Actuaries – unlikely saviours of the world?

Sandy Trust
Grant Thornton, Purposeful Finance lead
Protect Our Winters
Marianne Harper Gow
Baillie-Gifford, Head of Sustainability
Kaisie Rayner
Head of Responsible Investing, Scottish Widows

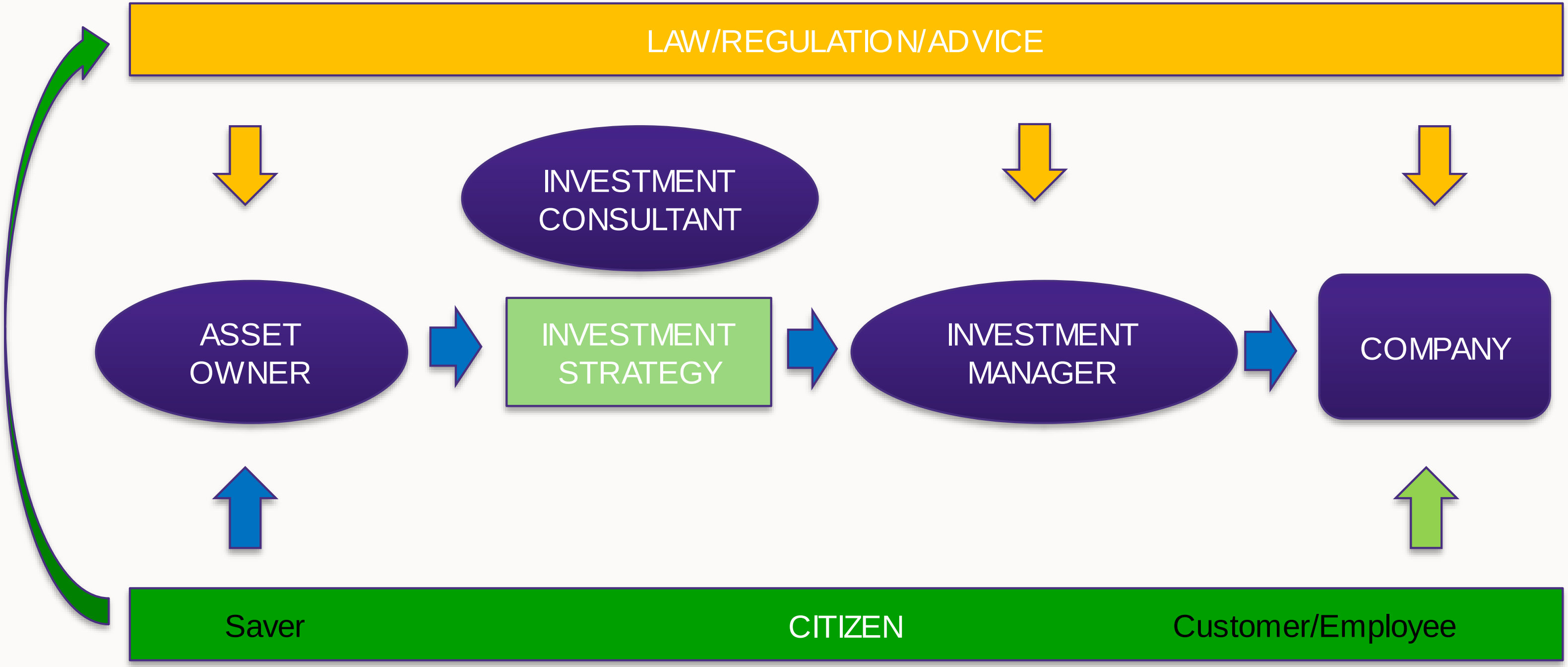
PROTECTOURWINTERS.UK
POW

Grant Thornton | An instinct for growth™

CLIMATE CHANGE

Photo: NASA

The flow of money (and influence) - *Who really owns the decisions?*



Grant Thornton | An instinct for growth

Purposeful Finance

1. Stakeholder perspectives – investment manager, asset owner and actuarial
2. Panel and questions
3. I need a hero

2A: PERSPECTIVES – INVESTMENT MANAGER

- *WHY INVESTMENT MANAGERS WILL SAVE THE WORLD*

- Marianne Harper Gow. November 2017

BAILLIE GIFFORD

Active Management

Bottom up research

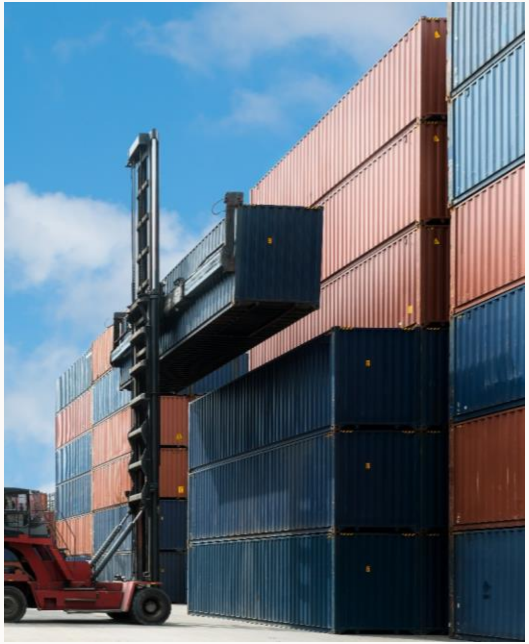
Concentrated portfolios

Long term sustainable growth

- Society's views

Limited alignment to the benchmark

Stewardship: collaborative relationships with management teams



Why is it Important to Think About Climate Change?

Supply

Demand

Storage

Impact

The Potential for Disruption is High…

… with this comes significant opportunity

All Sectors of the Economy…

… will need to address climate change

Why Does This Matter?

We are looking to invest for the long term

We are looking for sustainable growth opportunities

It is our responsibility of stewards of our clients' assets

It is about the next generation

Grant Thornton | An instinct for growth™

Positive Change at a Glance

Positive social change and share price performance go hand in hand

The Technology Has Been Here Before

We've already rejected the idea once...

Battery technology was the limiting factor then

Morrison Electric

In 1890 Scottish inventor William Morrison installed his cutting-edge lightweight storage battery in a carriage built by the Des Moines Buggy Co.

With an impressive but limited range of 50 miles, Morrison's cars did not meet with great success. Only 12 were ever built.

2B: Perspectives – Asset Owner

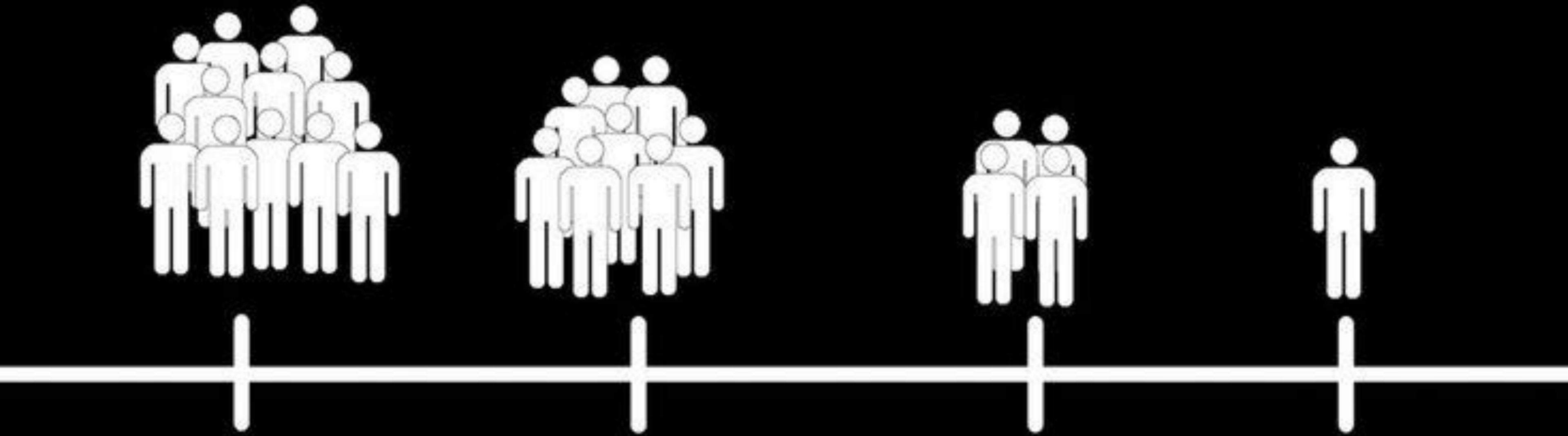
Kaisie Rayner, Head of Responsible Investment, Scottish Widows

An asset owner invests on behalf of beneficiaries

- Charities
- Endowments
- Defined benefit
- Defined contribution

c75% of DC pension customers invest in their scheme default fund

On a long enough timeline
the survival rate for everyone drops to zero

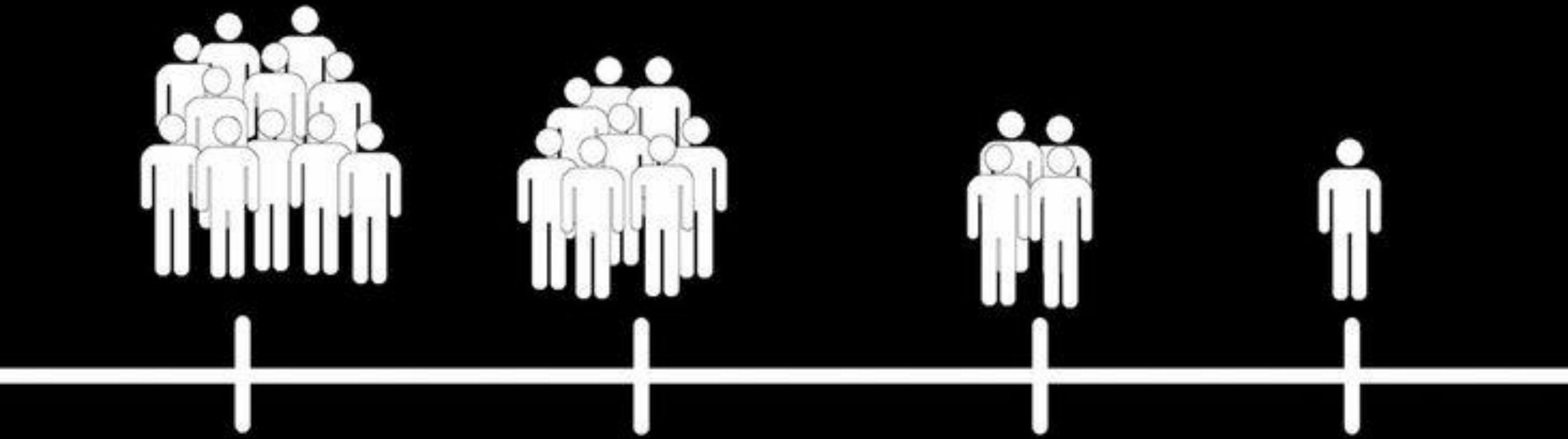


Why does this matter?

- How we set a mandate
- The perception of risk
- How we measure return
- Active VS Passive (Future maker VS Market taker)

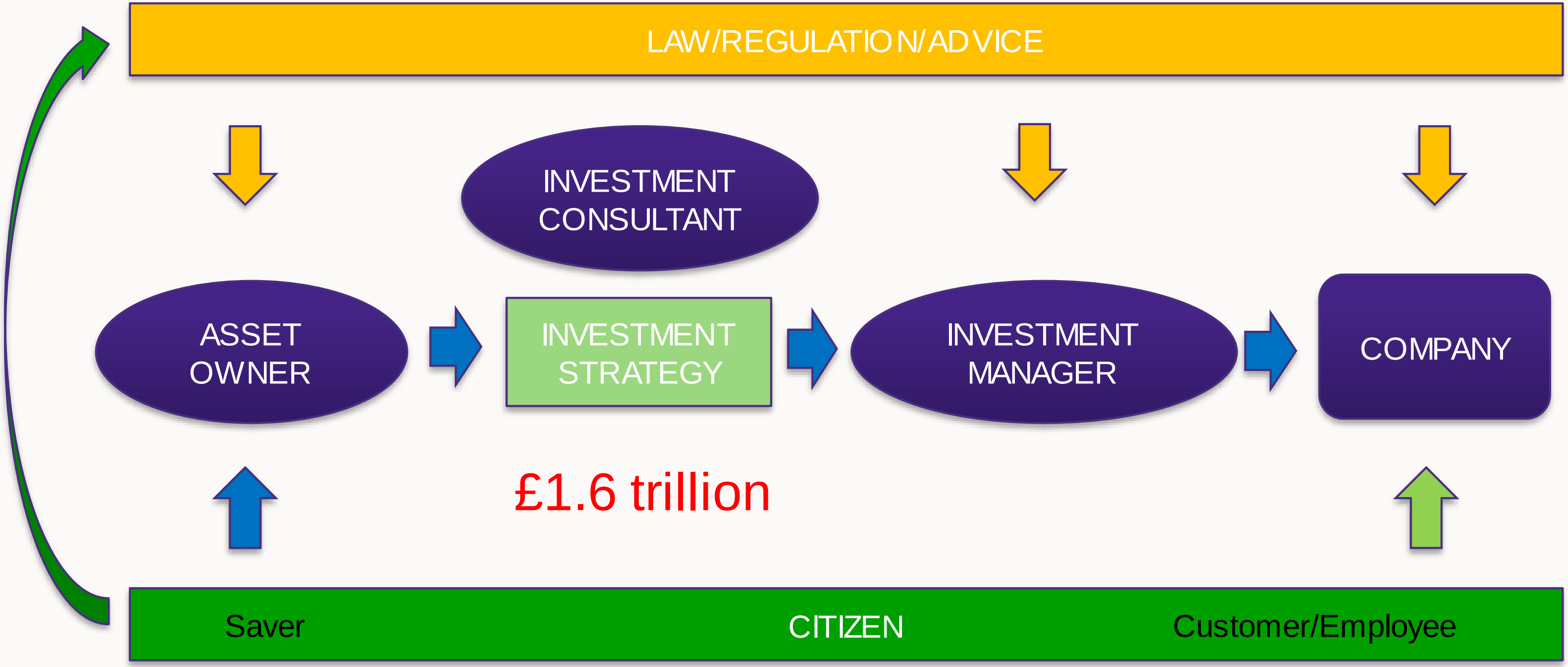
Invest in our future …

… rather than preside over our decline



2C: Perspectives – IFOA
Sandy Trust, IFOA Resource & Environment Board

The flow of money (and influence) - *Who really owns the decisions?*



Grant Thornton | An instinct for growth

Brief overview of IFOA activity in Resource & Environment space

The table below provides a brief summary of IFOA publications on this topic

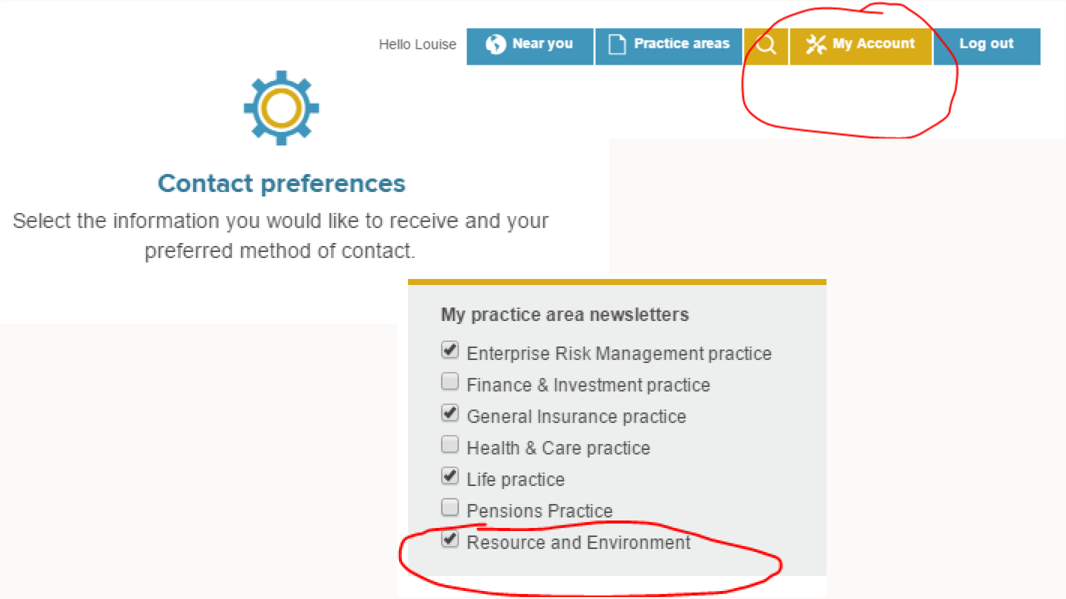
Date	Item	Brief notes
2013	Resource Constraints: sharing a finite world.	Research paper on implications to economic growth of finite resources
2014	IFOA Resource & Environment Board convened	Formal intro of board to IFOA governance
Nov 2015	Policy briefing for COP 21	Application of risk management techniques to climate change
Jan 2017	Intergenerational fairness bulletin on climate change	Launch of IFOA series with climate change as leader
May 2017	Risk Alert on climate change	Alert to all actuaries to consider climate risk
July 2017	DB Pensions Practical Guide	Guide to support actuaries in how to consider this risk in their advice
2018	Sustainable Development Goals initiative	International competition on how actuaries can support SDGs professionally
2018	Further practical guides planned	DC Pensions Q1 Life and GI guides next

The IFOA produces a monthly newsletter which is a good source of up to date information

1 – My Account

2 – Contact Preferences

3 – Tick R&E boxes



Institute and Faculty of Actuaries

RISK ALERT: Climate-Related Risks
www.actuaries.org.uk
12 May 2017

Risk Alert:

Climate-Related Risks

Key message:

Actuaries should ensure that they understand, and are clear in communicating, the extent to which they have taken account of climate-related risks in any relevant decisions, calculations or advice.

Three types of climate risk were outlined by Mark Carney in 2015

- In his 2015 speech, "Breaking the tragedy of the horizon", Mark Carney described three categories of risk arising from climate change, these being **physical, transition and liability risks**.

- These risks were further outlined by the actuarial profession in a risk alert to all actuaries in May 2017. The IFOA is currently producing a number of practical guides detailing how these risk types may impact different players in the long term savings and insurance industries.

1. **Physical Risks**
   - the risks arising from potential degradation to physical assets; e.g. property damage, disruption of resource availability, supply chain interruption for providers and their services.

2. **Transition Risks**
   - depending on the nature and speed of mitigation and adaptation policies and requirements by governments and regulators related to climate change, transition risks may pose varying levels of financial and reputational risk to insurers, pension funds and other institutional investors from the potentially rapid reduction in the market value of, or income generated by, assets.

3. **Liability Risks**
   –depending on the types and coverages of insurance or assets invested in, risks could arise if third parties have suffered damage or losses from the effects of climate change and seek compensation.

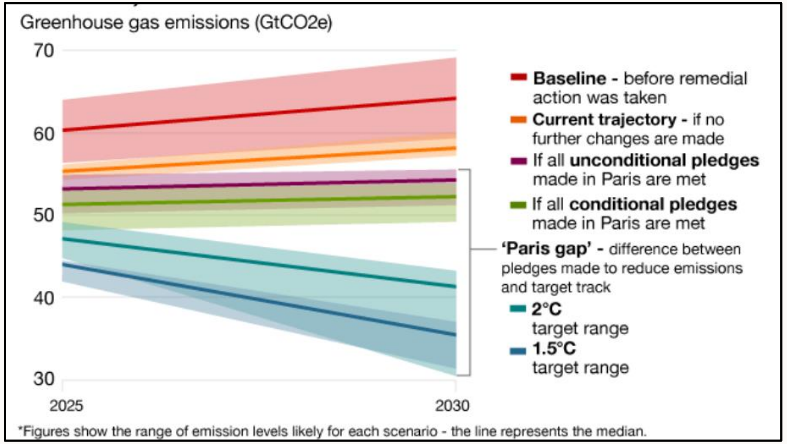
Grant Thornton | An instinct for growth™

Emissions must reduce sharply to avoid physical risk – is there a transition risk impact?

- **The Emissions Gap Report 2016 from the United Nations Environment Programme** (UNEP) shows that even if countries deliver on the commitments – known as Nationally Determined Contributions (NDCs) – that they made in Paris, the world will still warm by 3.0 to 3.2°C.

- To keep global warming to within 2°C and limit the risk of dangerous climate change, the world will need to reduce emissions by 40% to 70% by 2050 and eliminate them altogether by 2100. If this is to be achieved, the transition to a low carbon economy cannot be linear.

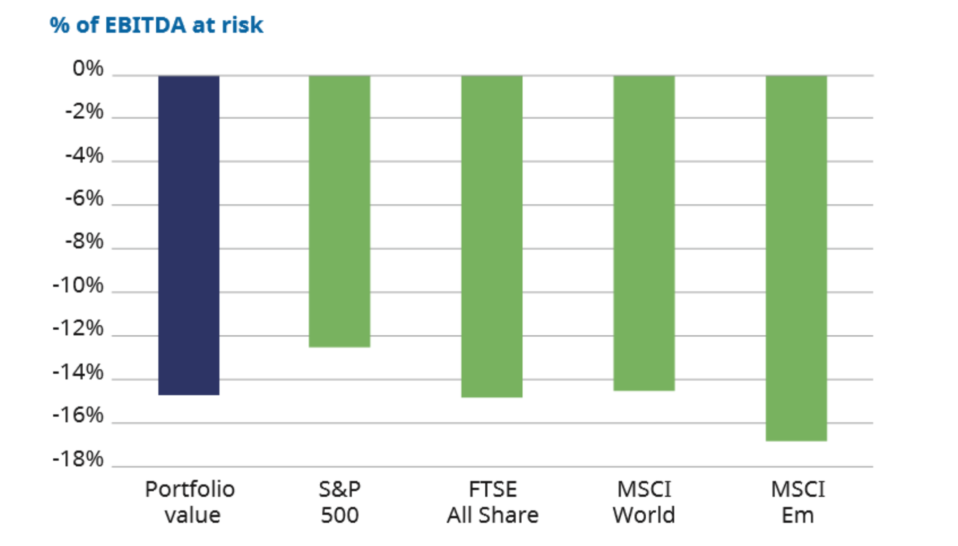
- There is a very strong desire to avoid catastrophic global warming, increasing the chance of policy decisions that will accelerate the move to a low carbon economy. For example, by introducing a carbon price. Such a move could decrease the physical risk but potentially increase transition risk.



Source: BBC, UN Emissions Gap Report

Materiality of transition risk – Schroder's assessment of $100/tonne carbon price

- As with any risk, it will be important to understand the nature of the risk and to then assess its materiality.
- Risk assessment has historically focused on carbon footprinting but a number of companies have now evolved towards a more sophisticated value at risk model, including stochastic modelling.
- The results below are from a recent Schroder's paper which estimated significant impacts on global EBITDA levels, should a carbon price be introduced. The results below disguise the more severe impacts on different sectors.

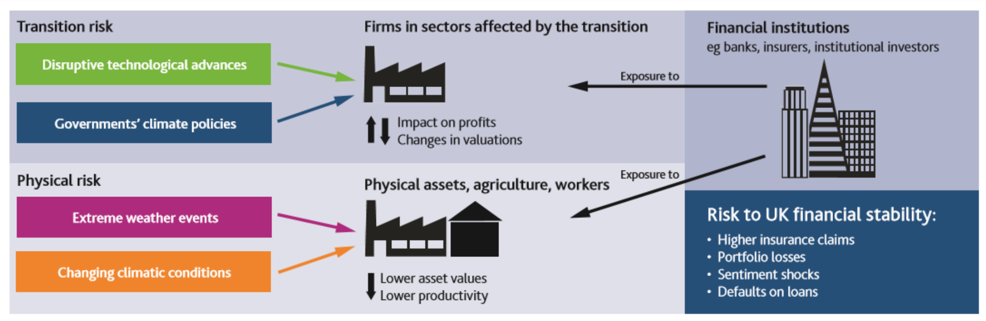


Source: Schroders, Climate Change: redefining the risks, September 2017

The Bank of England has indicated that it is increasing activity in insurance

In 2017, the BoE dedicated its Q2 quarterly bulletin to climate change, providing an update on its focus and activities, stating that:

- Climate change, and society's responses to it, present financial risks which impact upon the Bank's objectives. These risks arise through two primary channels: the physical effects of climate change and the impact of changes associated with the transition to a lower-carbon economy (see diagram below)
- The Bank's response to mitigating the financial risks from climate change has two core elements.
    - The first involves engaging with regulated firms on climate-related risks through prudential supervision, *including deepening activities in insurance* and beginning work in banking.
    - The second involves enhancing the resilience of the UK financial system by engaging with initiatives to support an orderly market transition to a lower-carbon economy. This includes taking a close interest in the Financial Stability Board's private sector Task Force on Climate-related Financial Disclosures (TCFD) and co-chairing the G20 Green Finance Study Group on behalf of the United Kingdom.



Transition Risk

- For example, the risk referred to as 'stranded assets' includes the inability of a company or industrial sector to extract value from its assets (e.g. plants, rights, land) due to restrictions placed on its activities. In effect, the assets become "stranded", resulting in a decline in market value of the affected company or industry, meaning the value or cash flows would no longer be able to materialise as expected.

Source: Bank of England Quarterly Bulletin, 2017 Q2

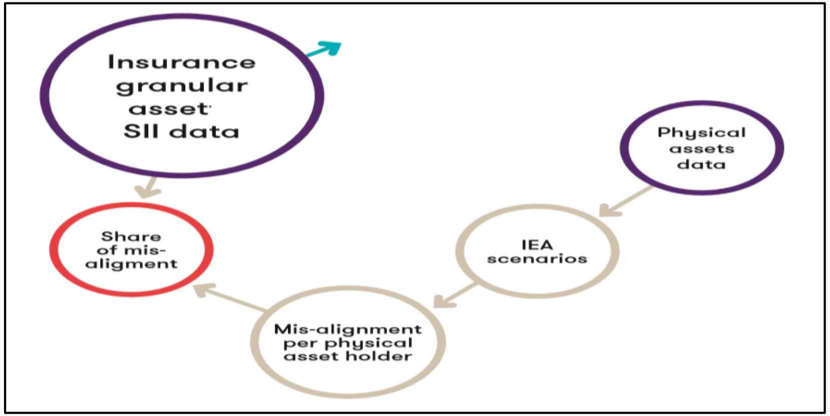
Grant Thornton | An instinct for growth™

Transition Risk – PRA Activity in the life insurance sector – output anticipated Q1 2018

The PRA is currently working with the Two Degree Investing Initiative (2ii) to analyse the exposure of UK life insurers to transition risk.:

- **The regulator is using Solvency II asset data from regulatory submissions to carry out an asset by asset assessment of transition risk.** The regulator will then be able to rank insurance companies according to their risk positions and to follow up accordingly with insurers who look particularly exposed.

- 2ii recently carried out analysis of Swiss pension and insurance portfolios, with the Swiss Government, covering around 75% of the market. **The findings were stark, with asset portfolios generally aligned to a 6 degree world.**



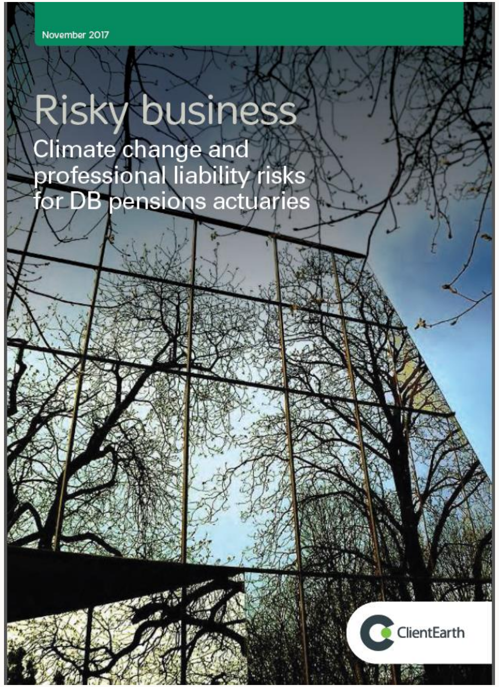
1. Firm specific results
2. Look through funds
3. Wider asset classes

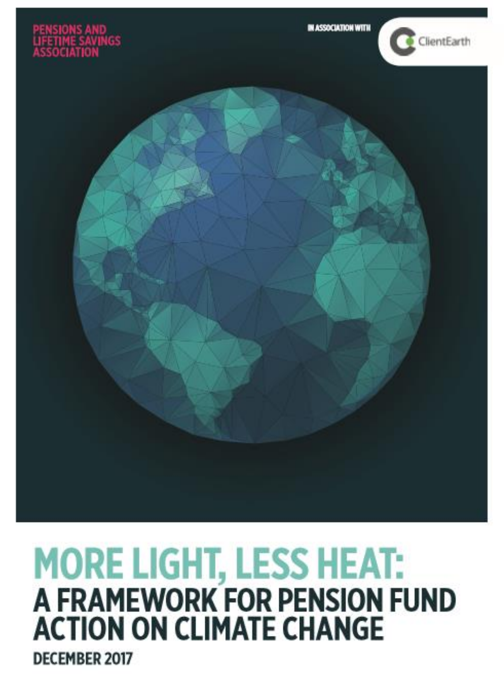
Grant Thornton | An instinct for growth

The Regulators are coming!

UK	EU	Global
Bank of England	HLEG on Sustainable Finance	UN PRI
NAB Impact Investing	European Parliament Resolution	FSB Recommendations
Green Finance Task Force	Article 173 (France)	World Benchmarking Alliance
Law Commission		G20 Green Finance Initiative
DWP and TPR		RE100

With increasing recommendations for pension funds in particular



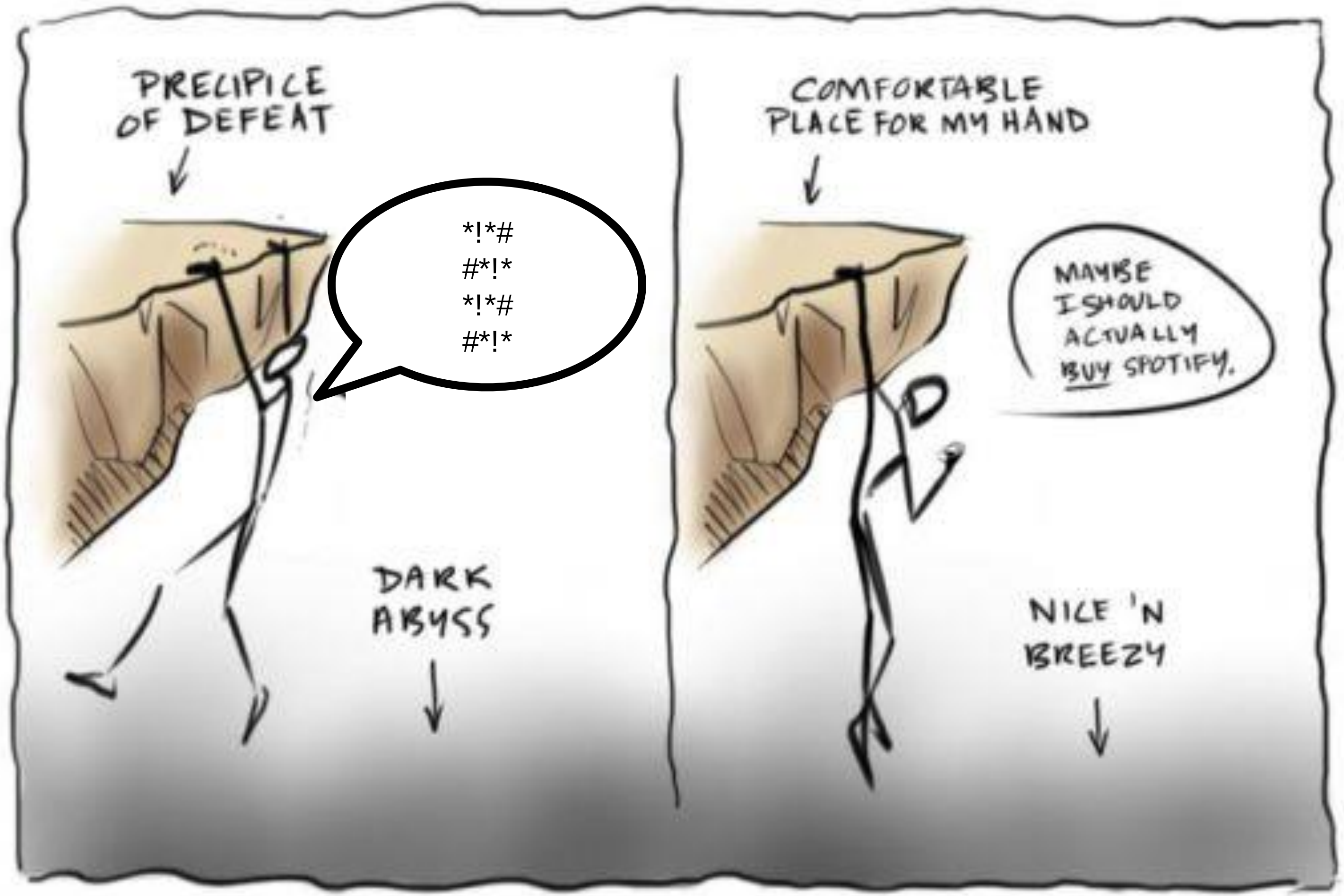


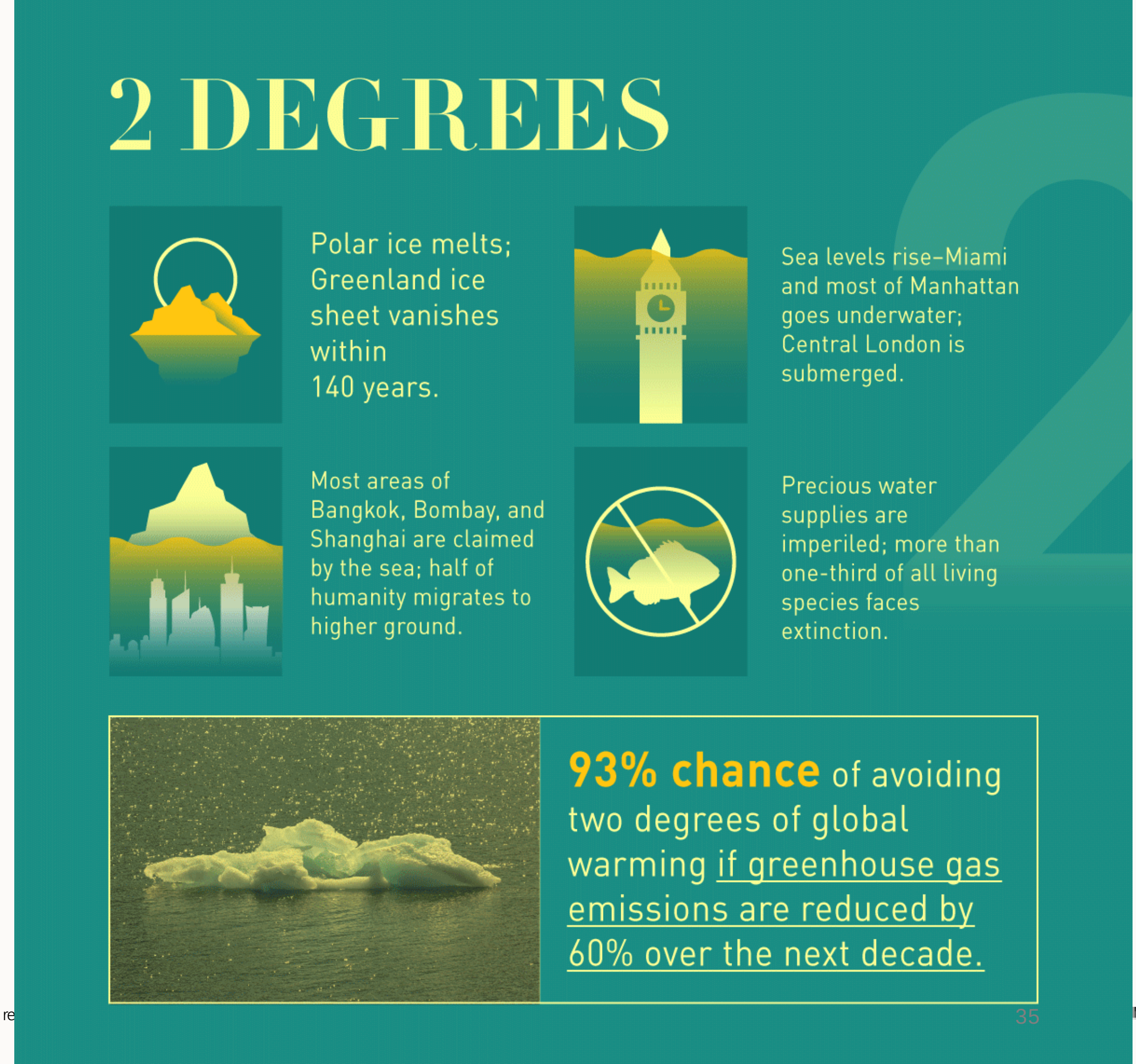
Panel and Questions

?

Grant Thornton | An instinct for growth™

5: I need a hero


PRECIPICE OF DEFEAT
!# #*!* *!*# #*!*
DARK ABYSS
COMFORTABLE PLACE FOR MY HAND
MAYBE I SHOULD ACTUALLY BUY SPOTIFY.
NICE 'N BREEZY

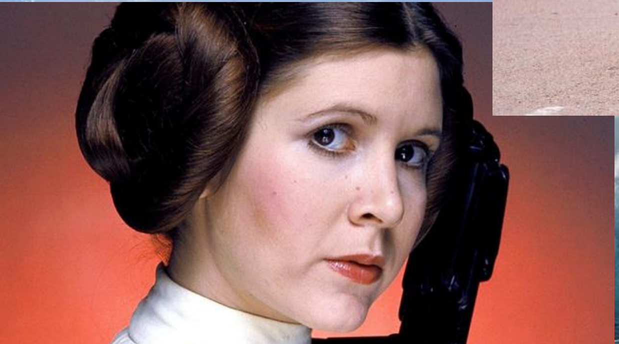

2 DEGREES
Polar ice melts; Greenland ice sheet vanishes within 140 years.
Sea levels rise–Miami and most of Manhattan goes underwater; Central London is submerged.
Most areas of Bangkok, Bombay, and Shanghai are claimed by the sea; half of humanity migrates to higher ground.
Precious water supplies are imperiled; more than one-third of all living species faces extinction.
93% chance of avoiding two degrees of global warming if greenhouse gas emissions are reduced by 60% over the next decade.

Welcome to the POW UK resort







ARTEMIS


Contacts

Financial Services Advisory

Sandy Trust
Senior Manager
++44 (0)7944 914 327
Sandy.tn.trust@ukgt.com

grantthornton.co.uk