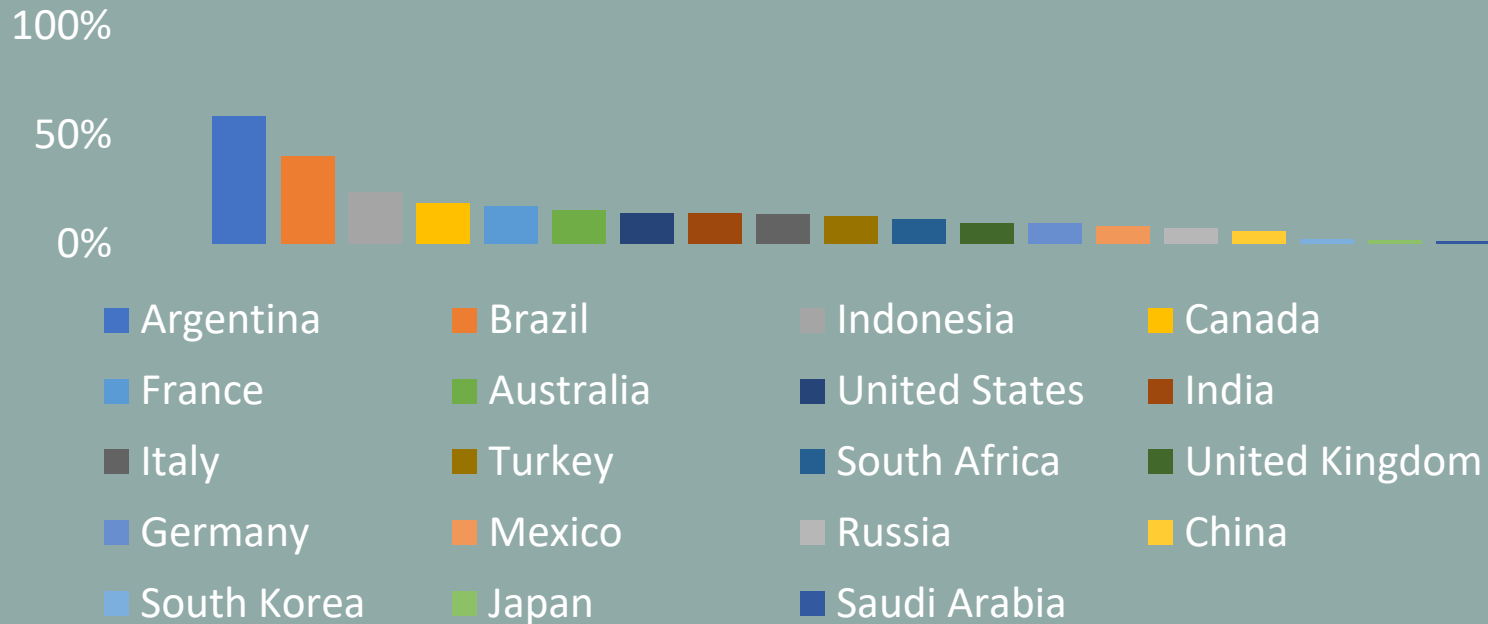


NATURAL CAPITAL

SUPPLY AND DEMAND CONSTRAINTS FOR SOVEREIGN HEALTH



G20 % EST. NATURE DEPENDENT SOFT COMMODITY EXPORTS 2008–17



Nature dependent soft commodity exports across the G20 generated \$10.4 trillion of BoP receipts and formed 10.3% of total G20 exports 2008–17.

ARGENTINA'S NATURE DEPENDENT SOFT COMMODITY EXPORTS



59% of est. total exports 2008–17



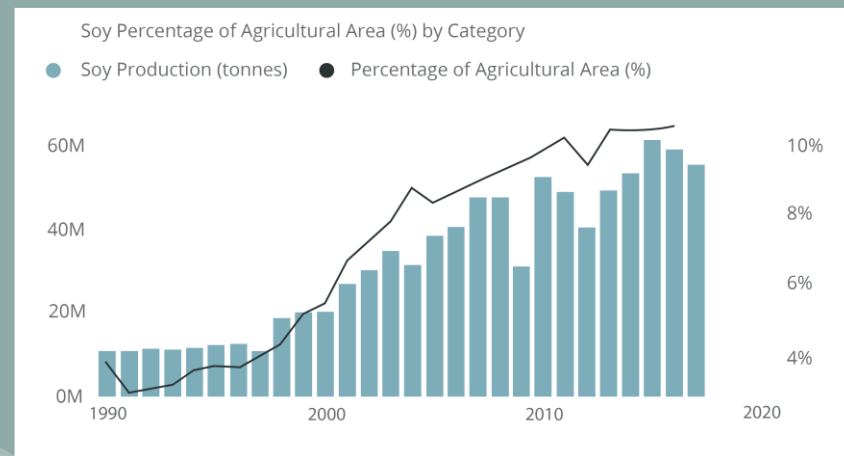
\$400BN of export receipts 2008–17



Soybean products generated **\$181BN** or **27%** of Argentina's exports 2008–17



Midstream soybean products **81%** of soybean-related exports 2015–18, where, soybean biodiesel exports were **\$4BN**



Exports (\$ millions)	2015	2016	2017*	2018*
Total Exports	56,784	57,909	58,621	61,559
All Soybean Products	18,615	18,911	17,170	15,050
Upstream				
Soybeans	4,270	3,235	2,733	1,454
Midstream				
Soybean Meal	9,673	9,972	9,081	9,192
Soybean Oil	3,815	4,106	3,726	2,961
Soybeans	4,270	3,235	2,733	1,454
Soybean Biodiesel	506	1,240	1,224	971
Other Soybean Products	351	359	405	474



BRAZIL'S NATURE DEPENDENT SOFT COMMODITY EXPORTS



40% of total exports 2008–17



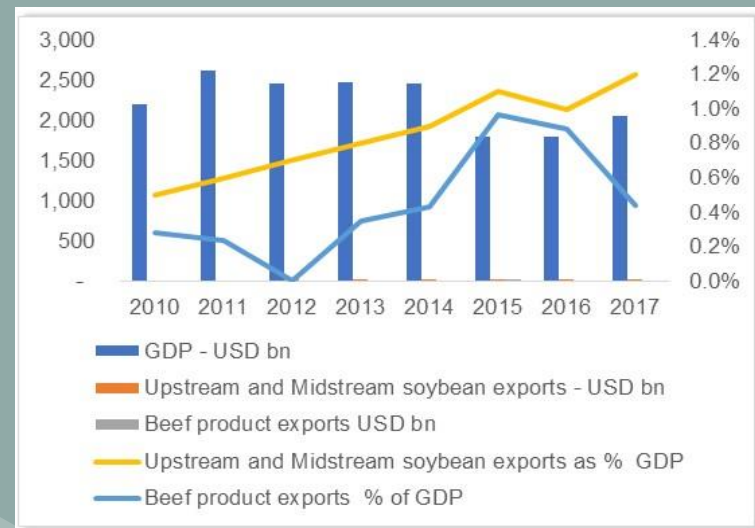
\$897BN of export receipts 2008–17



Soybean products generated **\$259BN** or
12% of Brazil's exports 2008–17



Livestock generated **\$44BN** or **2%** of
Brazil's exports 2008–17





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