

MARIM CONFERENCE 2017

Risk & Resilience in a VUCA World

26 - 27 July 2017 Le Meridien Putrajaya

KEY NOTE ADDRESS

Angela Kelly

Country Manager, Singapore, Lloyd's
Chief Executive Officer, Lloyd's of
London (Asia) Pte Ltd



Risk and Resilience in a VUCA World

Malaysian Association of Risk and Insurance Management

Key Note

Angela Kelly

Chief Executive Officer, Lloyd's Asia

26 July 2017

A Brief History of Lloyd's

➤ 1688

First known reference to Edward Lloyd's Coffee House

➤ 1730

Lloyd's dominates shipping insurance globally

➤ 1871

First Lloyd's Act passed making it illegal for anyone not recognised as a Lloyd's underwriting member to sign against a Lloyd's policy



The World's Leading Specialist Insurance Market



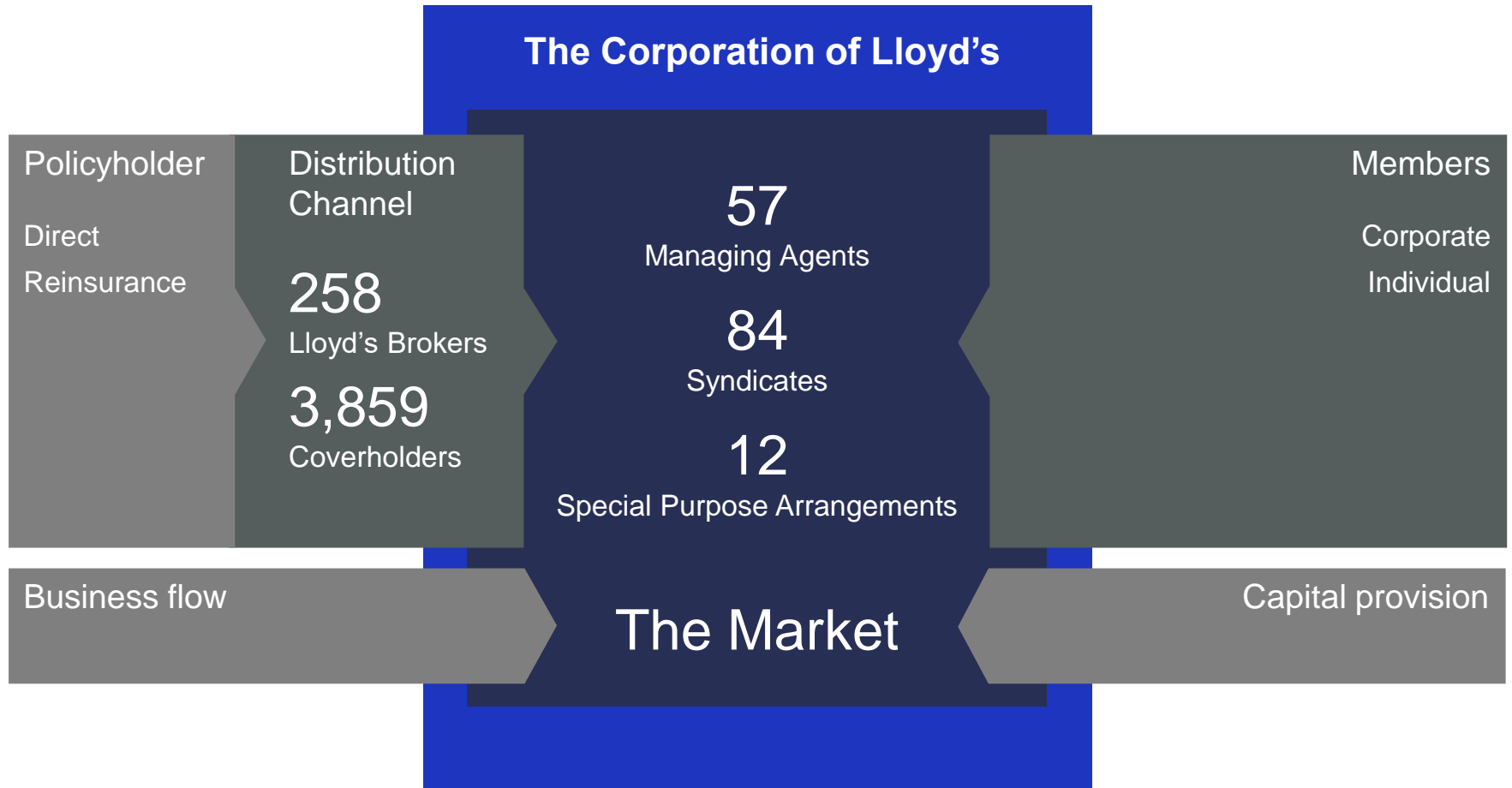
The Lloyd's Market

Home to Leading Insurance Brands

 Acappella SYNDICATE 2004	 ADVENT A FAIRFAX Company	 AEGIS	 AG DORÉ & OTHERS SYNDICATE TWO FIVE TWO SIX	 ALLIED WORLD	 AmTrust at Lloyd's An AmTrust Financial Company
 antares	 APOLLO SYNDICATE MANAGEMENT LIMITED	 Arch Underwriting at Lloyd's	 ARCUS 1856	 Argenta	
 ARGOGLOBAL Member Argi Group	 Arietta	 ARK	 ARCO	 ASPEN	 asta
 ATRIUM	 AXIS	 Barbican INSURANCE GROUP	 Beaufort Underwriting Agency Limited	 beazley	 BRIT GLOBAL SPECIALTY
 CATHEDRAL UNDERWRITING LTD	 CAPITA	 Charles Taylor MANAGING AGENCY	 Chaucer	 CHINA RE Syndicate 2008 at Lloyd's	 CHUBB
 CNA / HARDY	 CNA Dale Underwriting Partners	 DW 1991	 Endurance	 ERS	 EVEREST Cover Through Ltd
 FARADAY	 HAMILTON LLOYD'S	 HISCOX	 iCat Underwriter at LLOYD'S Syndicate 318	 Liberty Specialty Markets	 MAP underwriting at Lloyd's
 MARKET	 NEON	 MS Amlin	 MSIG	 MSF Pritchard Syndicate 318 Underwriters at Lloyd's	 Munich RE
 Navigators Insuring A World In Motion®	 Nephila	 NEWLINE GROUP	 Novae LOOKING FORWARD	 Pembroke MANAGING AGENCY	 1492 PROBITAS
 ProSight Specialty Insurance	 QBE	 R&Q	 RenaissanceRe	 RIVERSTONE A FAIRFAX Company	 S A Meacock & Company Limited
 Sirius International	 SKULD	 SOMPO CANOPIUS	 STARR COMPANIES	 STARSTONE	
 TALBOT VALDURIS GROUP	 The Channel Managing Agency	 The Standard Syndicate	 TOKIO MARINE KILN	 TOKIO MARINE HCC	 TRAVELERS
 VIBE SYNDICATE MANAGEMENT	 W/R/B UNDERWRITING	 XL XL CATLIN			

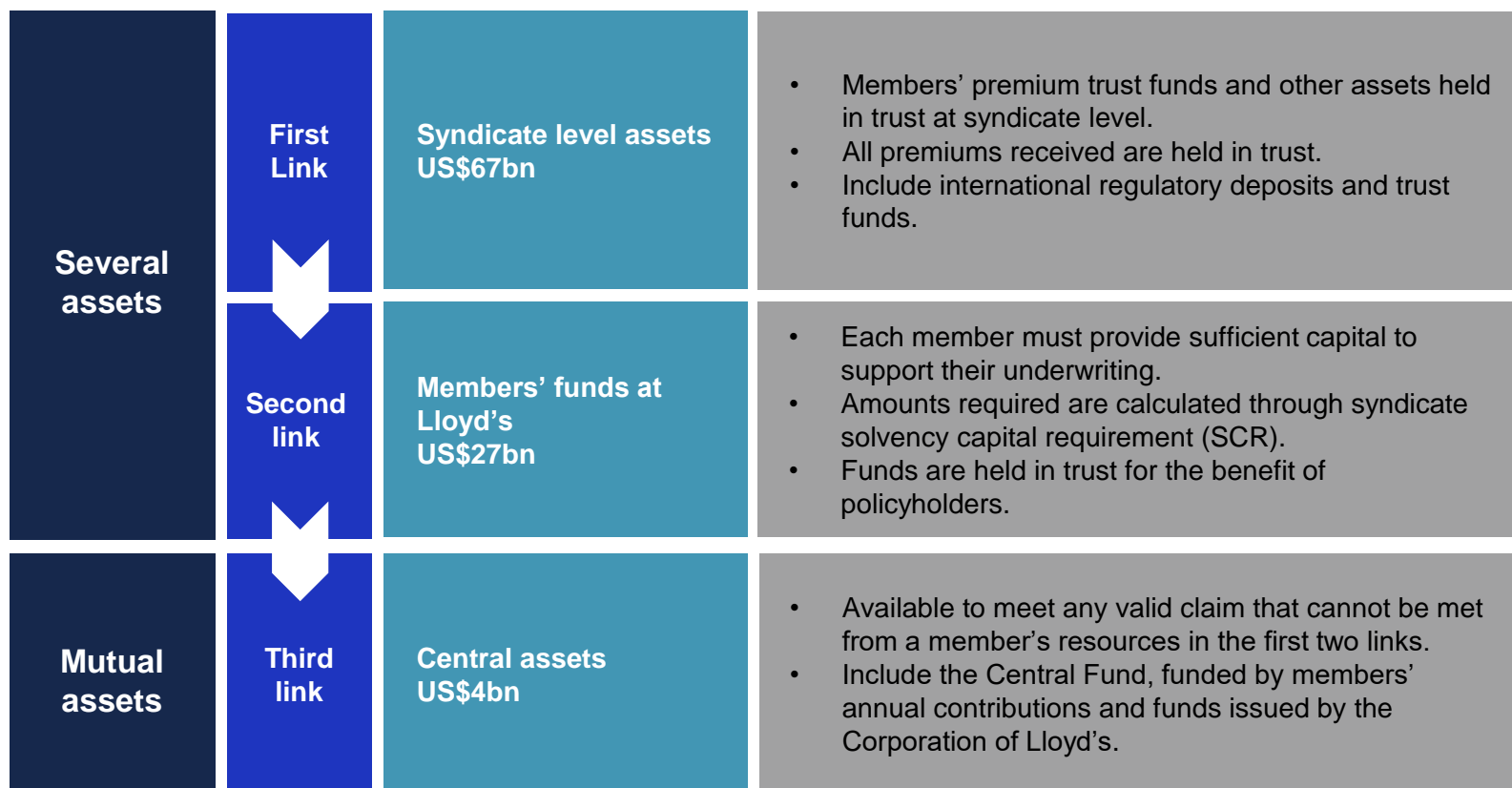
As at 30/03/16

The Lloyd's Market Structure



The Lloyd's Chain of Security

Unique capital structure provides **excellent financial security to policyholders** and capital efficiency to members



The Corporation is responsible for setting both member and central capital to achieve a level of capitalisation that is robust and allows members the potential to earn superior returns.

As of December 31st 2016; £1 = US\$1.23

Strength in Ratings

Syndicates operating in the market enjoy the benefit of a single market rating given by independent agencies

**STANDARD
& POOR'S**

A+
(Strong)

FitchRatings

AA-
(Very strong)



A
(Excellent)

Lloyd's in Numbers

Syndicates

of specialist underwriting expertise

84

Coverholders

offering a local route to Lloyd's

3,859

Brokers

bringing business to Lloyd's

258

Countries and territories

the Lloyd's market covers

200

US\$ billion claims paid

by Lloyd's over the last six years

85

Years

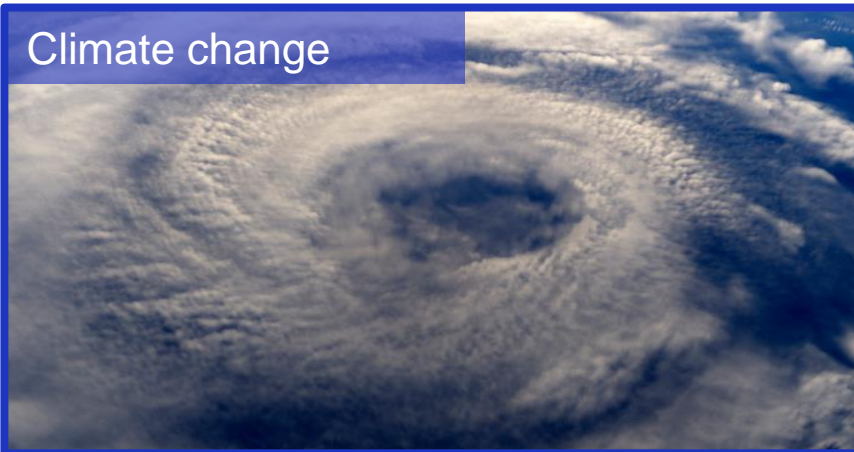
of underwriting experience

329

Four Mega Trends

Themes affecting risk generation, new and changed perceptions

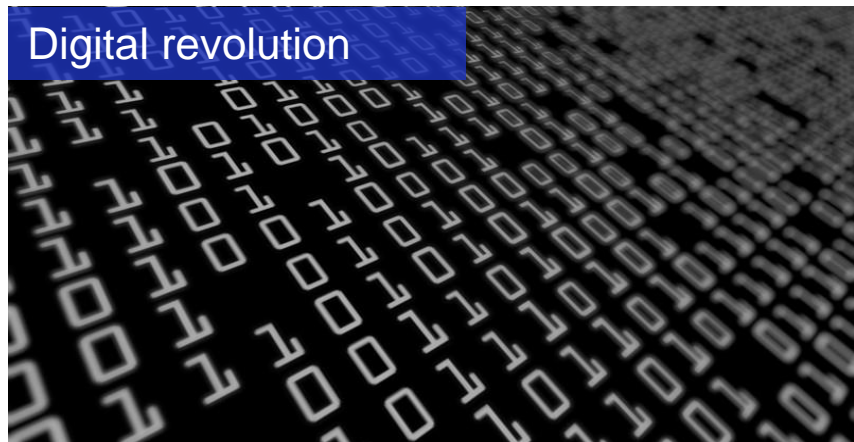
Climate change



Urbanisation



Digital revolution

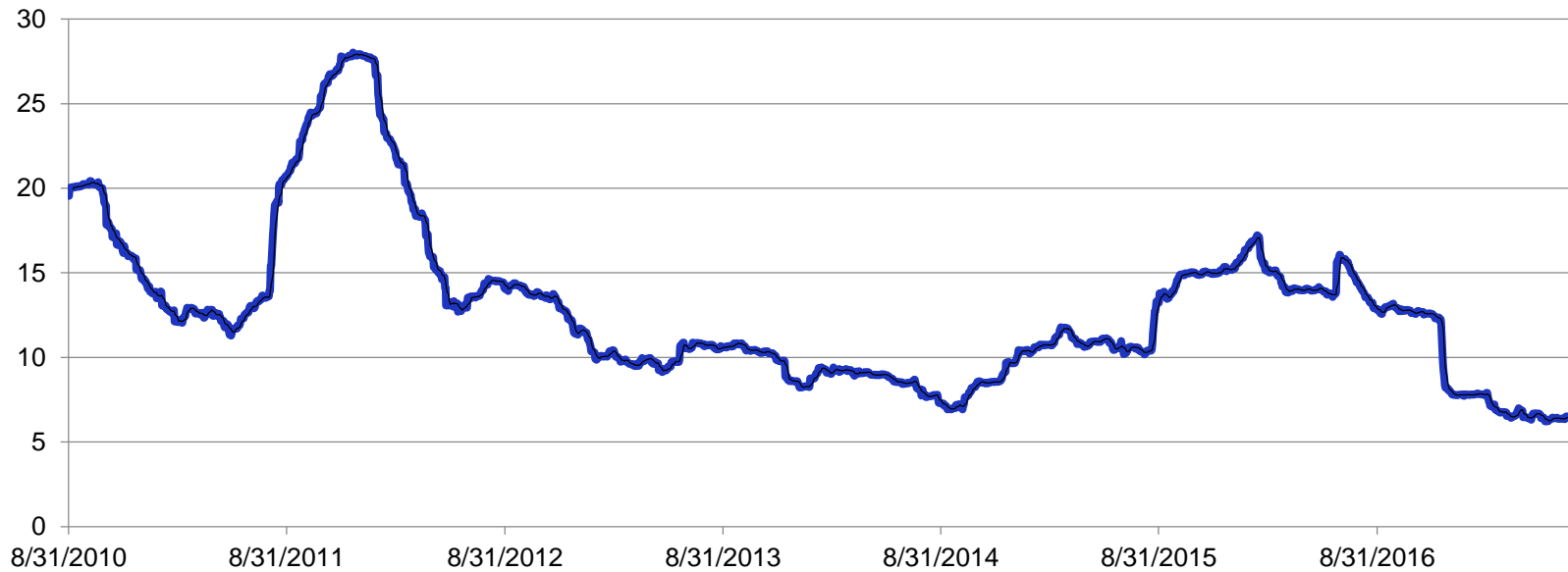


Globalisation



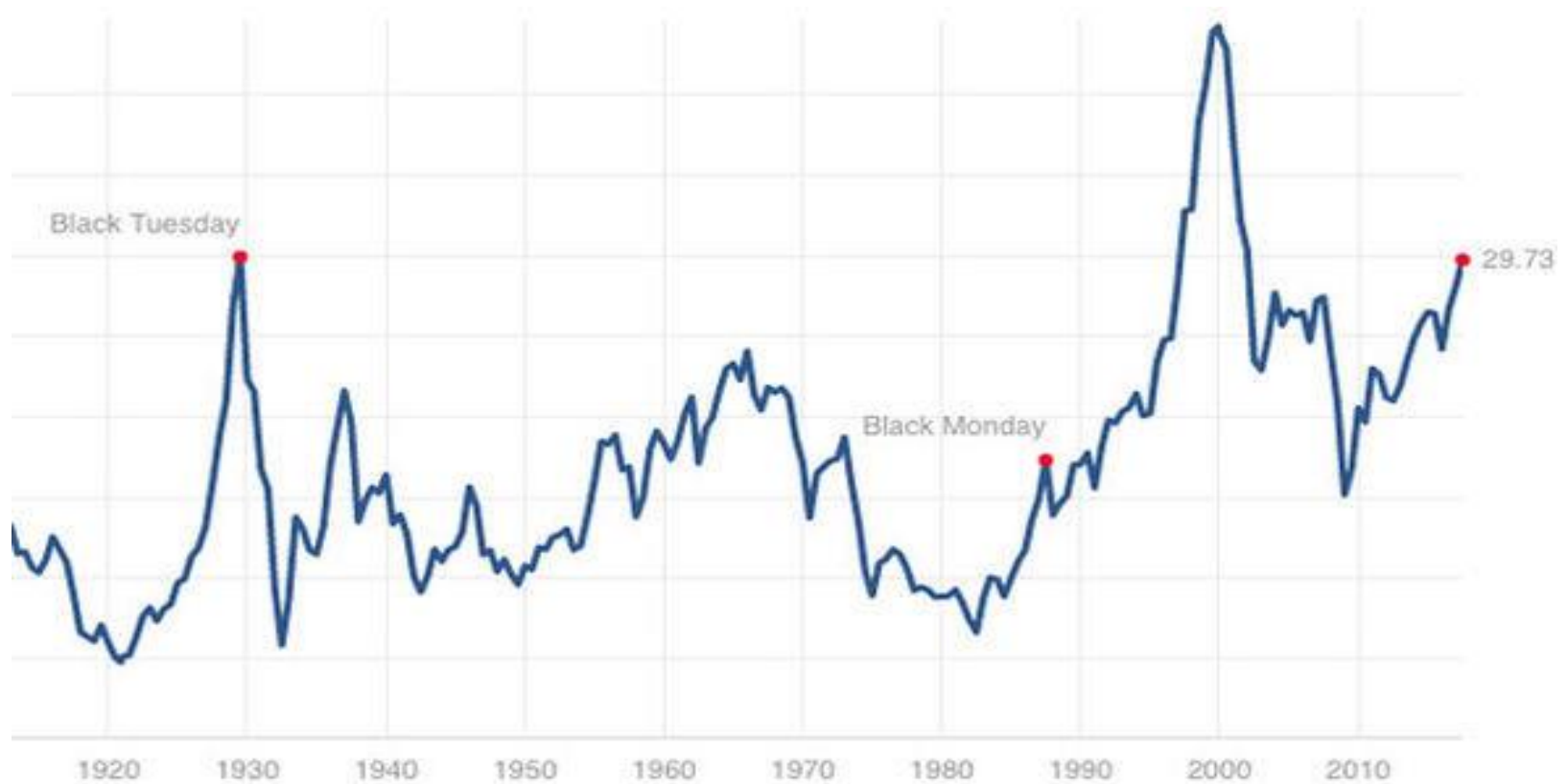
Equity Market Volatility

S&P Global 1200 6-Month Realized Volatility Index

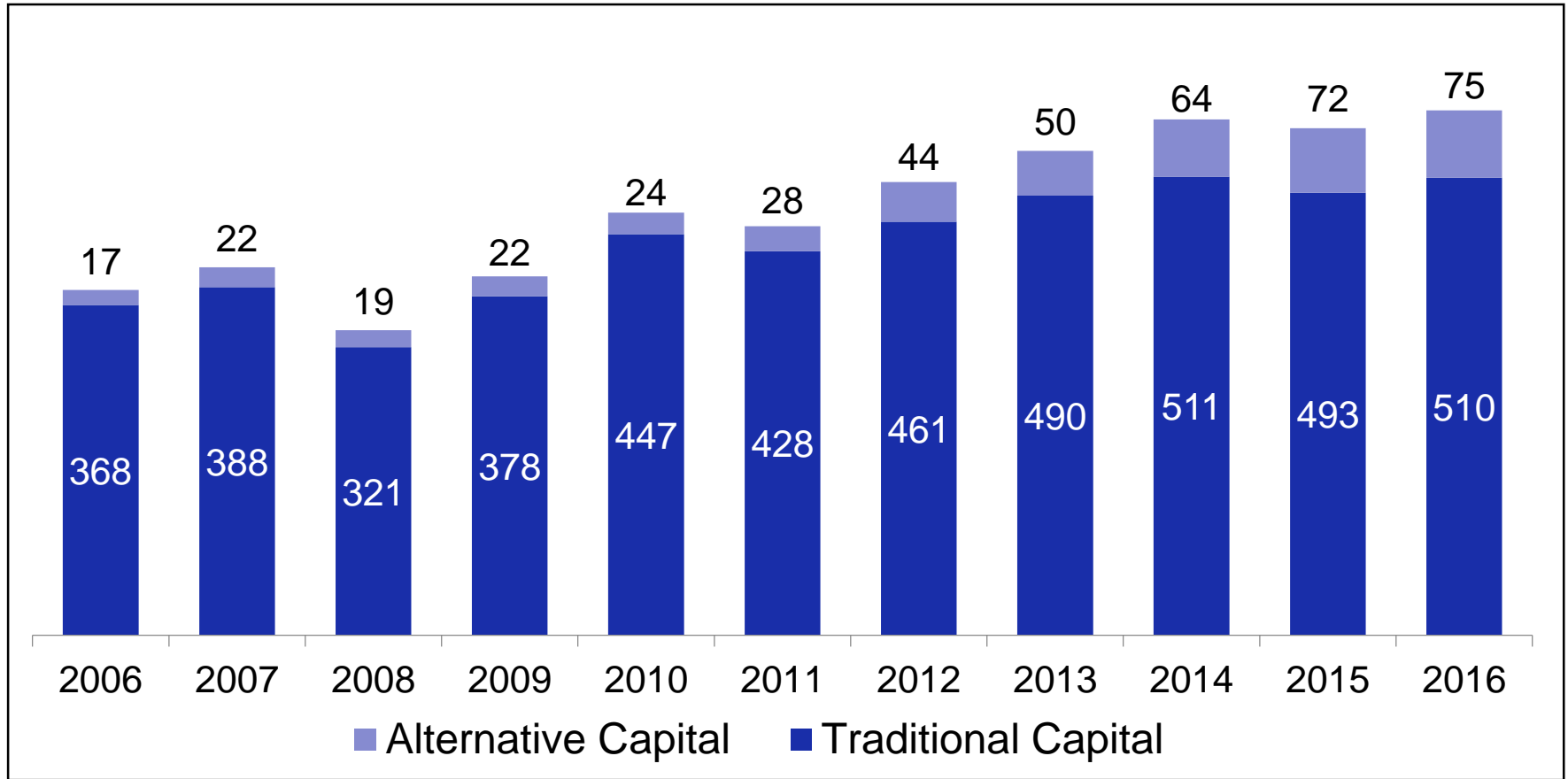


Price Earnings Ratios

Shiller Price Earnings (PE) ratio for S&P 500

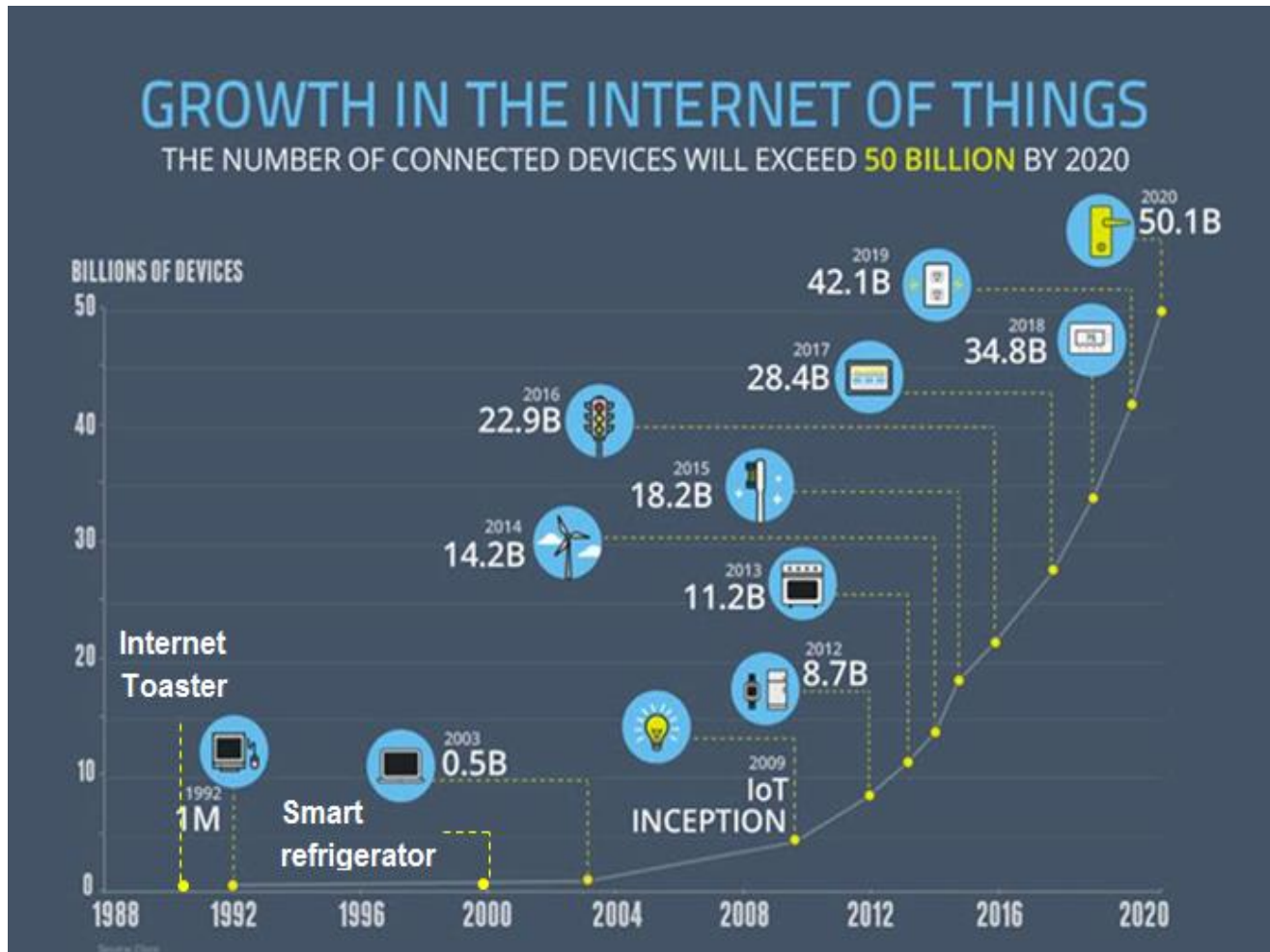


Global reinsurance capital (USD bn)



Source: Aon Benfield, Inc., "Reinsurance Market Outlook: Capacity Gap Narrows as Demand Picks up", September 2016

Trend of IoT – Exponential



Technology – Driving Transformation



Blockchain

- Quicker transaction processing
- Lower transaction and admin costs
- Increased transparency of transactions
- Improved data security

Drones

- Increased speed of claims assessments
- Reduced fraud
- Assess underlying assets for underwriting. quickly and effectively

Augmented/virtual reality

- Engage customers by illustrating tailored need for insurance
- Inspect underlying assets remotely
- Inspect damage remotely
- Train employees

The rise of the intangibles



Alibaba.com

The world's most valuable retailer owns no inventory

facebook

Facebook

The world's most popular media company creates no content

NETFLIX

Netflix

The world's largest movie house owns no cinemas



Skype

The world's largest phone company owns no telco infrastructure



Airbnb

The world's largest accommodation provider owns no property



Uber

The world's largest taxi company owns no taxis

Autonomous Marine Vessels

New Challenges on the Horizon



CYBER

Digitisation and Technology Driving Cyber Exposures

Technology. Global cyber attack

Security experts track initial infection

Officials in Ukraine, which was the hardest hit, point to the finger of blame at Moscow

64 seconds

The global cyber attack that hit some of the world's largest companies has been tracked by security experts in an initial infection in Ukraine, where politicians were accused of orchestrating the assassination of a prominent journalist.

Computer security experts said Ukraine was the hardest hit. ESET, a cyber security and anti-virus company, said its data had found more than three-quarters of the infections worldwide were in Ukraine.

Ukraine's national security agency said its forensic analysis of the largest and most serious infections, said they "could spread" to other countries, known as NotPetya or Lockbit, had begun with a compromised software update from the Ukrainian accounting company K2P.

The malware and spyware were provided to a network previously only used by anti-corruption watchdog groups because of the sophistication – and sophistication – required to do so.

British, American, French and Ukrainian presidential administrations

The virus originated in a [country] hostile to the Ukrainian nation ... Today, there is only one: Russia

and a former Moscow associate, said the malware was spread from the infected computers and programs from the infected machine in Ukraine. The virus originated in a factory located in the Ukrainian nation ... Today, there is only one: Russia.

Ukrainian spokesman Dmitry Pukhov said the virus had been installed on computers who had installed the attack. The virus spread through infected computers, with Google Analytics having been used.

What did the attack do?

The malware was designed to steal information from infected computers, which were then used to launch attacks on other computers in Ukraine. The malware was designed to steal information from infected computers, which were then used to launch attacks on other computers in Ukraine.

Locating threats

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Who is behind the attack?

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Cyber attack cripples systems worldwide

Virus-taking victims for ransom likely in three first factors hold in Ukraine, but experts say it may be the opposite

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'The recent ransomware attack that started just two days ago has global impact, stopping chocolate factories in Australia, crippling ports (in India) and affecting at least one shipping line.'

Asia under-insured against cyber threats: study

By Chris Hoang

These groups are at risk

Disastrous costs

Event types	Estimated costs of reported incidents	Incident types	% loss covered			
Event	Large loss (\$M)	Small loss (\$M)	Large loss (\$M)	Small loss (\$M)	Large loss (\$M)	Small loss (\$M)
Computer system	45	0	50	81	11	1
Computer system	57	23	74	21	1	7

Despite low large potential recoveries, only between 14 and 17 per cent of large losses were covered in the study, except for ransomware, which was covered for 81 per cent of the total in losses reported.

The report also found that single cyber events had the average potential to exceed \$10 million, with 50 per cent of large loss events exceeding \$1 million.

In Singapore, cyber risk is the second most prevalent risk

Several big corporations affected by virus

A.P. Moller-Maersk

The Danish shipping giant was hit by the NotPetya ransomware virus, which is believed to have originated in Ukraine. The virus caused significant damage to the company's IT systems, and it is believed that the virus was spread from an infected computer in Ukraine.

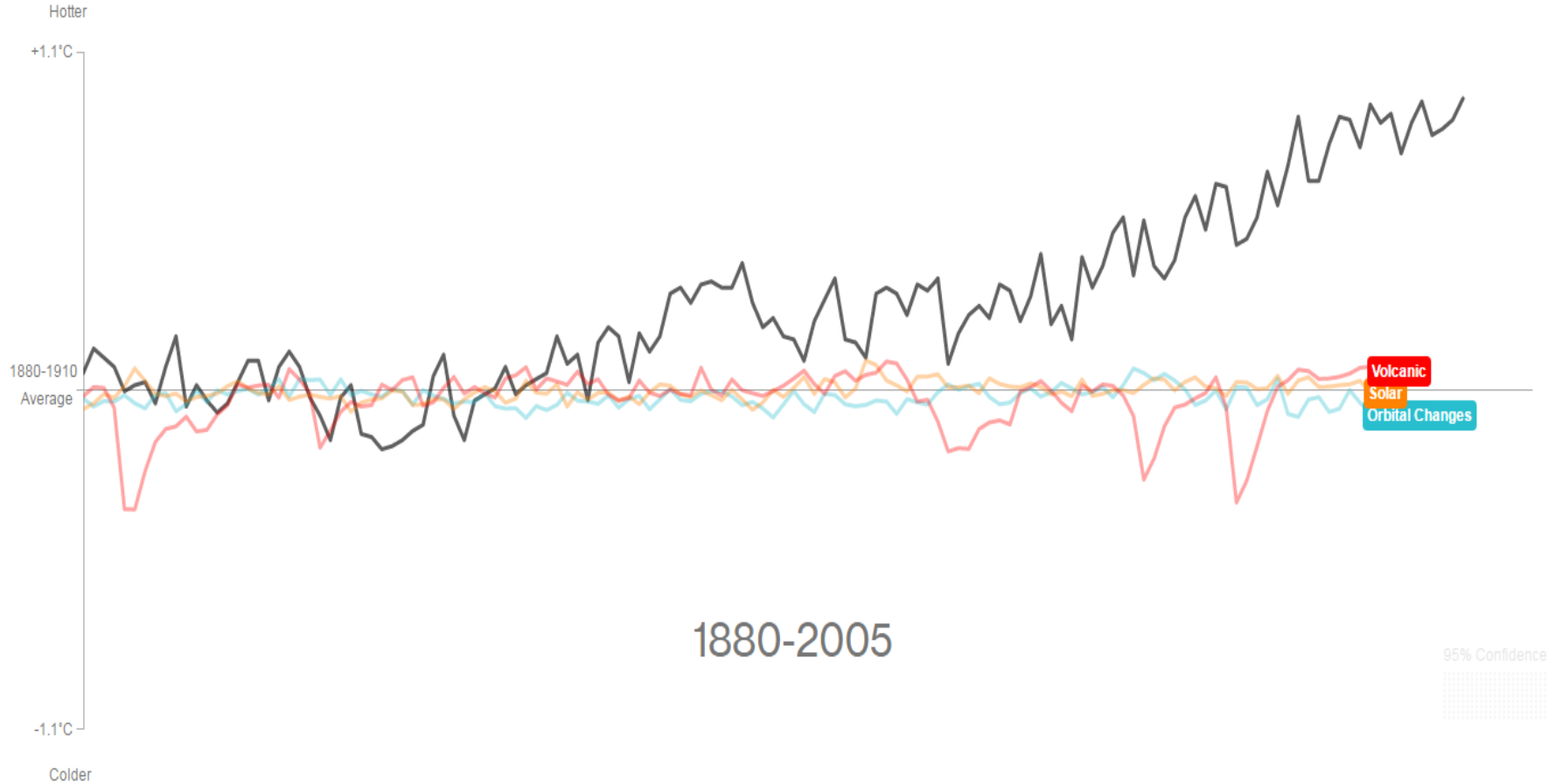
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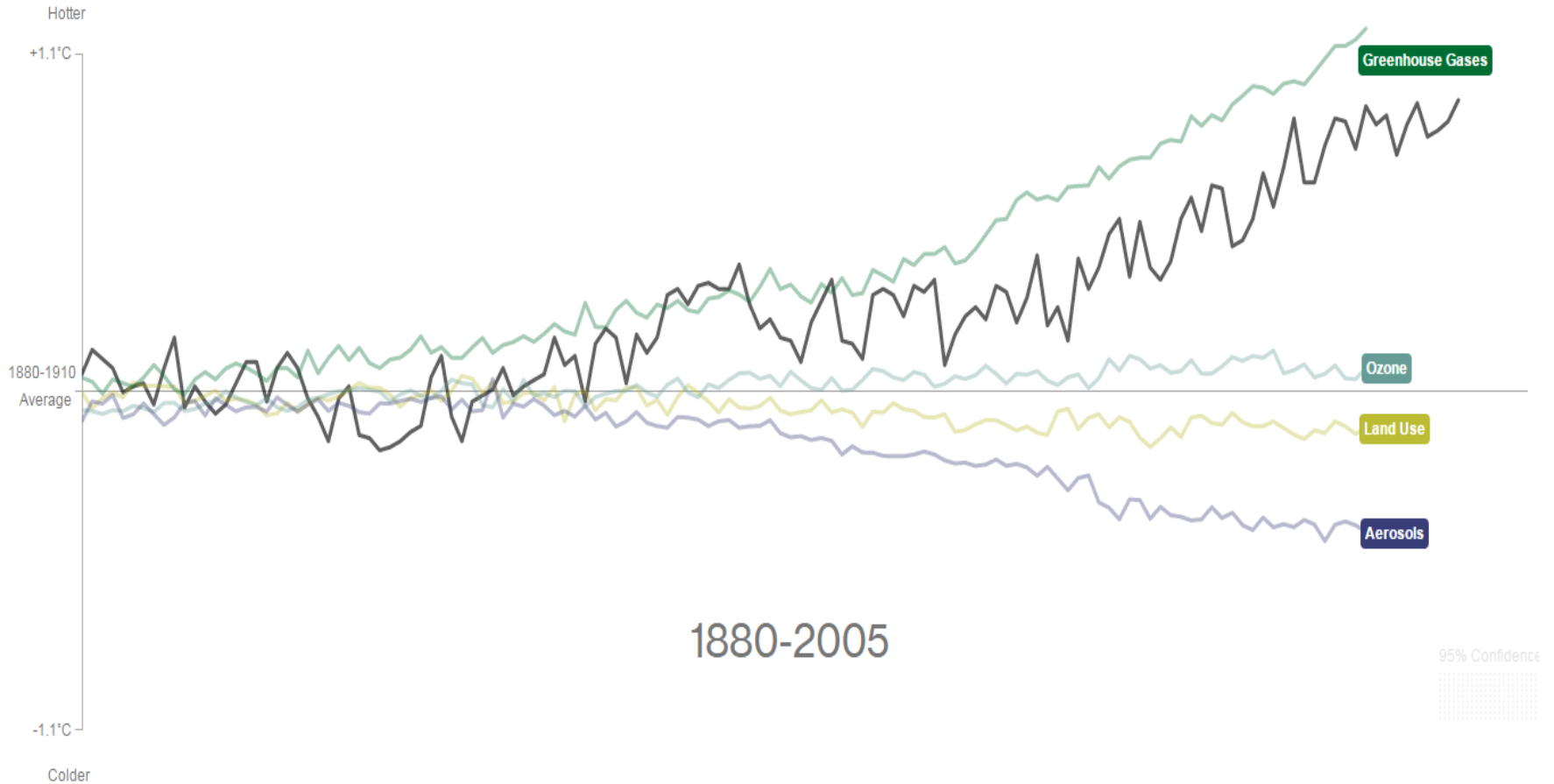
Where is warming coming from?

NASA's model – Natural factors



Where is warming coming from?

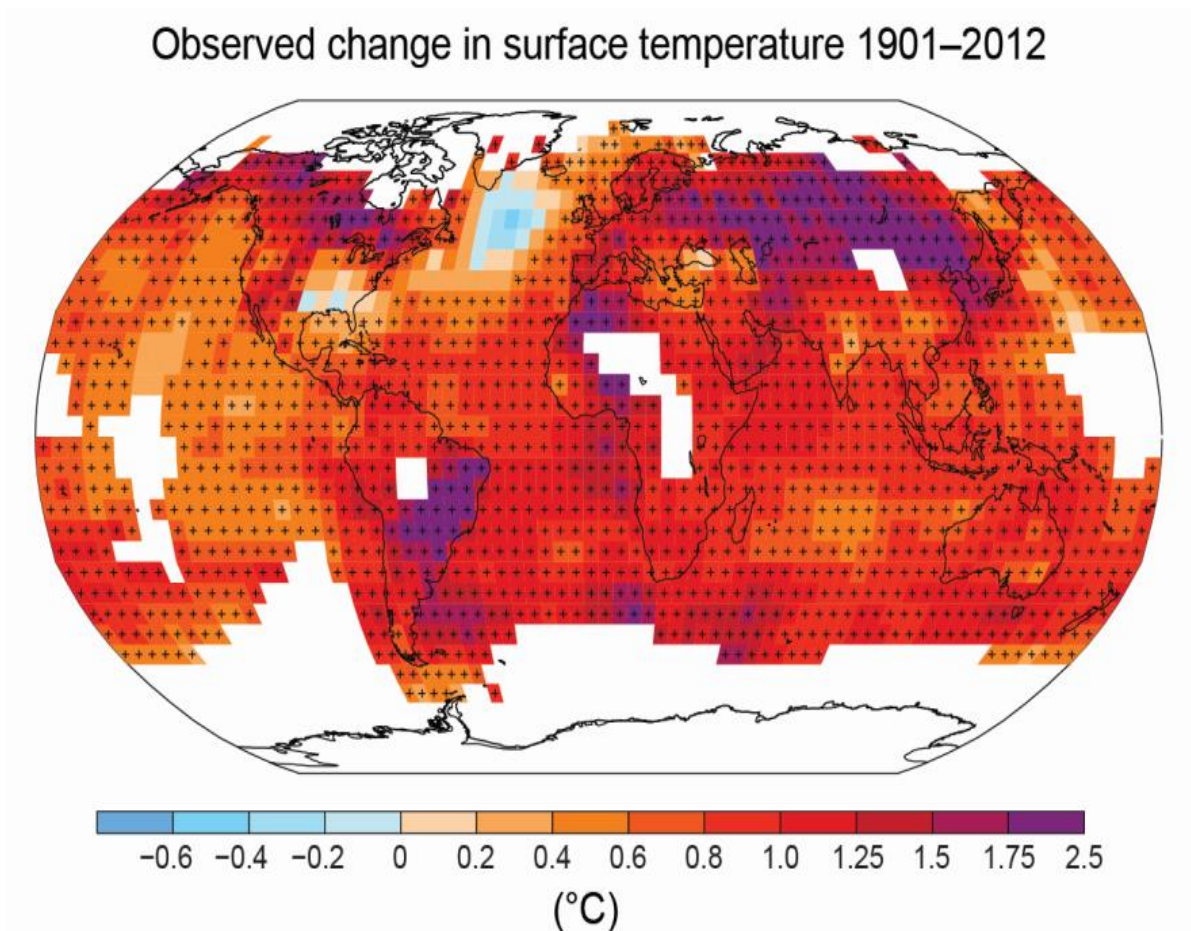
NASA's model – Human factors



Climate change

A risk multiplier rather than a peril

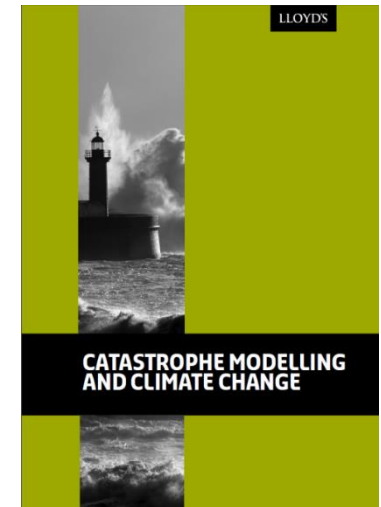
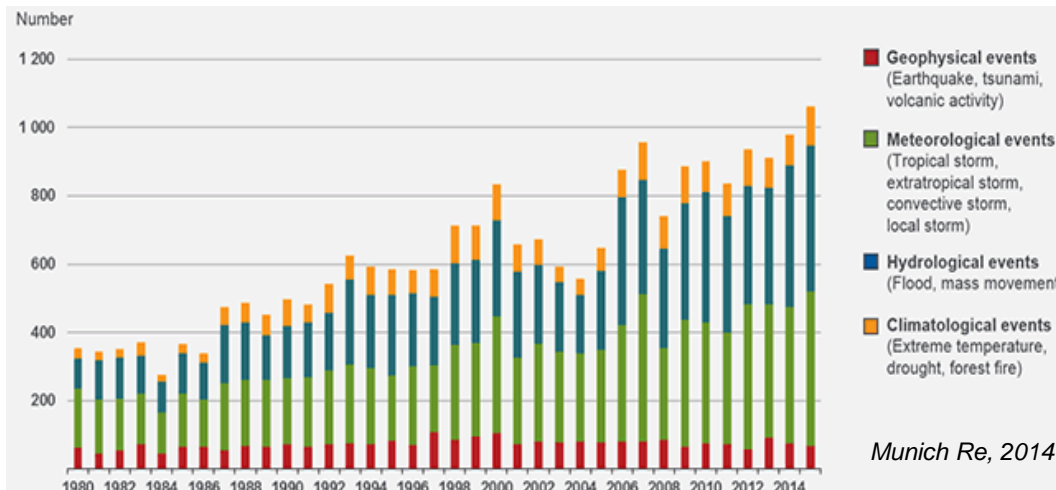
- The IPCC assesses that the current trajectory is for an additional 2.6 – 4.8°C of global warming by the end of the century
- This figure will **not** be uniform – there will be global variation



Climate change and extreme weather

Establishing impacts

- As the atmosphere becomes warmer and moister, it generates more potential energy for storms and severe weather events
- Changes in atmospheric and ocean circulation will influence storm tracks and many other aspects of the weather



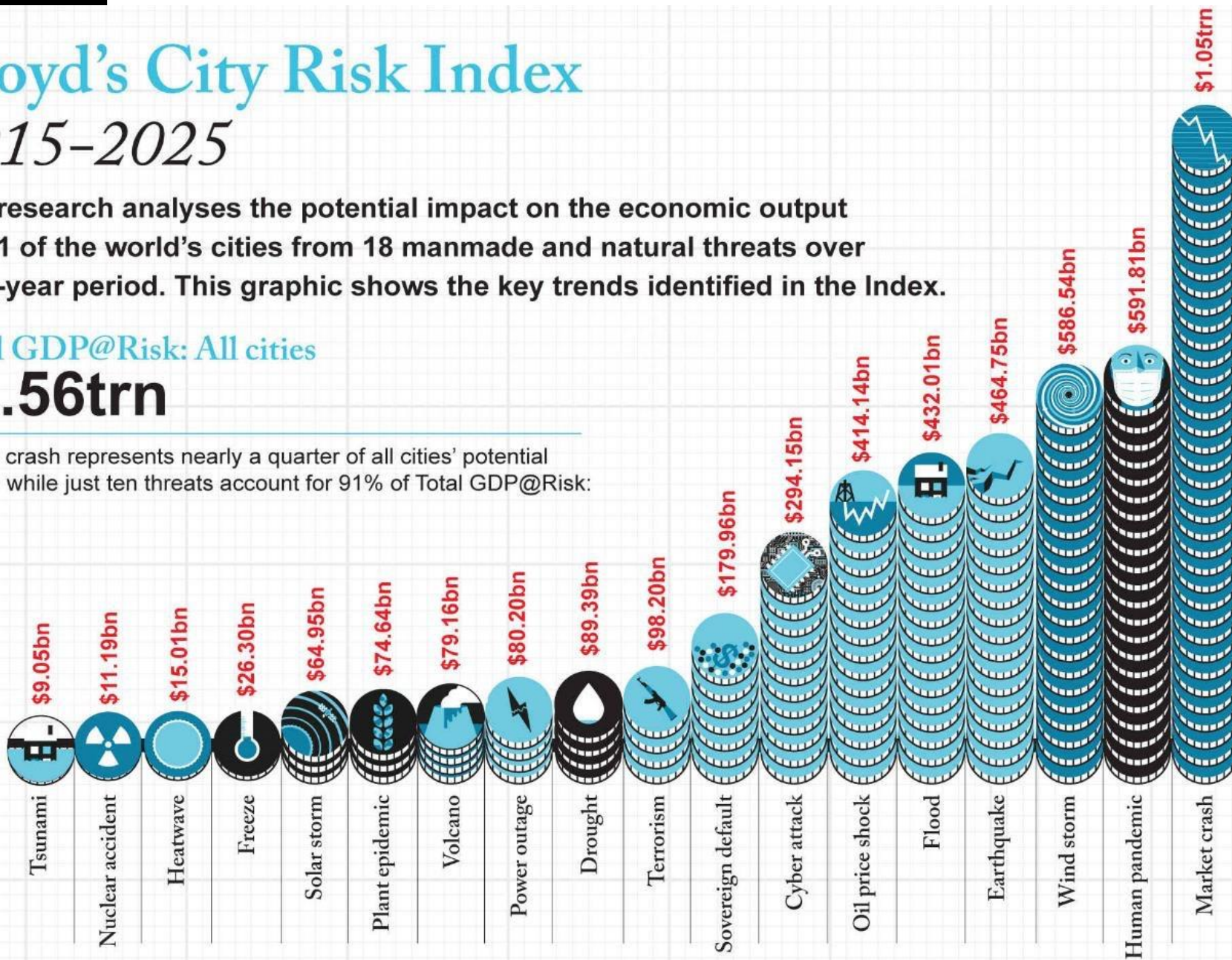
Lloyd's City Risk Index 2015-2025

New research analyses the potential impact on the economic output of 301 of the world's cities from 18 manmade and natural threats over a ten-year period. This graphic shows the key trends identified in the Index.

Total GDP@Risk: All cities

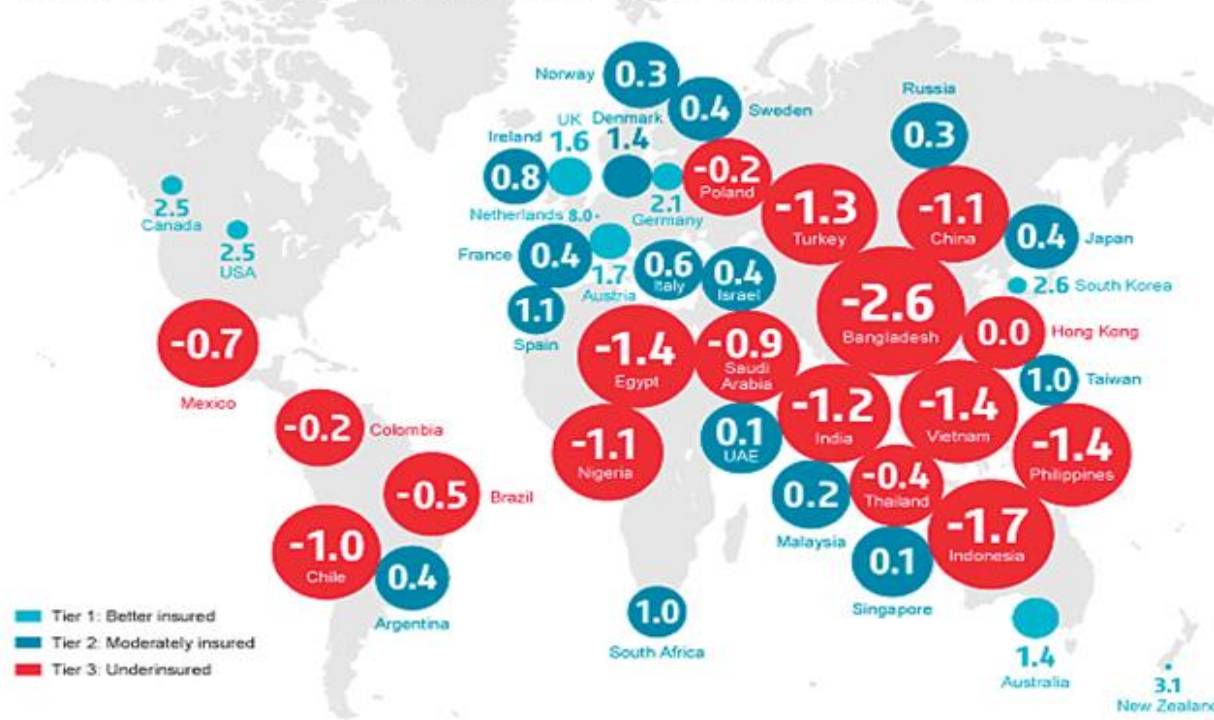
\$4.56trn

Market crash represents nearly a quarter of all cities' potential losses, while just ten threats account for 91% of Total GDP@Risk:



Insurance Penetration Gap

UNDERINSURANCE MAP



BETTER INSURED

- 8.0 Netherlands
- 3.1 New Zealand
- 2.6 South Korea
- 2.5 US
- 2.5 Canada
- 2.1 Germany
- 1.7 Austria
- 1.6 UK
- 1.4 Australia

MODERATELY INSURED

- 1.4 Denmark
- 1.1 Spain
- 1.0 South Africa
- 1.0 Taiwan
- 0.8 Ireland
- 0.6 Italy
- 0.4 Argentina
- 0.4 Israel
- 0.4 Japan
- 0.4 France
- 0.4 Sweden
- 0.3 Russia
- 0.3 Norway
- 0.2 Malaysia
- 0.1 Singapore
- 0.1 UAE

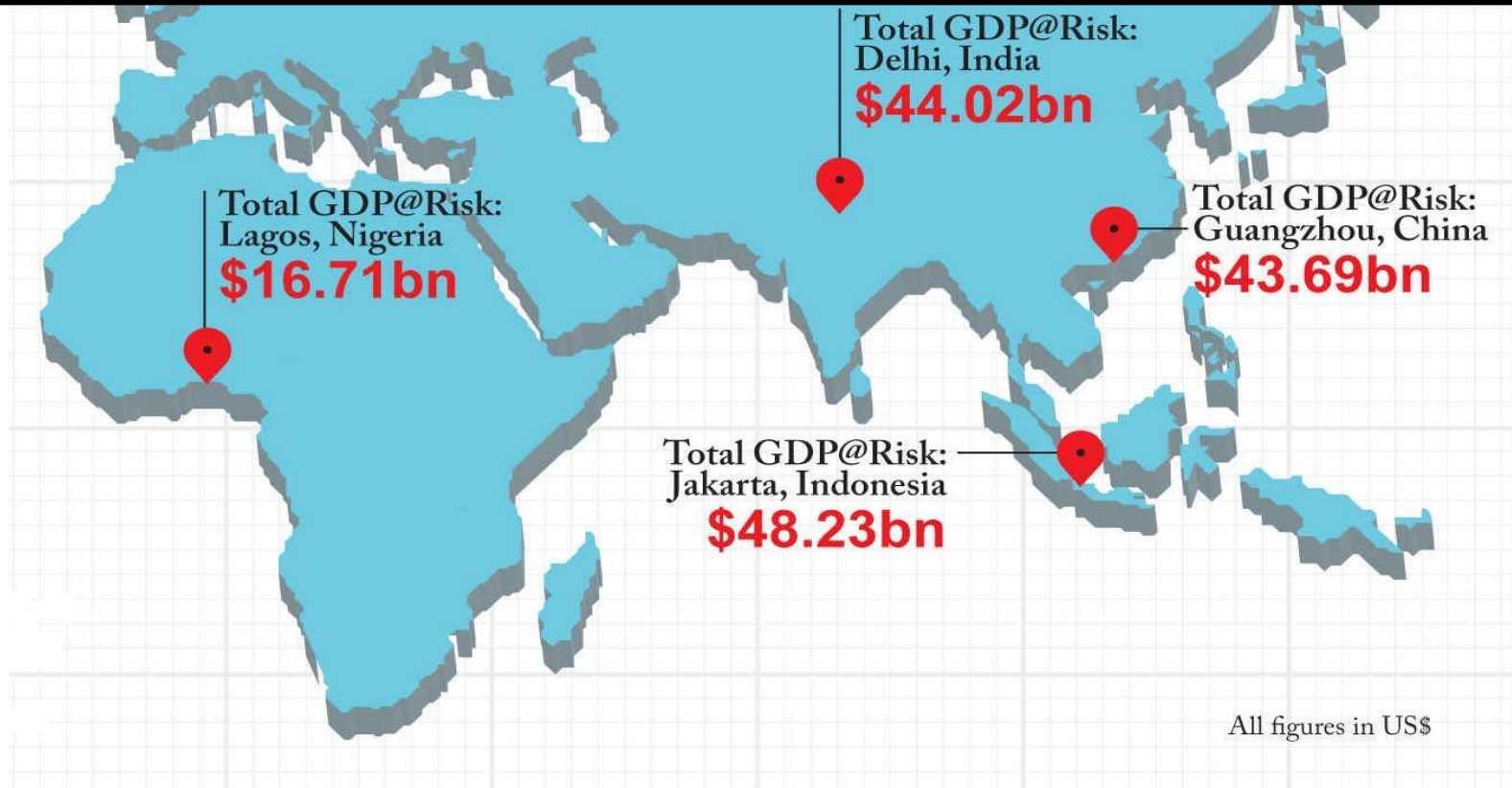
UNDERINSURED

- 0.0 Hong Kong
- 0.2 Poland
- 0.2 Colombia
- 0.4 Thailand
- 0.5 Brazil
- 0.7 Mexico
- 0.9 Saudi Arabia
- 1.0 Chile
- 1.1 Nigeria
- 1.2 India
- 1.3 Turkey
- 1.4 Egypt
- 1.4 Philippines
- 1.4 Vietnam
- 1.7 Indonesia
- 2.6 Bangladesh

Key Trends

Emerging economies have the most to lose

Total GDP@Risk: \$3.26trn



South East Asia

Top five threats across 15 cities



Wind Storm \$68.29bn GDP@risk



Market Crash \$60.80bn GDP@risk



Pandemic \$30.74bn GDP@risk



Earthquake \$30.06bn GDP@risk








Flood \$22.48bn GDP@risk

\$300.20bn GDP@risk

17.71% of Annual GDP

Malaysia

Top five threats

	Market Crash	\$2.75bn GDP@risk	60.19%
	Pandemic	\$0.63bn GDP@risk	13.77%
	Volcano	\$68.29bn GDP@risk	8.64%
	Plant Epidemic	\$30.06bn GDP@risk	5.20%
	Sovereign Default	\$22.48bn GDP@risk	2.87%

Risk & Resilience in a VUCA World

PANDEMIC
POTENTIAL INSURANCE IMPACTS
LLOYD'S EMERGING RISKS TEAM REPORT

SYNTHETIC BIOLOGY
INFLUENCING DEVELOPMENT
LLOYD'S EMERGING RISKS TEAM REPORT

BEHAVIOUR
BEAR, BULL OR LEMMING?
LLOYD'S EMERGING RISKS REPORT

ARCTIC OPENING:
Opportunity and Risk in the High North
CHATHAM HOUSE

AUTONOMOUS VEHICLES
HANDING OVER CONTROL: OPPORTUNITIES AND RISKS FOR INSURANCE
LLOYD'S

Stochastic modelling of liability accumulation risk
Emerging Risk Report 2017
Innovation Series
Society and Security

Stranded Assets: the transition to a low carbon economy
Overview for the insurance industry
Emerging Risk Report 2017
Innovation Series
Society and Security

California Flood
Central Valley risk analysis
NATURAL ENVIRONMENT
LLOYD'S

Potential impacts of weather events on food security
EL NINO
Key:
Floods, Food Rets, Crop Epidemic, Farms Suffer, Transient Drought, Landslides, Severe Drought, Transient Rainfall, Drought

Overall global economic impact

US stocks fell 3% of value	EU stocks rose 10% of value	Global risk production falls by 7%	Global macro production falls by 10%	Global oil and gas production falls by 11%	Risk prices increase by 500%
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LLOYD'S