



Quantifying Risk, Enabling Opportunity.

Introduction to ESG investments and the role of the actuary

WELCOME ANTHROPOCENE ACTUARIES



Historically



Planetary boundaries are not threatened by human activity

Greater wealth leads to improved quality of life

Financial services focused on positive economic outcomes
(generating wealth) serves society well.



Now



A number of planetary boundaries have been breached

Focus on economic outcomes will lead to severe detrimental impacts to quality of life

Financial services must now focus on wealth and positive real world impact to serve society well.

AGENDA

Agenda item
1. Exploring the drivers of change
2. Deciphering the sustainable finance lexicon
3. Decomposing the elements of E, S and G
4. How is this relevant to the actuarial profession?



Quantifying Risk, Enabling Opportunity.

1. Exploring the drivers of change

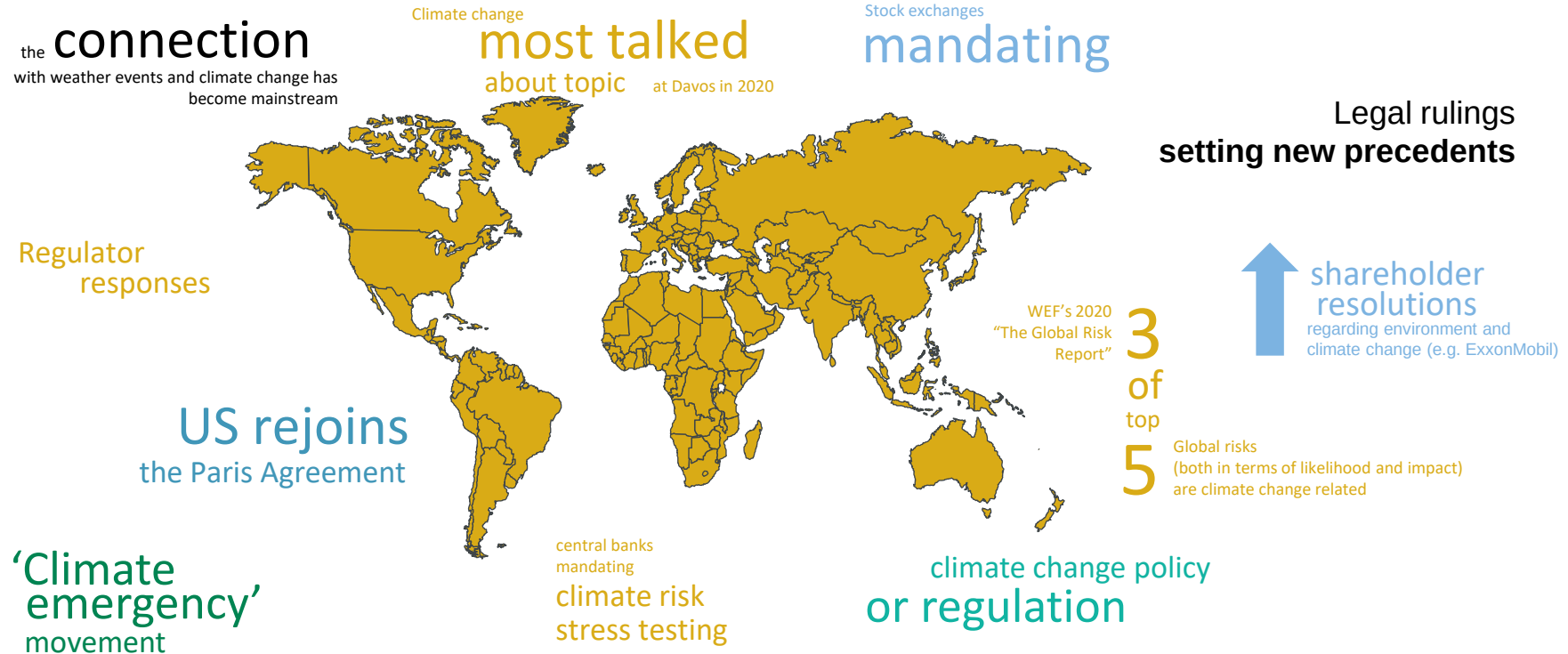
Presentation Name: Title

Author: Name Surname

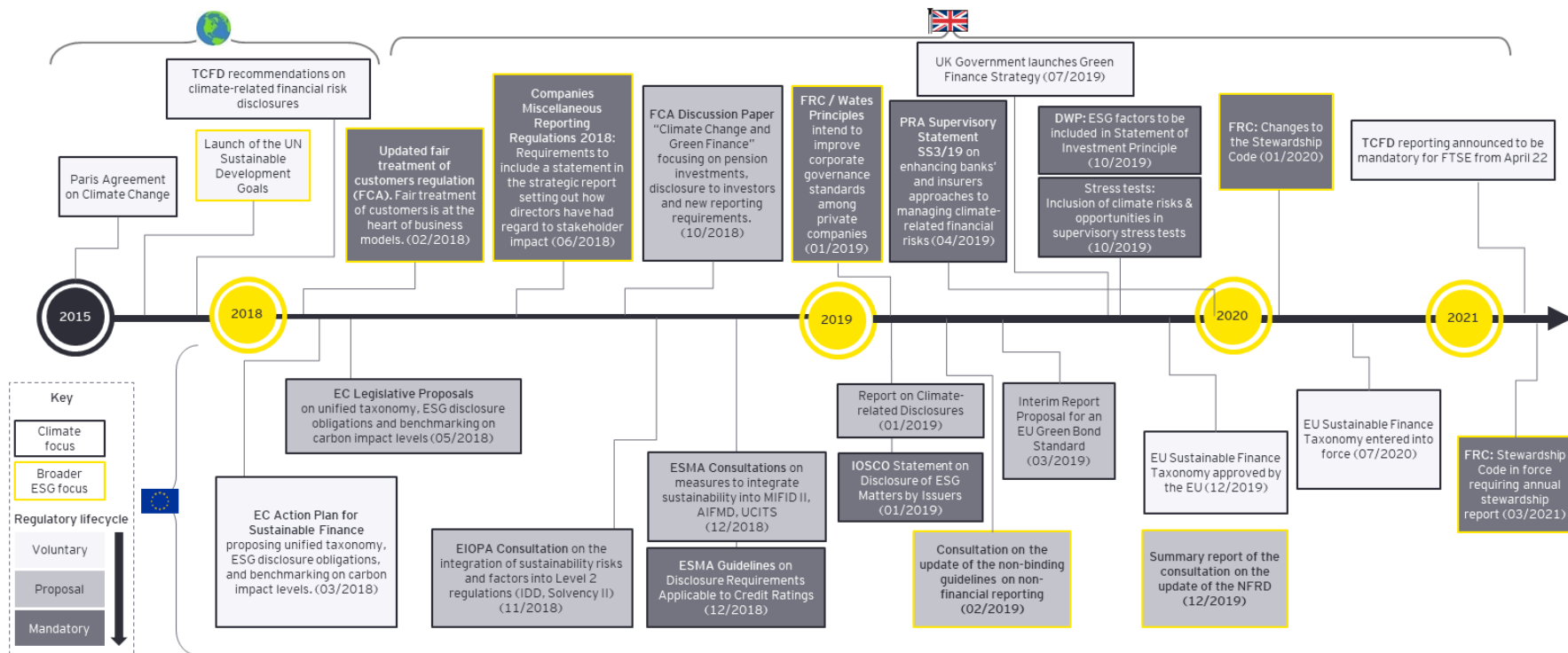
Date: dd/mm/yyyy

Version: v.0.0

What is driving action globally?



A range of regulatory drivers of change



Net-zero as an emerging theme in financial services

Net-Zero Asset Owner Alliance

Asset Owners

37 institutional investors; ~\$5.7t AuM

Net-Zero Banking Alliance

Banks

43 banks from 23 countries

Net-Zero Asset Managers Initiative

Asset Managers

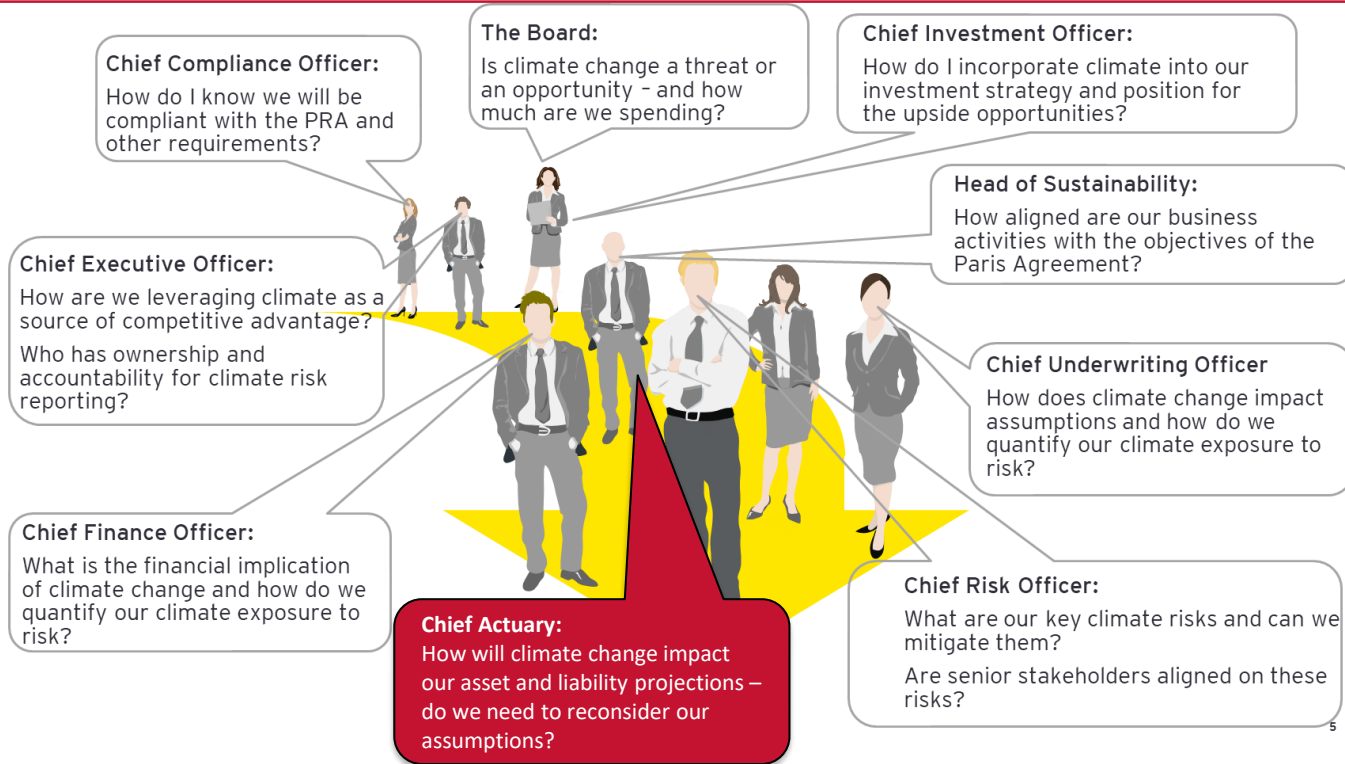
87 signatories; ~\$36t AuM

Net-Zero Insurance Alliance

Insurers

Expected to launch at COP26

How does this transpose to a company level?





Quantifying Risk, Enabling Opportunity.

2. Deciphering the sustainable finance lexicon

Presentation Name: Title

Author: Name Surname

Date: dd/mm/yyyy

Version: v.0.0

Beginning with broad umbrella terms

Sustainability

Meeting present needs without compromising the ability of future generations to meet their own needs



Sustainable finance

The application of financial services to achieve the goal of sustainability, including the integration of ESG practices into business or investment decisions

Diving into the next layer of detail

ESG

Understanding how ESG (environmental, social and governance) factors impact fund performance and underwriting activities, now and in the future



Impact investing

Investing with the intention to generate positive, measurable social and environmental impact alongside a financial return

Climate risk

Results from the effects of global warming and society's response. It gives rise to three types of financial risks:

1. **Physical risk**
2. **Transition risk**
3. **Litigation risk**





Quantifying Risk, Enabling Opportunity.

3. Decomposing the elements of E, S and G

Presentation Name: Title

Author: Name Surname

Date: dd/mm/yyyy

Version: v.0.0

Decomposing the elements of ESG – Environmental

Environmental criteria relate to any impacts from the operation of a company on the environment.

Examples of environmental criteria include:

Climate change	Resource scarcity / efficiency
Air and water pollution	Waste management
Biodiversity	Deforestation

Decomposing the elements of ESG – Social

Social criteria fundamentally relate to how the business impacts and interacts with its employees as well as wider society.

Examples of social criteria include:

Internal

- Diversity/inclusion
- Health and safety
- Employee pay and benefits
- Staff turnover

External

- Mission statement
- Customer relationships
- Supply chain
- Charity involvement

Decomposing the elements of ESG – Governance

Governance criteria relate to the way a company is overseen and managed by its executives, and the clarity of the rights and responsibilities of stakeholders.

Board governance:

Are governance structures robust and does the Board exercise effective oversight?

Financial transparency:

Does the company produce comprehensive and honest financial reports?

Executive compensation:

Is the pay package for executives in keeping with the long term profitability and financial health of the company?

Business ethics and cyber security:

What policies and systems are in place to mitigate business ethics risks (e.g. bribery, corruption, etc.)?

Piecing the jigsaw together to form an ESG rating

TESLA, INC.

(TSLA)

Industry: Automobiles

Country/Region: United States of America

MSCI
ESG RATINGS

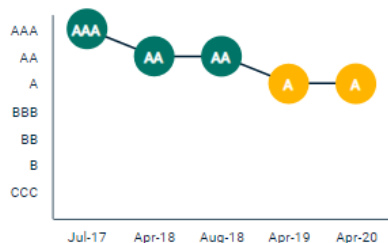


Tesla's rating remains unchanged since April, 2019.

Tesla is **average** among 41 companies in the automobiles industry.

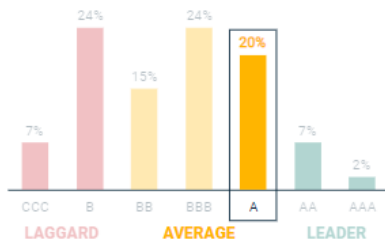
ESG Rating history

MSCI ESG Rating history data over the last five years or since records began.



ESG Rating distribution

Universe: MSCI ACWI Index constituents automobiles, n=41.



We focus on the key issues material to the **automobiles industry**. Here is how **Tesla** compares to industry peers. MSCI also evaluates companies on their controversial business activities (weapons, tobacco, gambling, global norms and principles etc) and sustainable impact solutions (renewable energy, health, education etc). This information is only factored into the MSCI ESG Ratings from a financial risk perspective. For more details, visit the [ESG investing page](#).

ESG LAGGARD	AVERAGE	ESG LEADER
 PRODUCT SAFETY & QUALITY	 PRODUCT CARBON FOOTPRINT	 CORPORATE GOVERNANCE
 LABOR MANAGEMENT		 CORPORATE BEHAVIOR
		 OPPORTUNITIES IN CLEAN TECH



Quantifying Risk, Enabling Opportunity.

4. How is this relevant to the actuarial profession?

Presentation Name: Title

Author: Name Surname

Date: dd/mm/yyyy

Version: v.0.0

The future of the financial system is under threat

AXA: 4C warming makes the world uninsurable



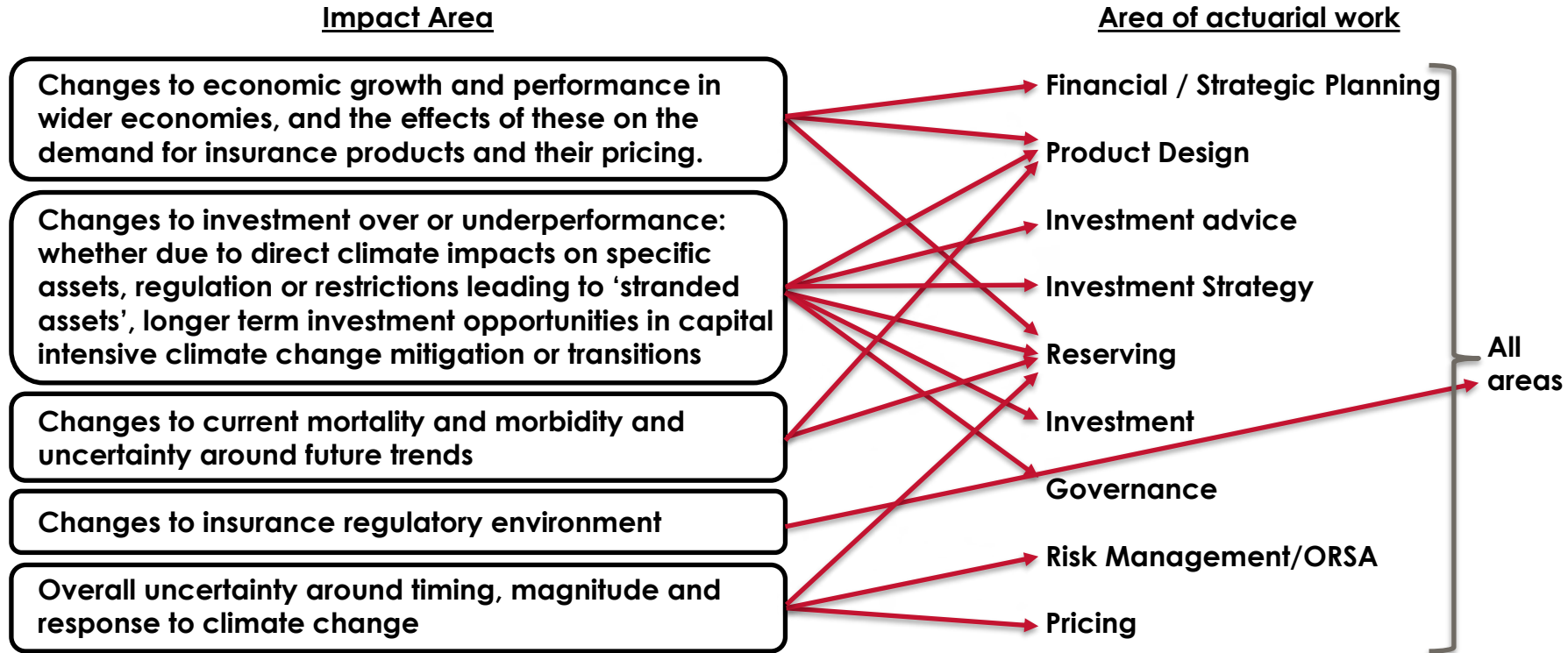
Insurance giant AXA has announced a quadrupling of its 2020 green investment target from \$3.53 billion to \$14.13 billion as the company's CEO warned more than 4 degrees Celsius of warming this century would make the world "uninsurable."

Lex in depth: the \$900bn cost of 'stranded energy assets'



According to Lex estimates, around \$900bn – or one-third of the current value of big oil and gas companies – would evaporate if governments more aggressively attempted to restrict the rise in temperatures to 1.5C above pre-industrial levels for the rest of this century.

Where does it come in to actuarial world?





Quantifying Risk, Enabling Opportunity.

Thank you

Presentation Name: Title

Author: Name Surname

Date: dd/mm/yyyy

Version: v.0.0