

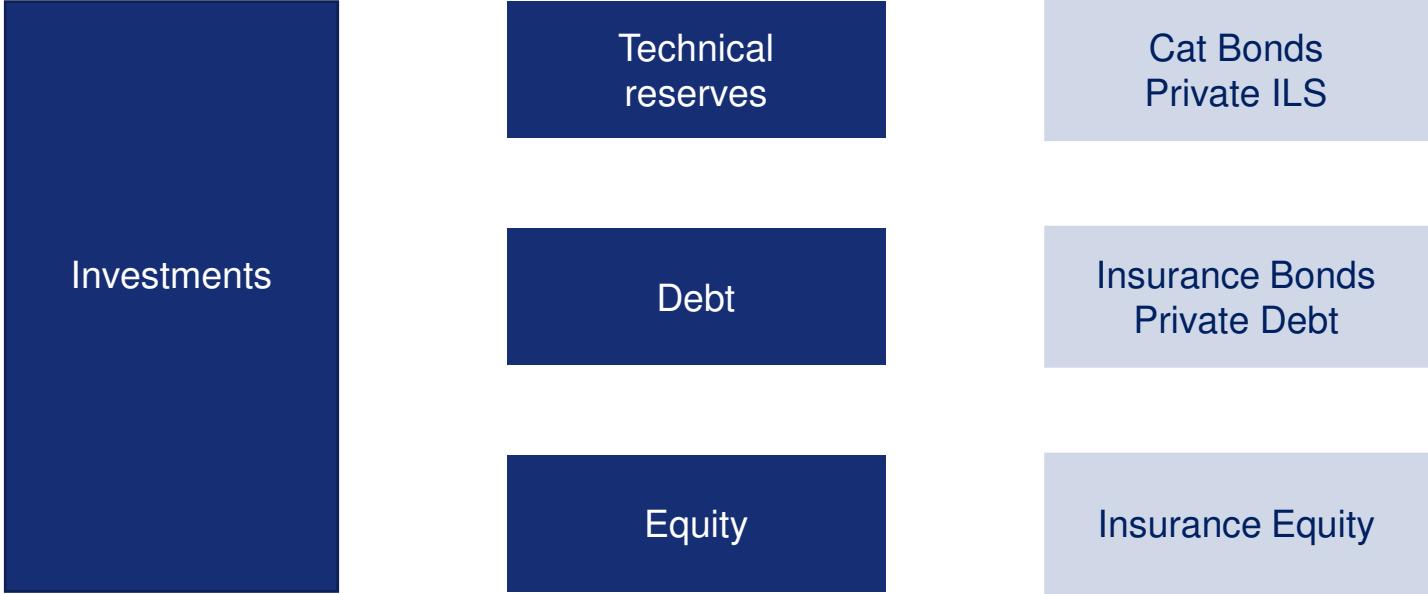
# LIVING UP TO NATURE: CATASTROPHE INSURANCE, UNCORRELATED RETURNS AND THE COMPLEXITY PREMIA

Urs Ramseier, chief executive and chief investment officer,  
Twelve Capital

# An overview of the insurance balance sheet

## The Insurance Balance Sheet

## Debt and Equity



# COVID Related Exposures

## Business Interruption ('BI') risk

- BI coverage compensates a business for lost income due to the suspension of operations caused by direct physical loss, damage, or destruction to property.
- In Twelve's view the issue is not so clear cut as commercial insurance policies across the industry broadly fit into one of three categories, i.e. those where:
  - Pandemic is explicitly included as covered risk;
  - Pandemic is explicitly excluded as covered risk; or
  - The policy is silent or unclear on whether pandemic coverage is included or excluded.
- As a result (especially the last category), the potential impact of BI related losses will take time to develop and are potentially material.

# Fundamental Shifts in the Global (Re)Insurance Industry

Two major global risk trends for the next decade in relation to insurance

1. **Climate change:** higher frequency and severity of natural catastrophes
2. **Pandemic risk** is expected to remain for many years

Impact on (re)insurance industry:

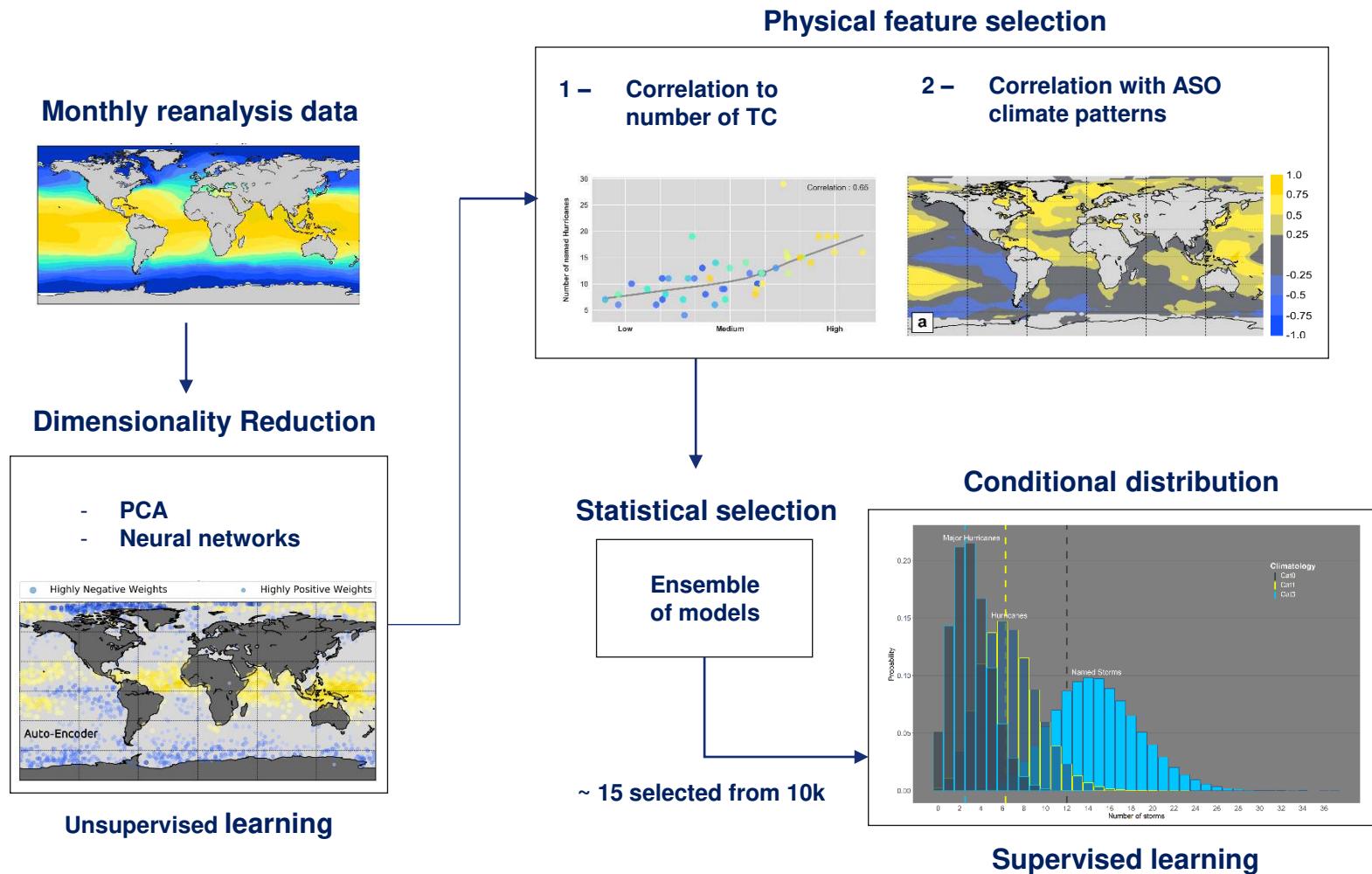
- Exponential increase of demand for risk mitigation
- Significant increase of insurance premiums
- Substantial need for additional capital
- Increase of return on capital

Challenges:

- Risk assessment and pricing of risks

# Climate Change Risk Assessment

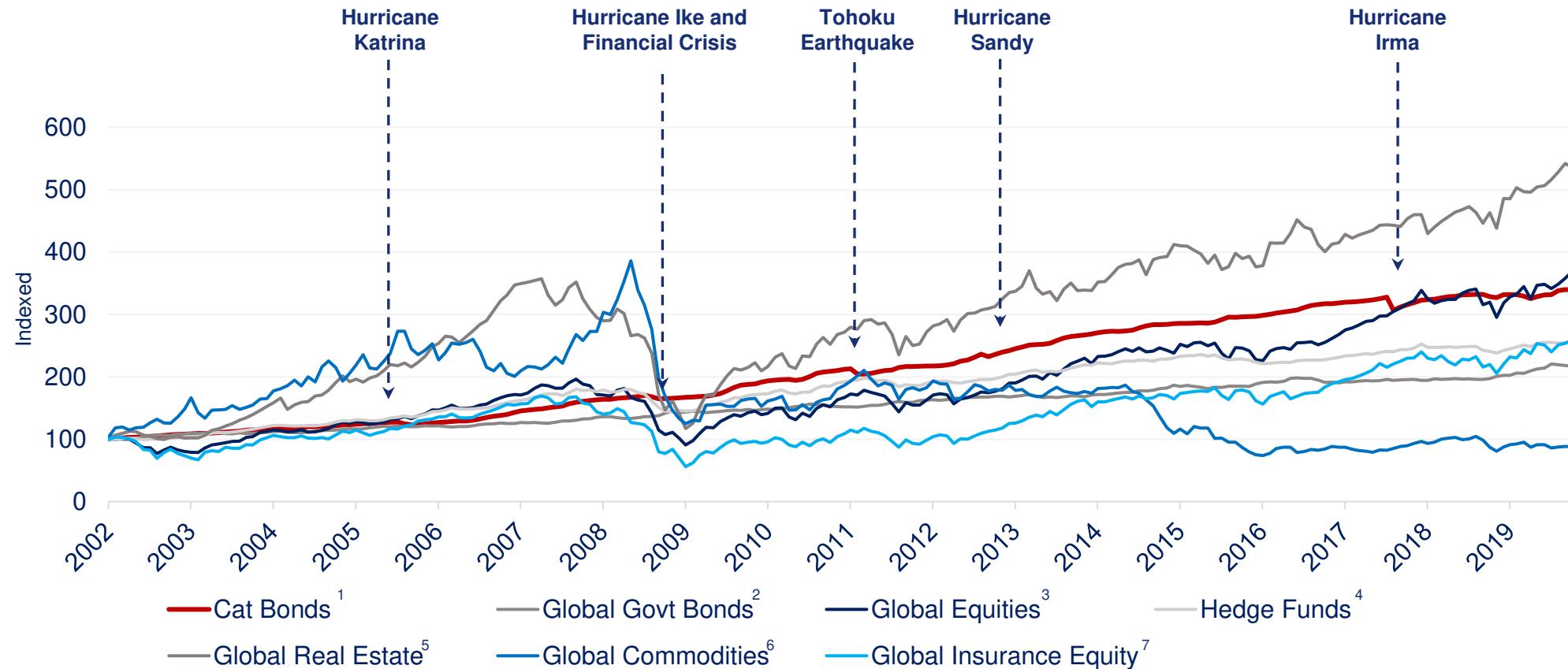
New techniques based on machine learning developing



Source: reask.

# Outcomes of Cat Bonds

Since 2002



<sup>1</sup>Swiss Re Global Cat Bond Index Total Return, calculated by Swiss Re Capital Markets, is a market value-weighted basket of natural cat bonds tracked by Swiss Re Capital Markets, calculated on a weekly basis. <sup>2</sup>JPMorgan Hedged USD GBI Global. <sup>3</sup>MSCI World USD <sup>4</sup>The Dow Jones Credit Suisse Hedge Fund Index, an asset weighted benchmark that seeks to measure hedge fund performance and provide the most accurate representation of the hedge fund universe. <sup>5</sup>EPRA/NAREIT Dev TR USD. <sup>6</sup>The S&P GSCI serves as a benchmark for investment in the commodity markets and as a measure of commodity performance over time. It is a tradable index that is readily available to market participants of the Chicago Mercantile Exchange. <sup>7</sup>The MSCI World Insurance Index is an Index focused at measuring the equity performance of the c.80 largest listed global insurance companies weighted by free-float of market capitalisation.

# The Risk Premia

## Cat Bonds

Quarterly LTM U.S. wind exposed weighted average risk premium and expected loss

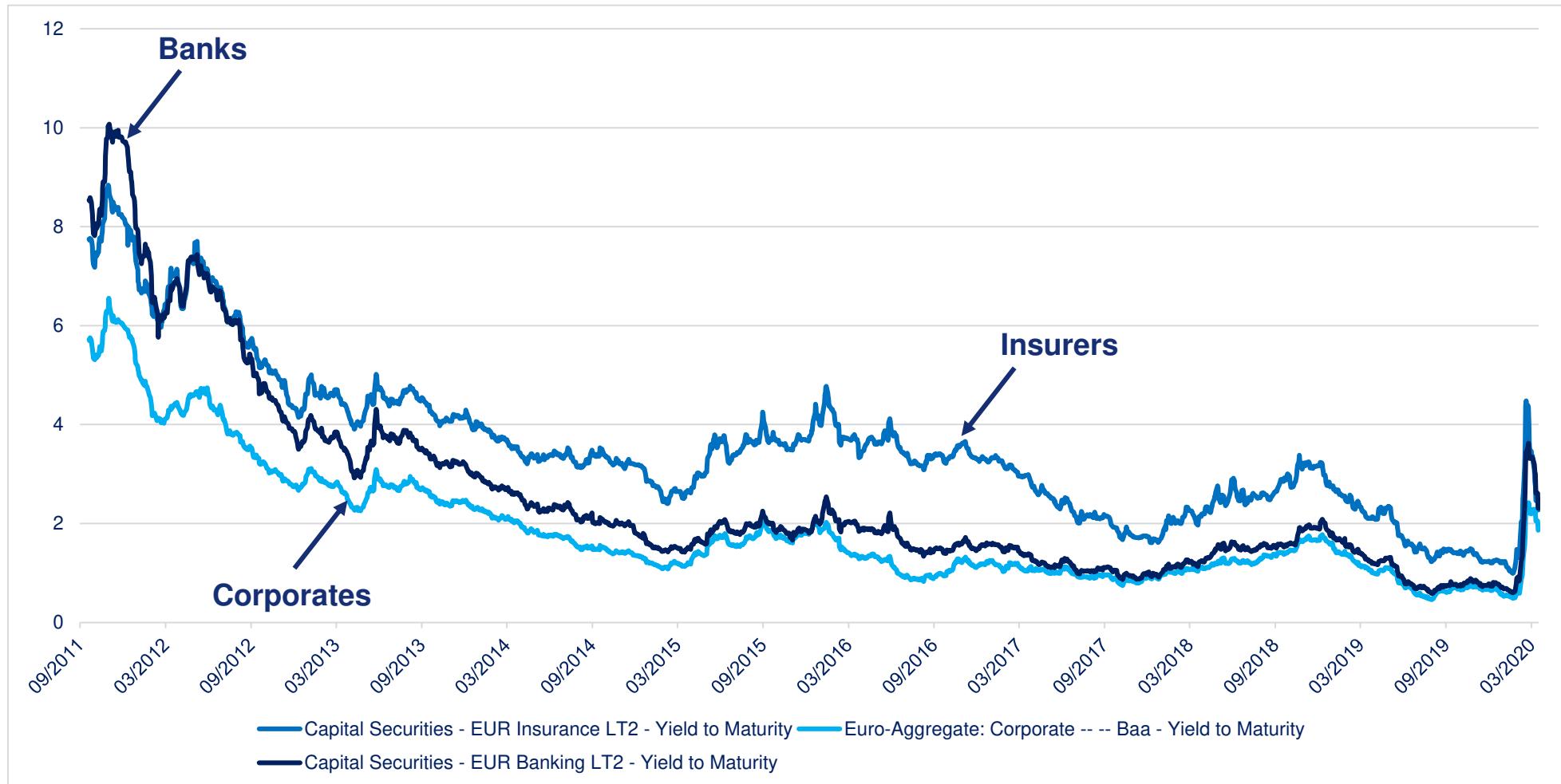


Source: Willis Re Securities, ILS Market Update Q3 2019, November 2019.

# Insurance Bonds

## Banks, Corporates and Insurers

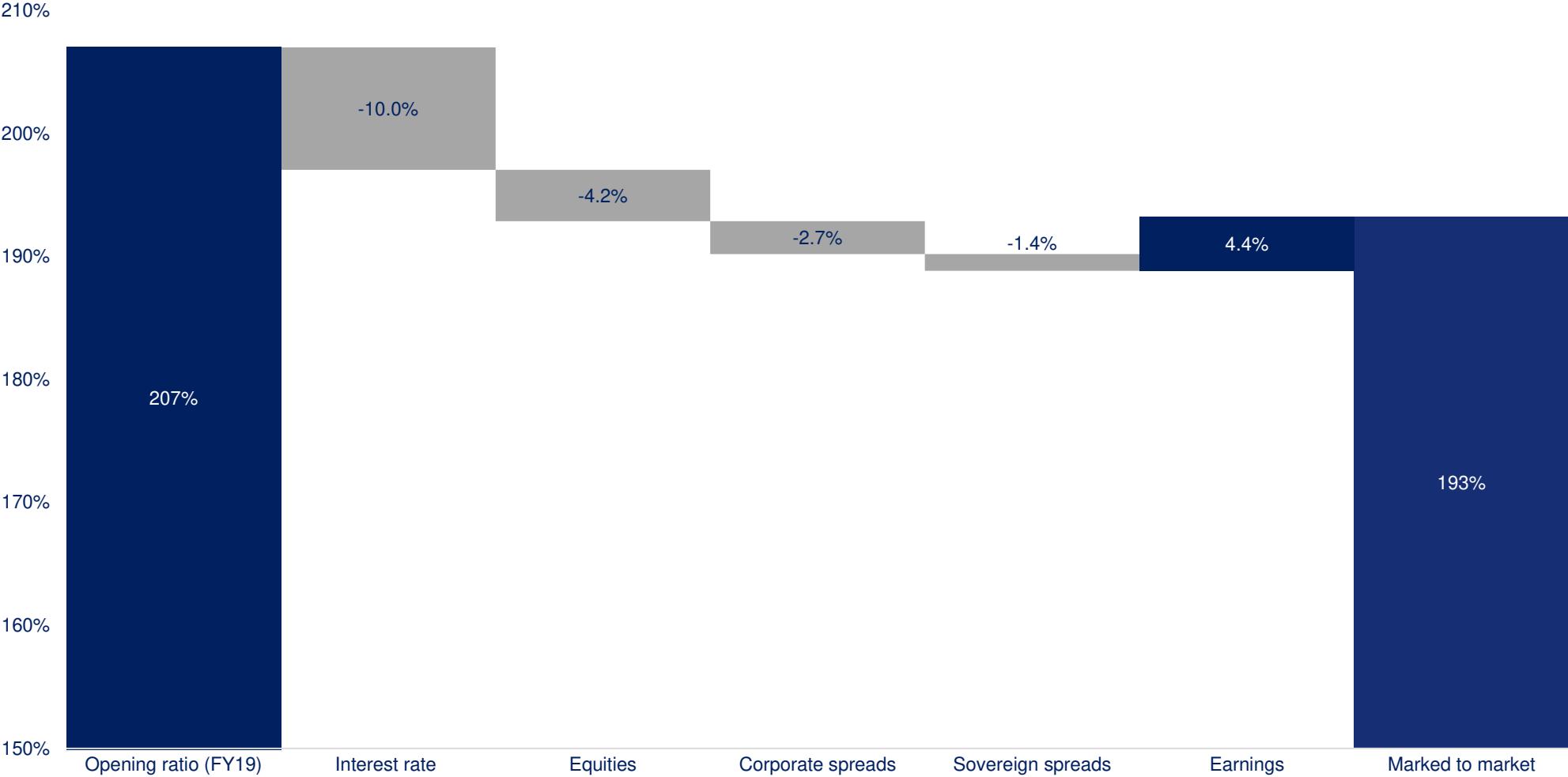
European Insurance Bonds yields in comparison to bank and corporate bonds



Source: Barclays Live. As at 31 March 2020.

# Insurance Debt

Solvency II mark to market points to continued resilience

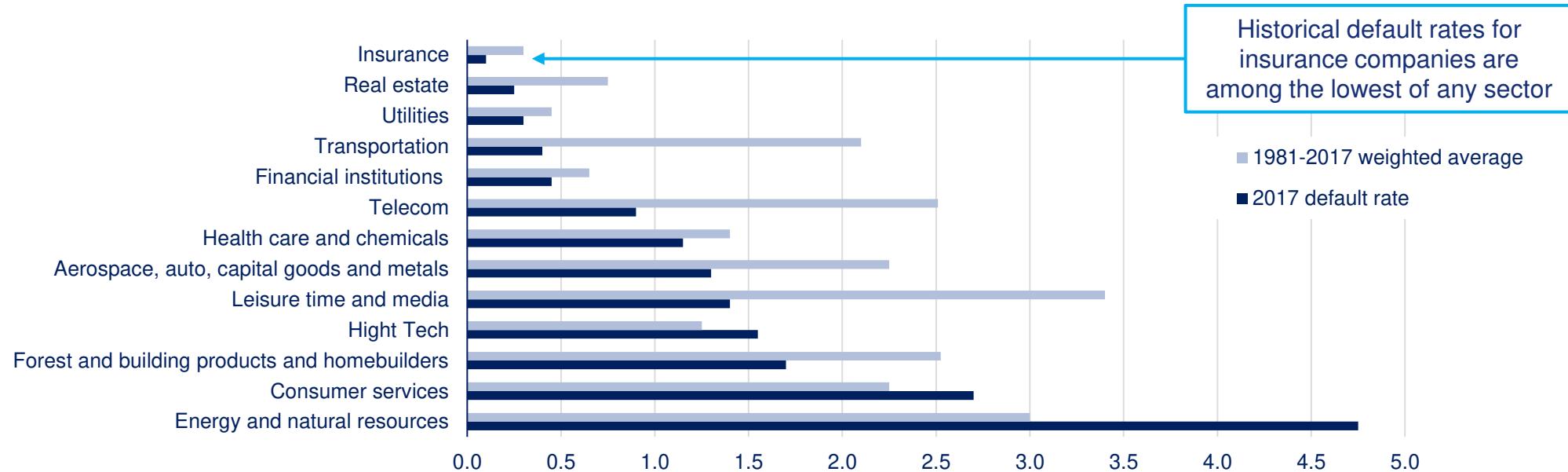


Source: Twelve Capital, Company Reports. As at 16 April 2020.

# Insurance Bonds

A highly regulated sector

Global corporate default rates by industry: 2017 versus long-term average



# Insurance Capital

## Insurance Equity

- Substantial decrease of insurance stock prices in the last two months across business lines and geographies.
- Once COVID related BI losses are digested, significant upside expected in selected insurance stocks:
  - Insurance has minimal correlation to economic cycle (recession)
  - Due to reduction of available capital ROE's will shift upwards
  - Reinsurance companies are expected to profit from massive premium increases and new business opportunities
  - Consolidation and M&A activity will accelerate as not all companies have access to new capital

# Overview re: COVID19

## Understanding the economic impacts

1. **Cat Bonds** are not affected by the COVID crises to a large degree. Spreads have increased due to improved reinsurance pricing and offer attractive low correlated returns.
2. **Insurance Bonds** offer attractive yields for investment grade corporate bond investors.
3. **Private Insurance Debt** has only limited correlation to the economic cycle and is expected to have lower defaults than corporate private debt or infrastructure but offers comparable yields.
4. **Insurance stocks** currently have attractive valuation levels, however investors have to be very selective.

# Appendix - COVID Related Exposures

## Assessing potential COVID related risks across insurance asset classes

Asset Class	Cat Bonds	Private ILS	Life ILS	Insurance Bonds	Private Insurance Debt	Insurance Equity
<b>Main source of potential risk</b>	Commercial risk via original commercial property insurance policies.	Commercial risk via original commercial property insurance policies.	Excess mortality lapse risk due to economic downturn (recession).	Underwriting exposure to commercial risk lines of business where insurance contract wording is silent/unclear.	Underwriting exposure to commercial risk lines of business where insurance contract wording is silent/unclear.	Underwriting exposure to commercial risk lines of business where insurance contract wording is silent/unclear.
<b>Source of risk mitigation</b>	Detailed cedant analysis; focus on natural perils or, in some cases, named perils coverage only; distant positioning from original risk.	Cedant analysis; non-proportional, natural perils focus; distant positioning from original risk.	Portfolios with lapse risk to be avoided.	Diversification by line of business or, very limited exposure to 'pure play' commercial lines operations; relative senior position in capital structure.	Diversification by line of business or, retail insurance orientated with very limited exposure to commercial lines; relative senior position in capital structure.	Significant potential impact embedded within current equity valuations; highly selective exposure to 'pure play' commercial lines operations.
<b>Expected impact</b>	Very low	Medium on average; high in sidecars and quota shares	Medium to high	Very low	Very low	Medium

Source: Twelve Capital.

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**Twelve Capital AG**  
Dufourstrasse 101  
8008 Zurich  
Switzerland  
+41 (0)44 5000 120

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**Twelve Capital (UK) Ltd**  
Moss House  
15-16 Brook's Mews  
London W1K 4DS  
United Kingdom