



**INSURANCE
INFORMATION
INSTITUTE**

Overview of US P&C and Marine Market

Marine Insurance Issues Seminar
American Institute of Marine Underwriters, New York, NY
May 7, 2019

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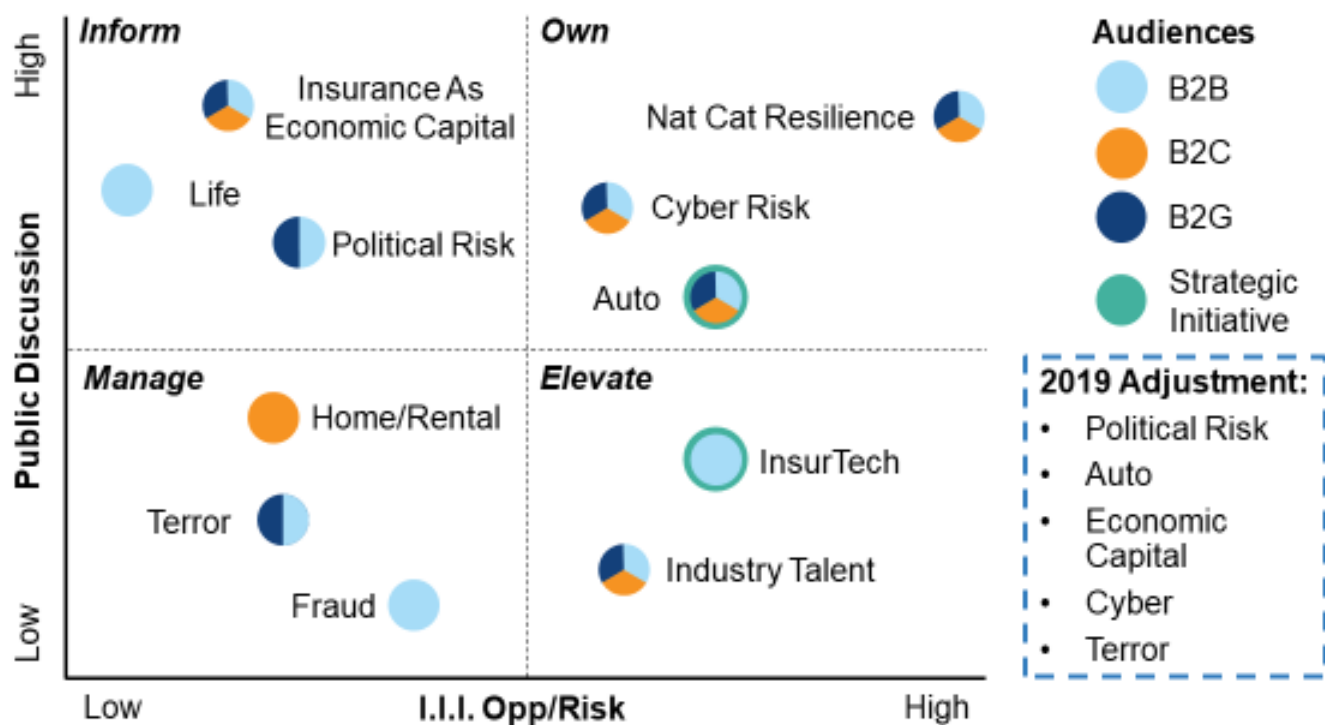
What is the Insurance Information Institute?

Improving public understanding
of insurance...

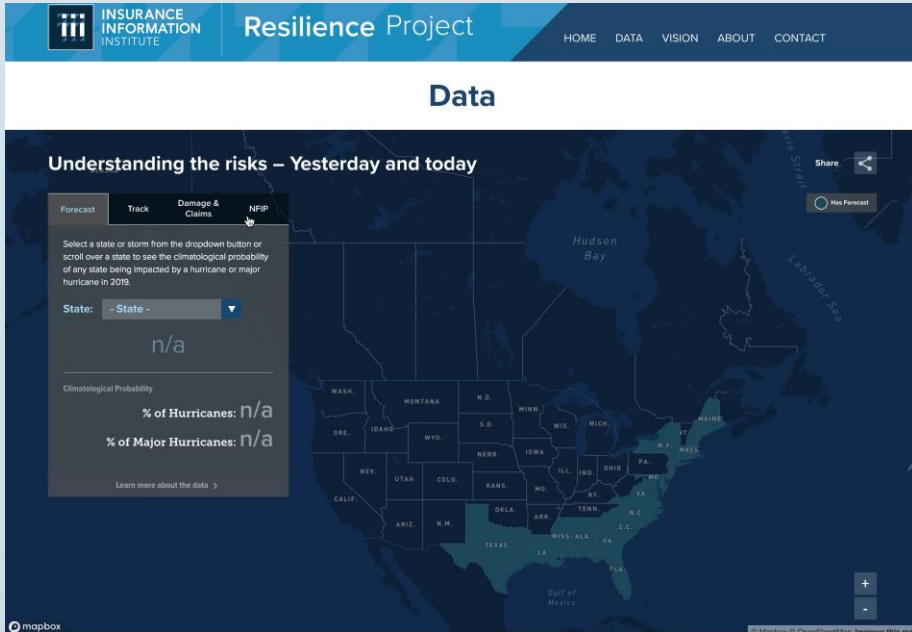
...what it does and how it works

Renewed 2019 Focus

While some priorities have shifted over the past year, resilience has become a central theme across numerous issue areas



The Power of Visualization



Data transformed to show the power of resilience.

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How Insurance Drives Economic Growth

Safety/ Security



1. Insurers are financial first responders



2. Insurers are risk mitigators

Economic/ Financial Stability



3. Insurers are capital protectors



4. Insurance is a partner in social policy



5. Insurance sustains the supply chain



6. Insurers are capital infusers

Development



7. Insurers are community builders



8. Insurance enables infrastructure improvements



9. Insurers are innovation catalysts



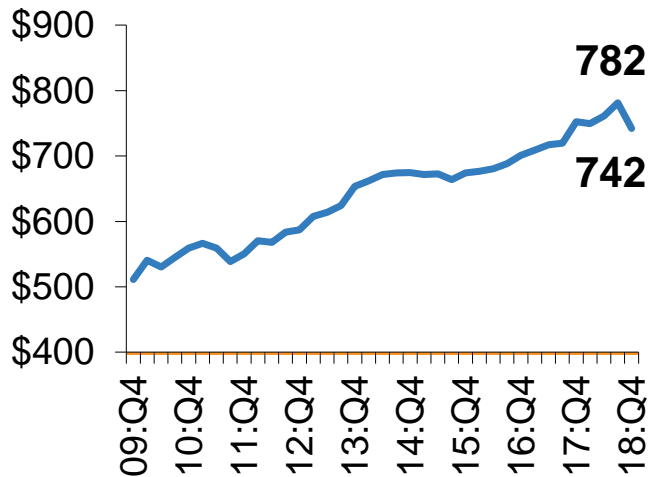
10. Insurers are credit facilitators

Financial Results Q4 2018

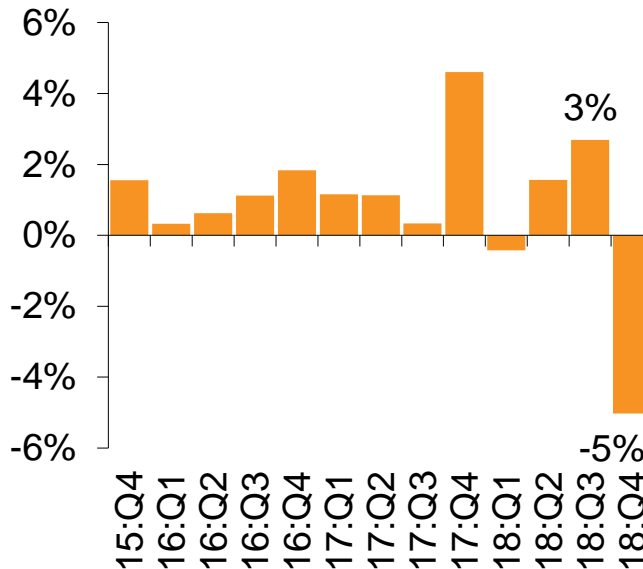
Policyholder Surplus By Quarter

Amount of Surplus

(\$ Billions)



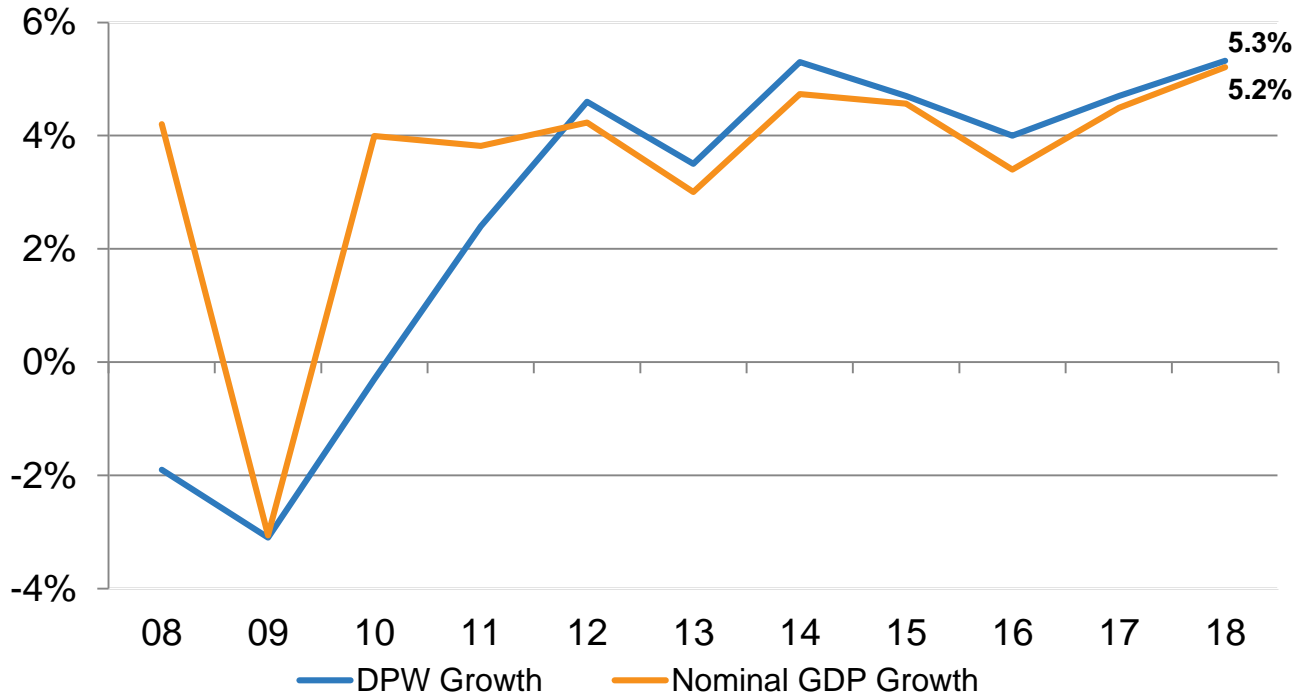
Change from Prior Quarter



Tax Law Increased Surplus at Year-End 2017 and Makes Surplus Growth a Bit More Volatile. \$0.83 Premium per \$1 Surplus.



Direct Premium Growth, Annual Change



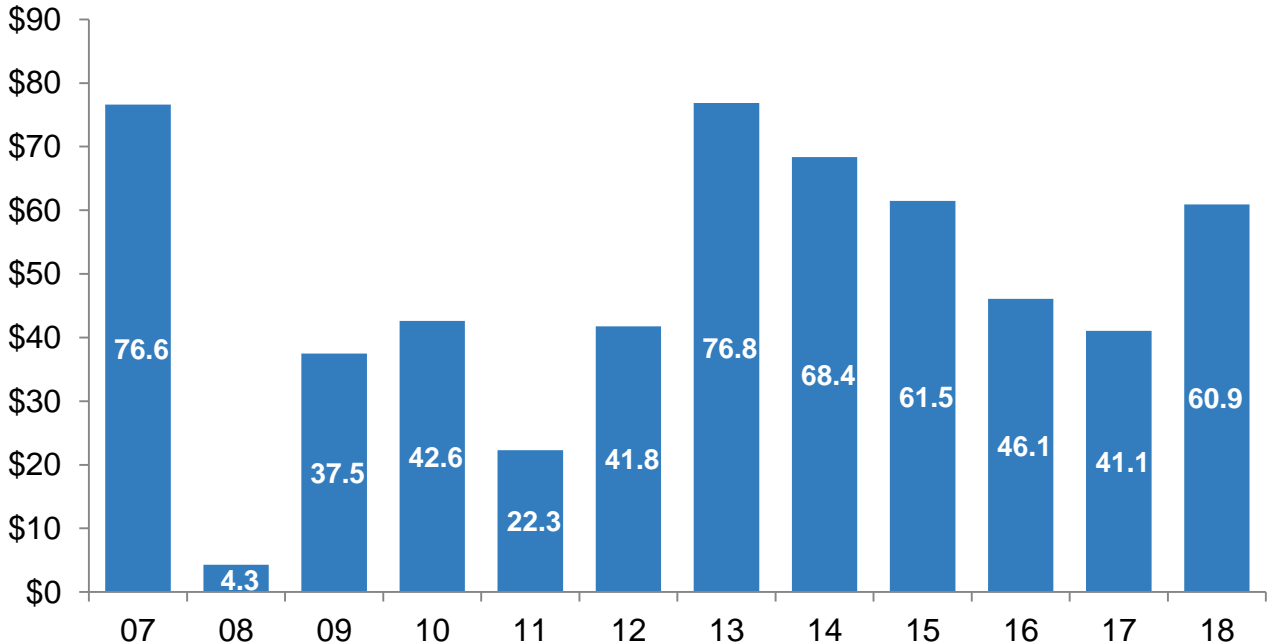
Direct Premiums Continue to Track Economic Growth



SOURCES: NAIC data sourced through S&P Global Intelligence, Bureau of Economic Affairs, Insurance Information Institute.

P/C industry net income after taxes

Billions, 2018 dollars

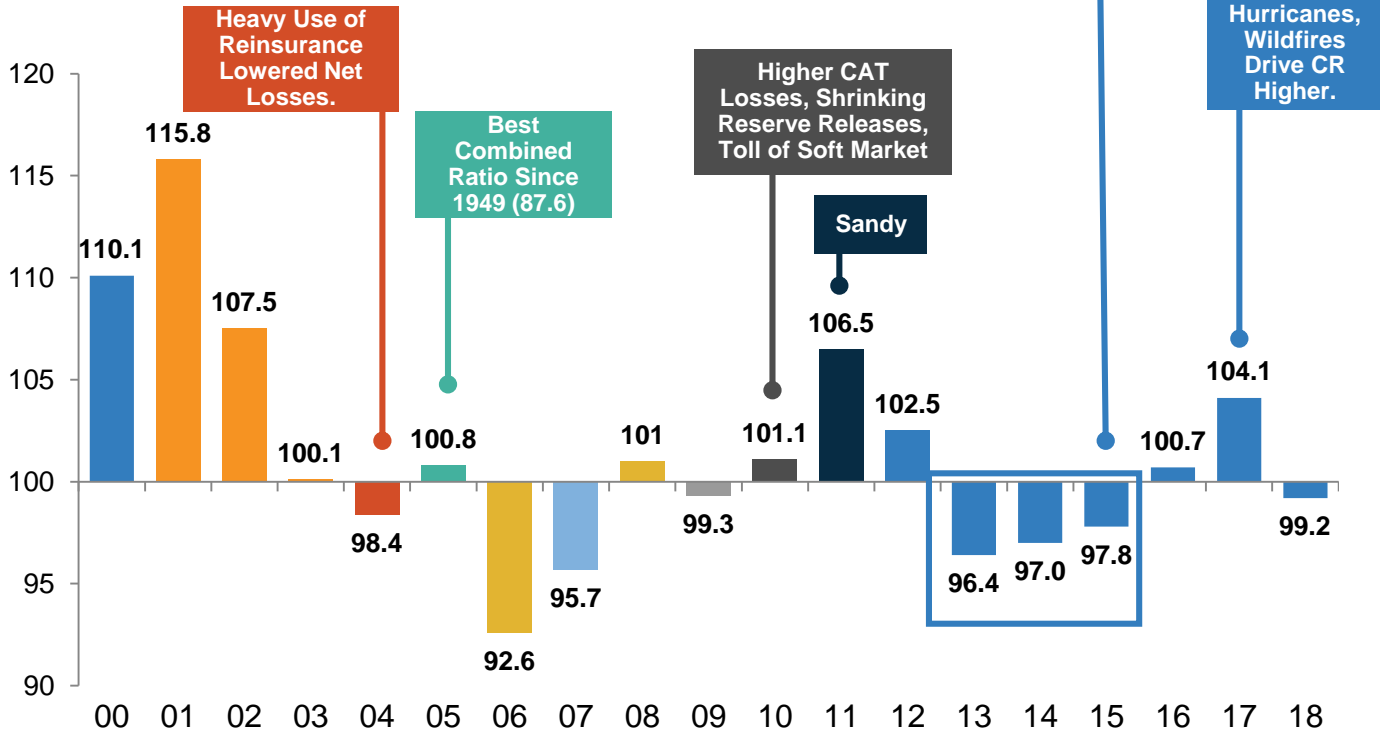


Catastrophes Let Up After Awful '17; Auto Turned a Corner.



Through fourth quarter. Adjusted for inflation using the BLS CPI calculator, to 2018 dollars.
Sources: NAIC data, sourced from S&P Global Market Intelligence; Insurance Information Institute.

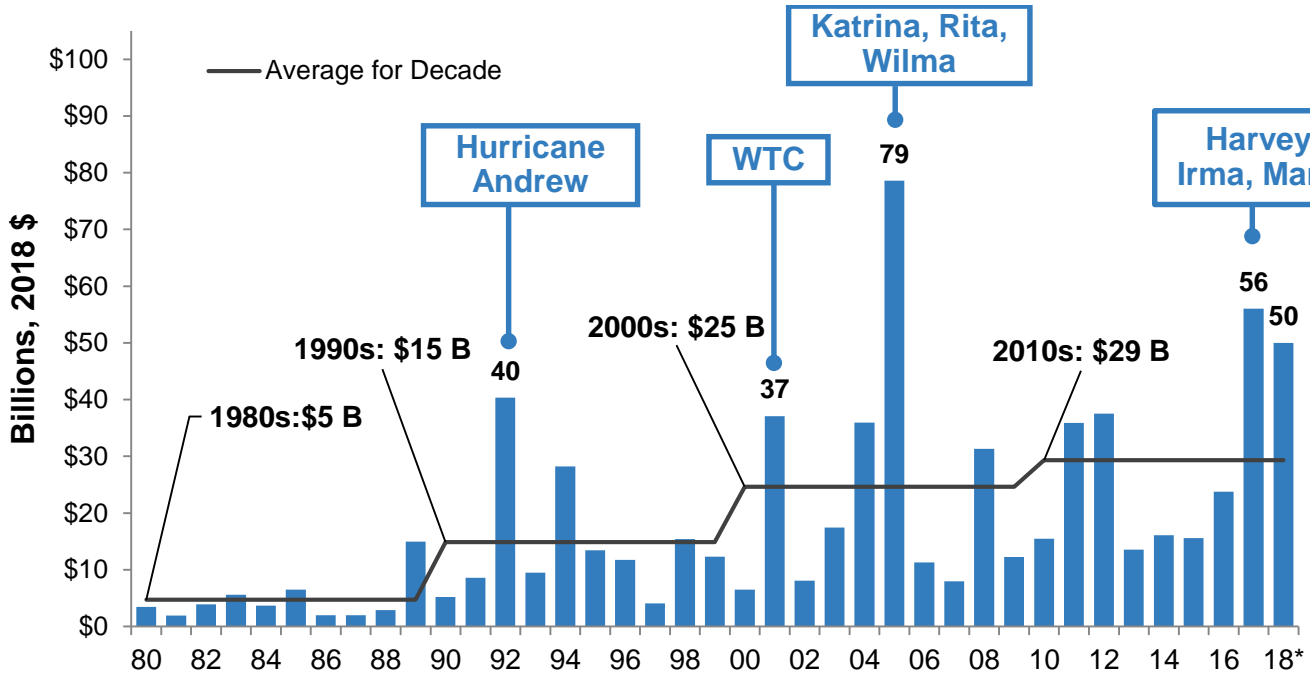
P/C Insurance Industry Combined Ratio, 2000-2018*



*Excludes Mortgage & Financial Guaranty insurers 2008-2014.
 Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012=103.2; 2013= 96.1; 2014= 97.0.
 Sources: A.M. Best; ISO, a Verisk Analytics company; I.I.I. estimate for 2018.



U.S. Inflation-Adjusted Cat Losses



**2018 – Third worst year for U.S. Insured Catastrophe Losses.
Average Insured Loss per Year for 1980-2018 is \$18.1 B.**

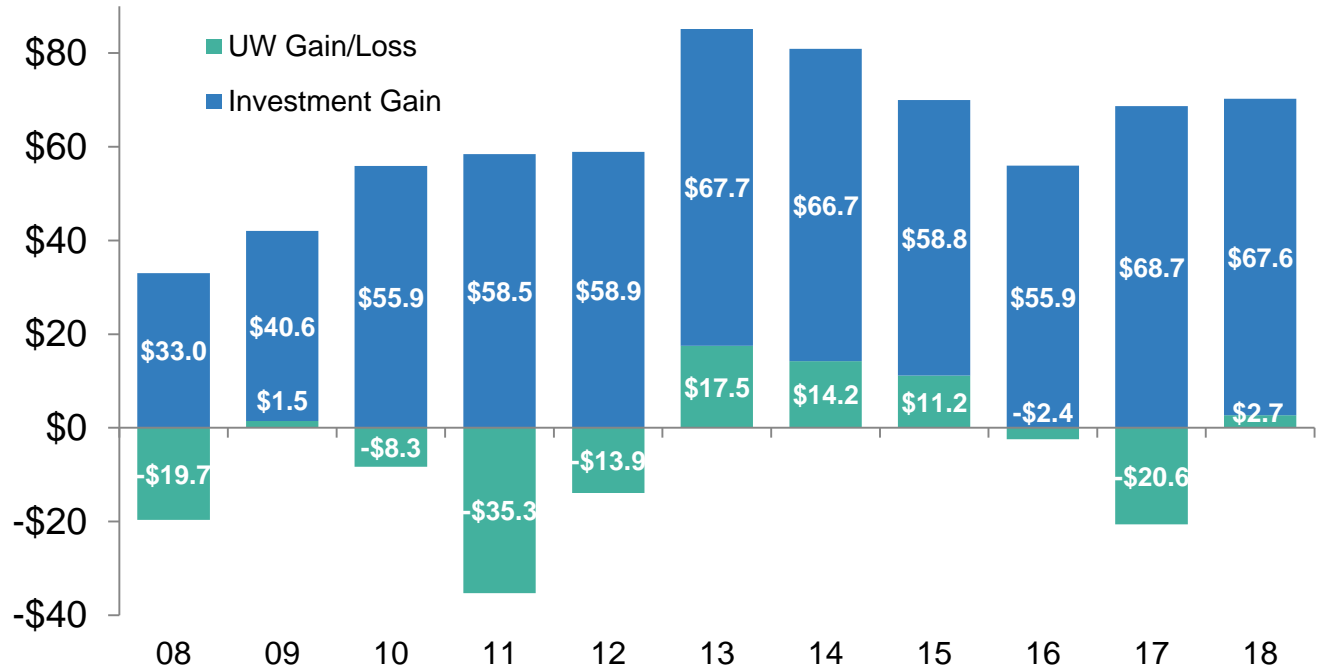
*2018: Estimate, subject to change. 2010s is average of 2010 to 2018.

Sources: Property Claims Service, a Verisk Analytics business; Insurance Information Institute.



Key sources of P/C insurer profits, 2008-2018

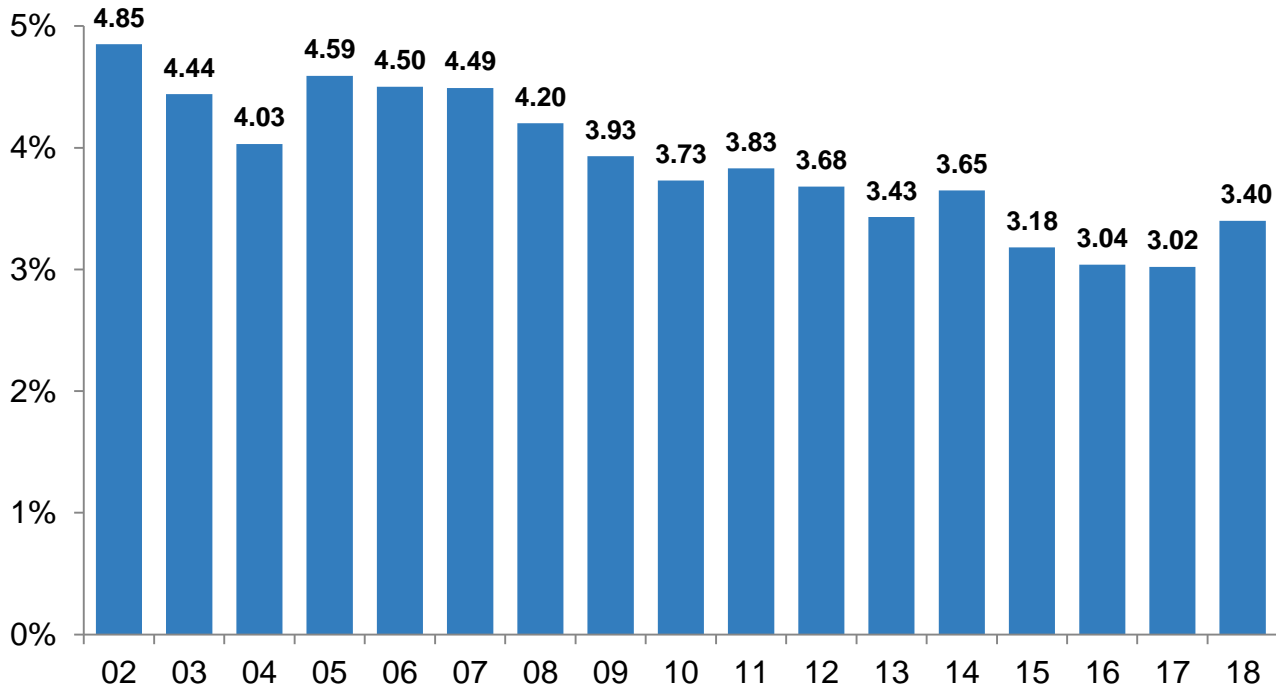
\$ Billions



Data are before taxes and exclude extraordinary items.

Source: NAIC data, sourced from S&P Global Market Intelligence.

P/C Insurer Portfolio Yields



Yields Have Been Falling for Over a Decade, Reflecting the Long Downward Trend in Prevailing Interest Rates.

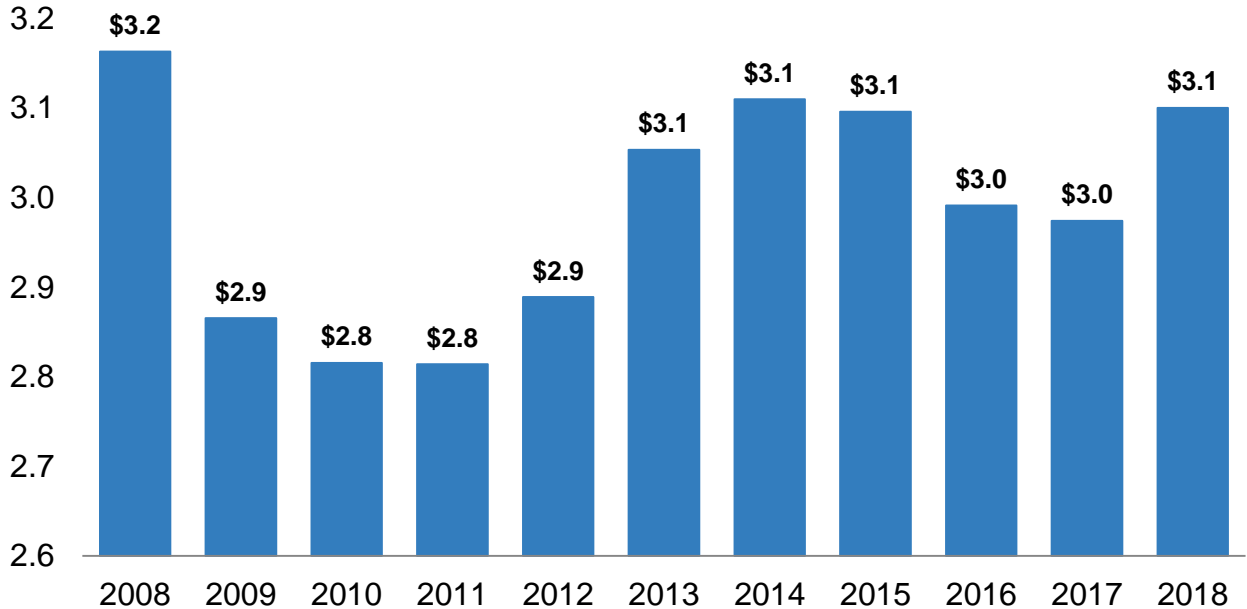


Marine Results

Underwriting is Historically Volatile; Has the Market Turned?

U.S. Ocean Marine Direct Written Premiums

(\$ Billions)



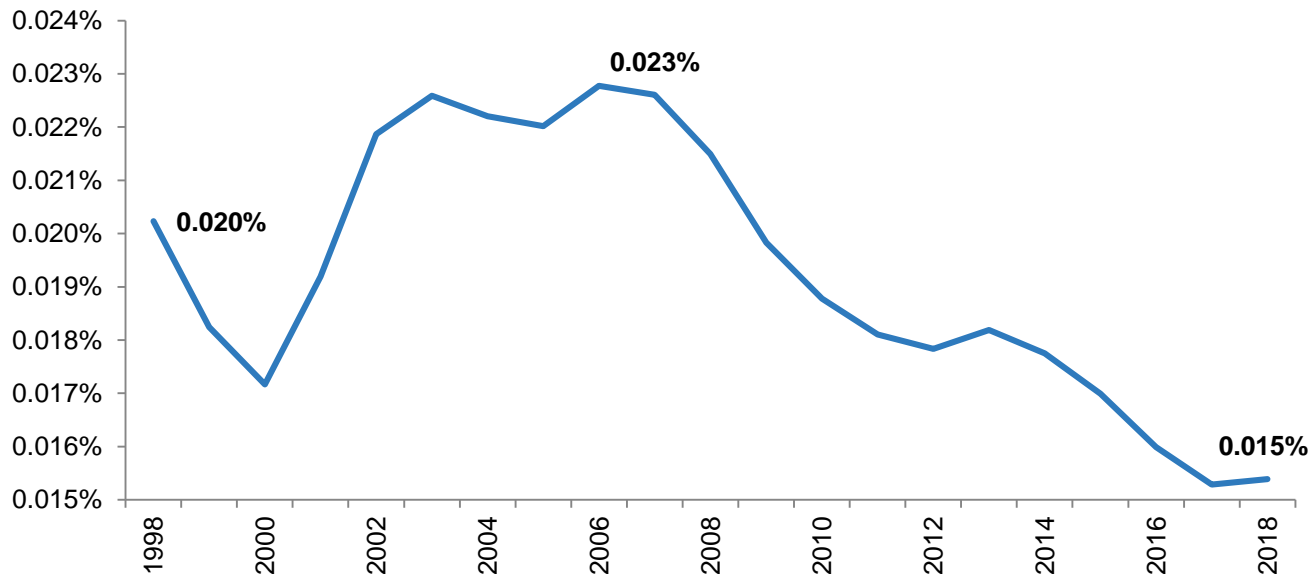
Ocean Marine Premium Volume Fell During the Global Financial Crisis.



Source: NAIC data, sourced from S&P Global Market Intelligence.
Note: U.S. and territories

Has the Market Bottomed Out?

(U.S. Ocean Marine DWP as % of GDP)

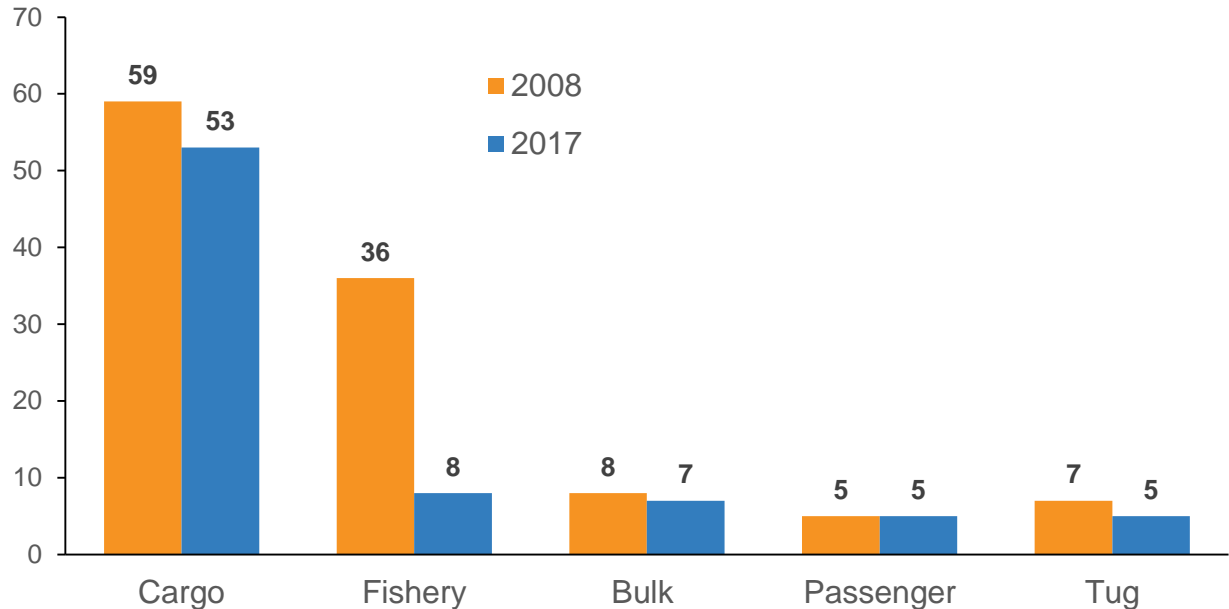


Economy Grows Faster Than Premium – Sign of Soft Market (30% Decline Since 2006 Peak)



Total losses by type of vessel 2008 vs. 2017

(Vessels Lost)



While Exposures Grow, the Number of Vessels Lost Has Declined.



Source: Source: Lloyd's List Intelligence Casualty Statistics; Allianz Global Safety & Shipping Review 2018

Major Energy Losses

Year of Loss	Type	Cause	Region	PD US\$	OEE US\$	BI US\$	Total US\$
2016	MOPU	Mechanical failure	Africa	620,000,000	0	900,000,000	1,520,000,000
2016	Rig	Mechanical failure	North America	83,500,000	0	95,000,000	178,500,000
2016	Pipeline	Anchor/jacking/trawl	Africa	100,000,000	0	0	100,000,000
2016	Platform	Fire + explosion/VCE	Latin America	95,367,316	0	0	95,367,316
2016	Well	Blowout + fire	Australasia	0	70,000,000	0	70,000,000
2016	Pipeline	Terrorism	Africa	65,000,000	0	0	65,000,000
2016	Platform	Piling operations	Asia	51,000,000	0	0	51,000,000
2016	SSCS	Anchor/jacking/trawl	Middle East	50,000,000	0	0	50,000,000
2017	Well	Collapse	Europe	42,000,000	151,737,600	35,451,000	229,188,600
2017	MOPU	Faulty work/op error	Africa	135,000,000	0	0	135,000,000
2017	MOPU	Faulty work/op error	Asia Pacific	132,000,000	0	0	132,000,000
2017	Vessel	Pipelaying/trenching	Latin America	128,500,000	0	0	128,500,000
2017	Well	Unknown	Europe	72,000,000	0	24,000,000	96,000,000
2017	Well	Blowout + fire	Europe	0	80,000,000	0	80,000,000
2017	Pipeline	Impact	Africa	70,500,000	0	0	70,500,000
2017	Pipeline	Corrosion	North America	60,000,000	0	0	60,000,000
2017	Platform	Fire no explosion	Africa	52,000,000	0	0	52,000,000
2017	Well	Blowout + fire	Africa	0	50,000,000	0	50,000,000
2018	Plant	Earthquake	Asia Pacific	270,000,000	0	0	270,000,000
2018	Pipeline	Heavy weather	North America	51,000,000	0	0	51,000,000

The Upstream loss record continues to defy gravity from a catastrophe perspective. But does this take into account the attritional effect of minor E&P losses?

Source: WTW Energy Loss Database as of March 1 2019 (figures include both insured and uninsured losses)

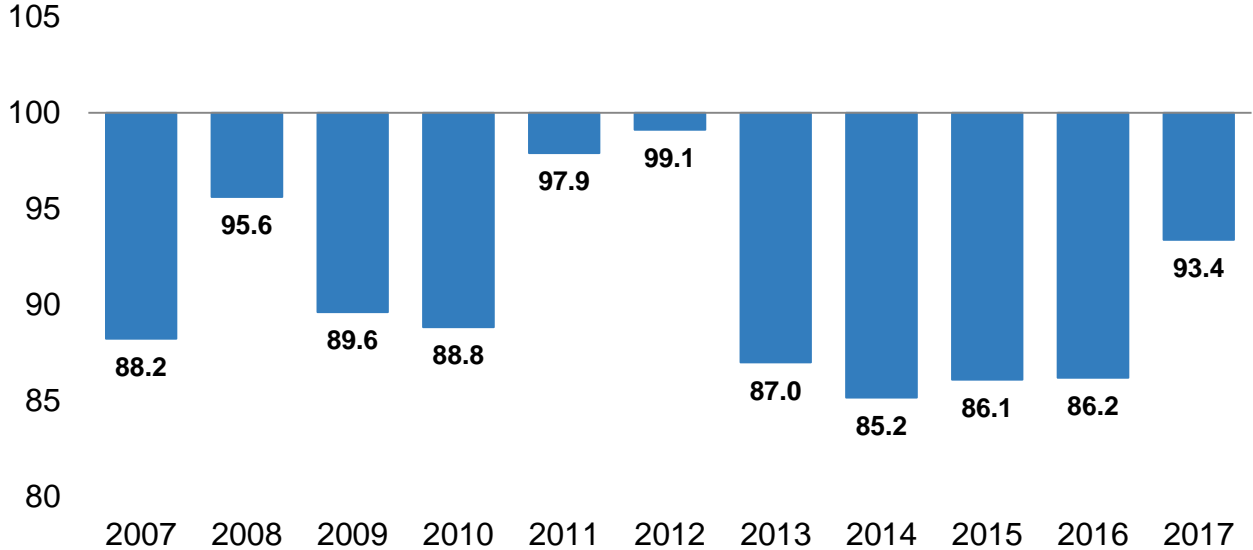
Heaviest Upstream 2018 Losses Were Outside USA.



Source: Willis Towers Watson Energy Loss Database (February 12, 2018).

U.S. Marine Results, 2007-2017

Combined Ratio After Dividends



Results Deteriorated in 2018.



Source: Ocean and Inland Marine combined. A.M. Best's *Aggregates and Averages*, 2017

Economic Factors

Global Premium Growth, 2017

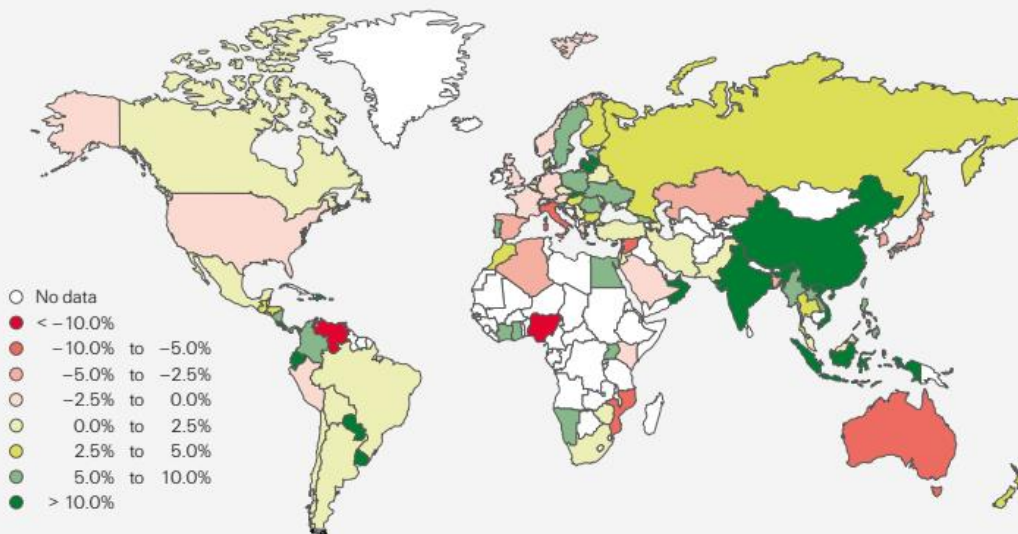
Real premium growth in 2017,
vs average 2007–16 and outlook



Markets	Life			Non-life			Total	
	2017	'07-16	Outlook*	2017	'07-16	Outlook*	2017	'07-16
Advanced	-2.7%	-0.2%	→	1.9%	0.9%	↗	-0.6%	0.3%
Emerging	14%	8.3%	→	6.1%	8.4%	→	10%	8.4%
World	0.5%	0.9%		2.8%	2.1%		1.5%	1.4%

*Direction of the arrow indicates whether real growth will improve, remain the same or worsen.

Source: Swiss Re Institute

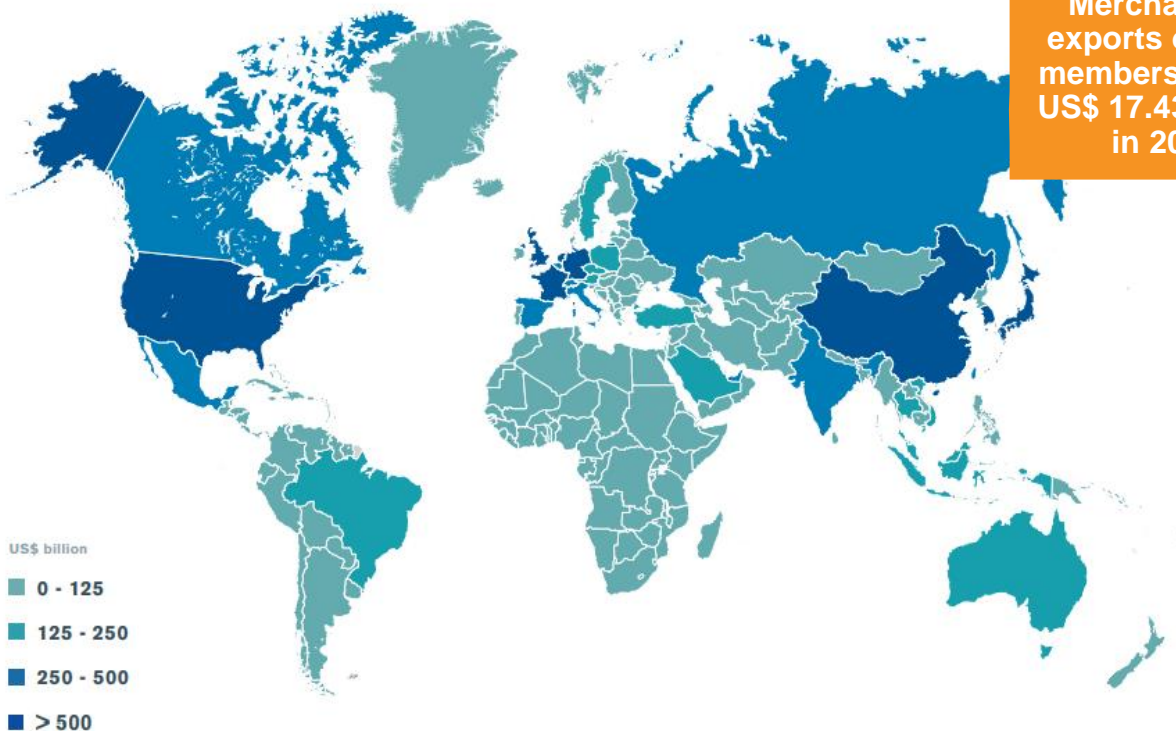


- Life Sector's Growth Cooled
- P/C Looking Good
- Watch China, India



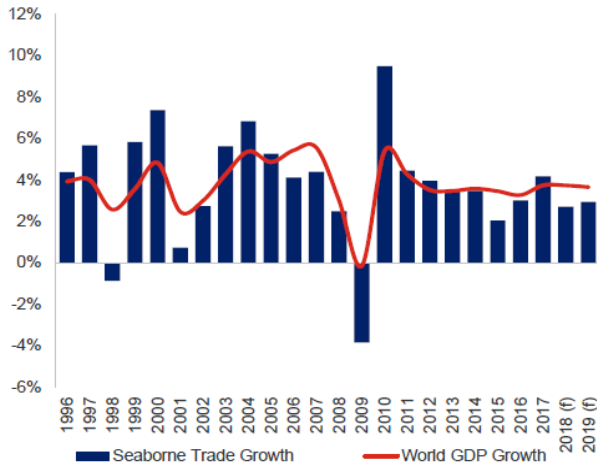
Economies by size of merchandise trade, 2017

Merchandise exports of WTO members totaled US\$ 17.43 trillion in 2017

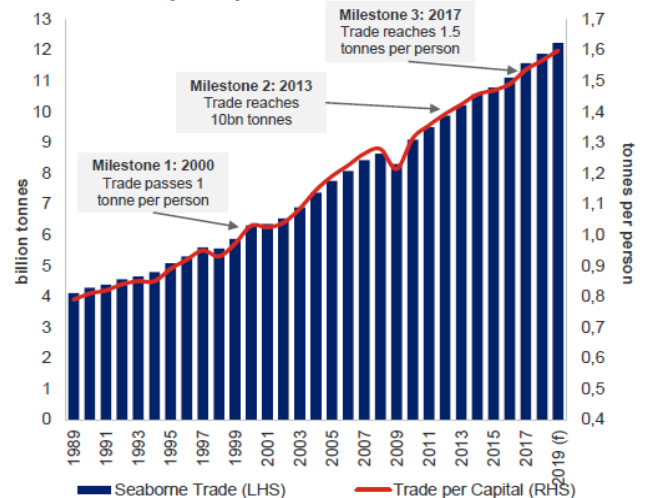


World Trade and the Economy

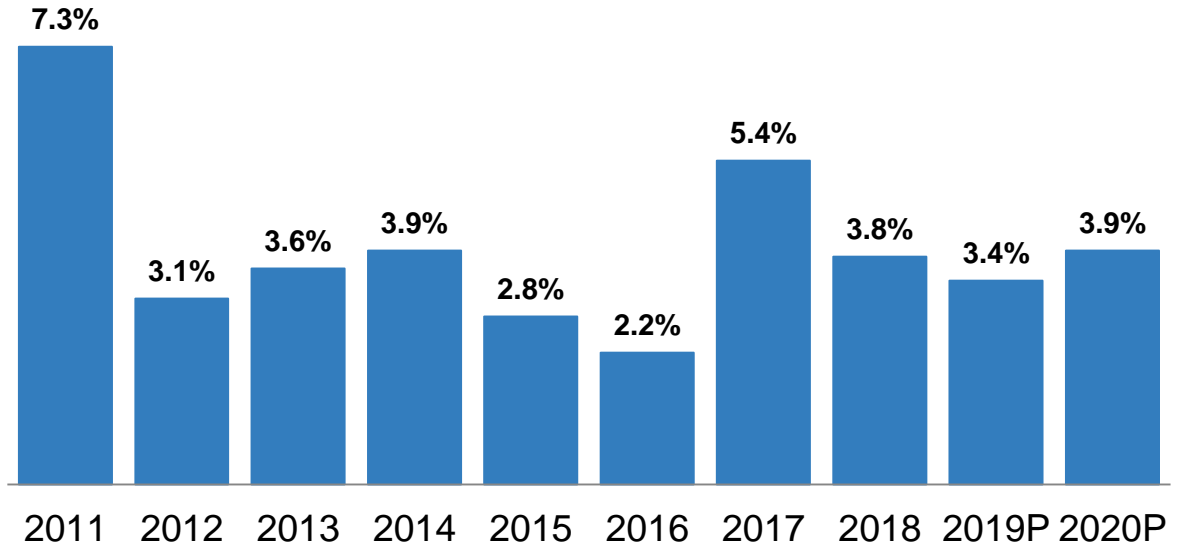
Growth: Seaborne Trade vs. World GDP



Seaborne Trade per Capita



World Trade Volume Growth* 2012-2020P



Global trade growth has slowed sharply.

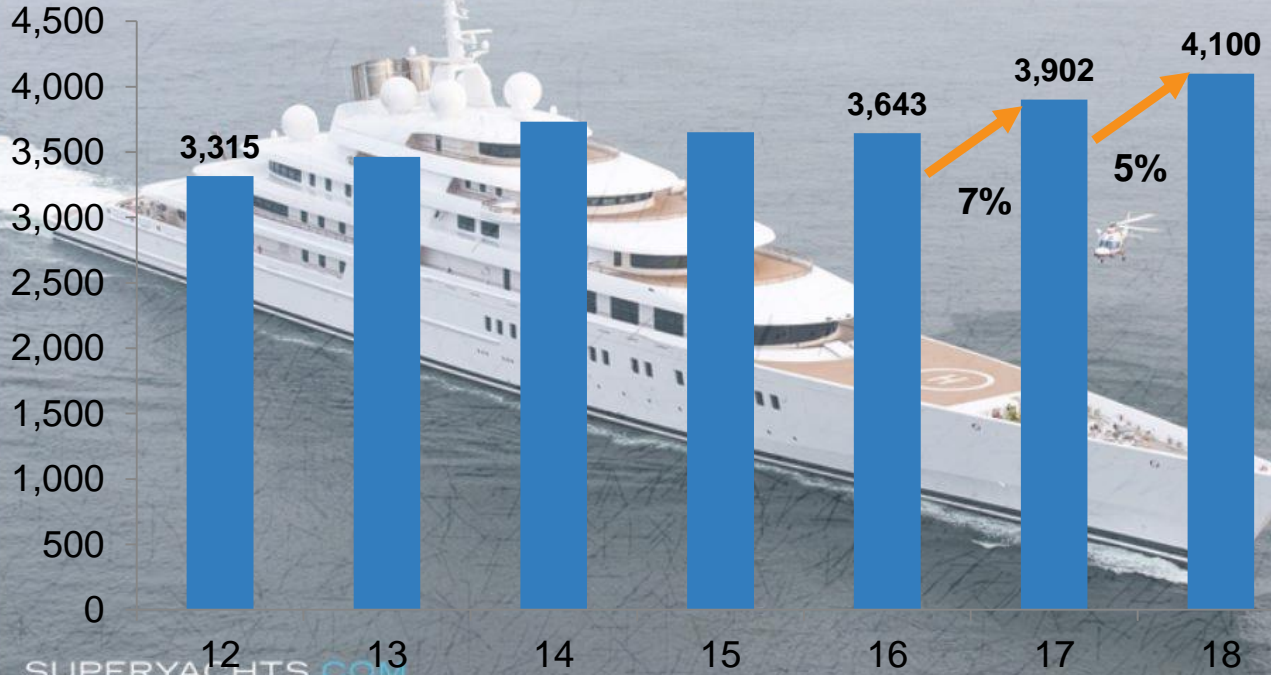


Sources: International Monetary Fund, *World Economic Outlook*, April 2019 Statistical Appendix

* Goods and services

Total value of recreational boats sold in the U.S.

(\$ Millions in Sales)



SUPERYACHTS.COM
THE WORLD OF LUXURY YACHTING



*National Marine Manufacturers Association.
SOURCE: Statista, 2018.

Global Risk

Top 5 Global Risks in Terms of *Likelihood*, 2015—2019: Insurance Can Help With Most

2015	2016	2017	2018	2019	
Interstate conflict with regional consequences	Large-scale involuntary migration	Extreme weather events	Extreme weather events	Extreme weather events	Environmental & Tech Issues Dominate
Extreme weather events	Extreme weather events	Large-scale involuntary migration	Natural disasters	Failure of climate-change mitigation and adaptation	
Failure of national governance	Failure of climate-change mitigation and adaptation	Major natural disasters	Cyber-attacks	Natural disasters	
State collapse or crisis	Interstate conflict with regional consequences	Large-scale terrorist attacks	Data fraud or theft	Data fraud or theft	
High structural unemployment or underemployment	Major natural catastrophes	Massive incident of data fraud/theft	Failure of climate-change mitigation and adaptation	Cyber-attacks	

Concerns Shift Considerably Over Short Spans of Time.



Top 5 Global Risks in Terms of *Impact*, 2015—2019: Insurance Can Help With Most



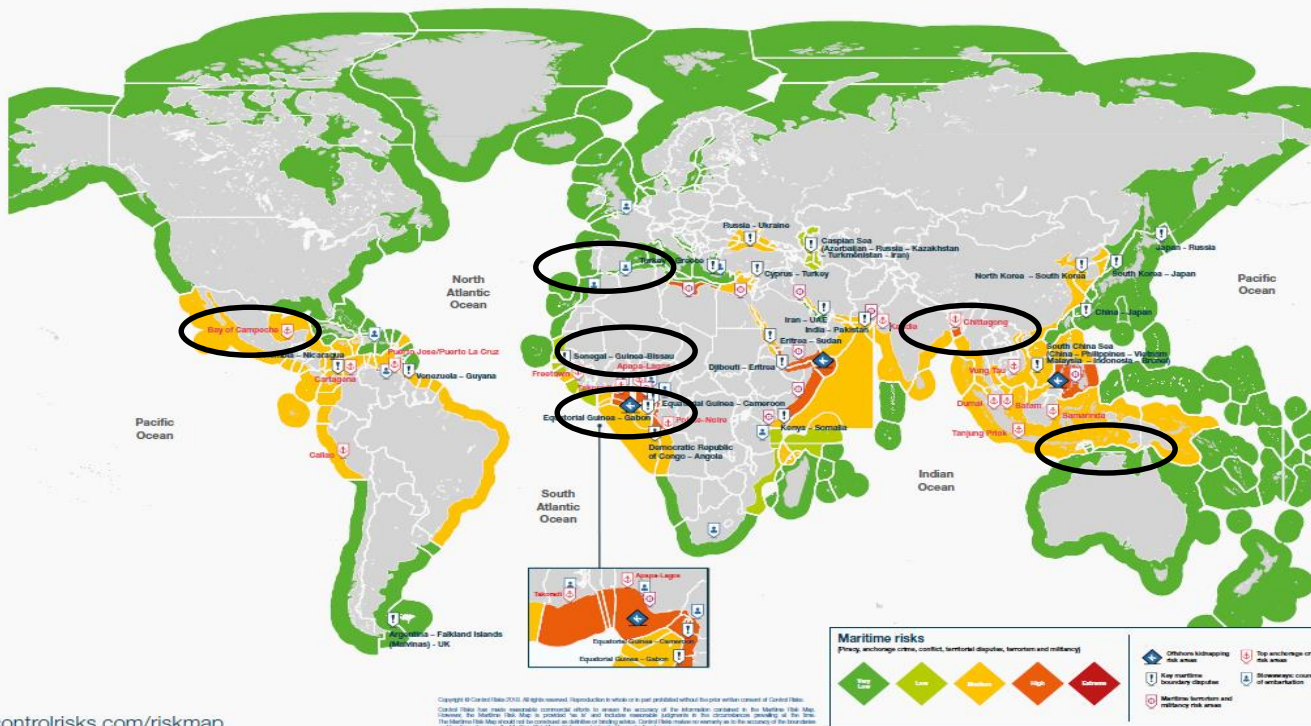
Marine Underwriters Have a Lot to Worry About.

Sources: World Economic Forum, *Global Risks 2019*; Insurance Information Institute.

Maritime Risk

ControlRisks RISKMAP2019

MARITIME



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controlrisks.com/riskmap



Source: ControlRisks, 2019 Risk Map

Piracy 2019 (so far)

Gulf of Guinea remains a hotspot: 22 kidnappings in Q1

 = Attempted Attack  = Boarded  = Fired upon  = Hijacked  = Suspicious vessel



The Risk Report

The Latest in the World of Property/Casualty

The Economy

- ▲ How Long Can It Last?
- ▲ The Jobs Engine Powers Along
- ▲ Trade Wars

Marine Issues

- ▲ Lloyd's: 10th Decile
- ▲ Psst . . . Rates are Rising

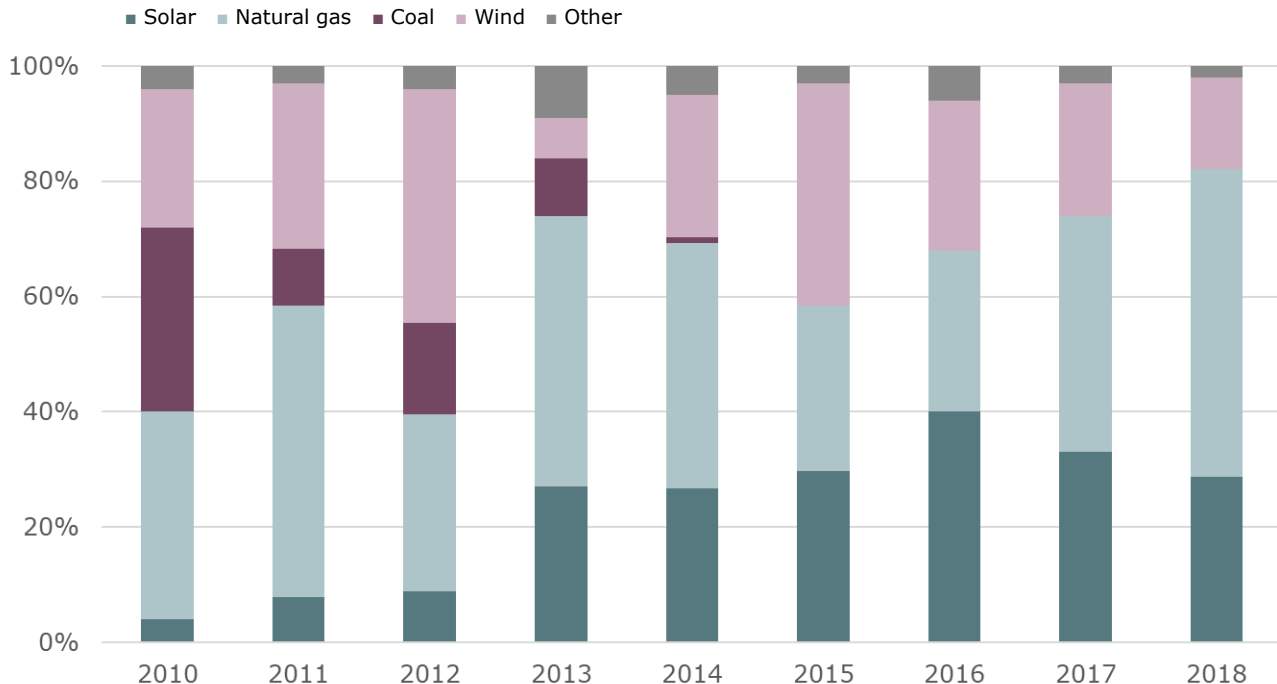
The World of Insurance

- ▲ Mondelez/NotPetya: It's War!
- ▲ Rating Variables
- ▲ Product Liability
 - ◆ Roundup - \$158M
 - ◆ J&J talc - \$142M
- ▲ Burger King's \$9,026 claim



Wind Power

New U.S. electricity generation by source



Coal is Out. Solar, Gas and Wind Are In.



Sources: "Solar Market Insight Report 2018 Year in Review," SEIA and Wood Mackenzie Power & Renewables, March 2019.

Upside of wind energy



Wind energy provides **over 20%** of the electricity produced in **6 states**

The wind industry is present in **69%** of all U.S. Congressional districts

Wind energy avoided **201 million metric tons** of CO₂ emissions in 2018

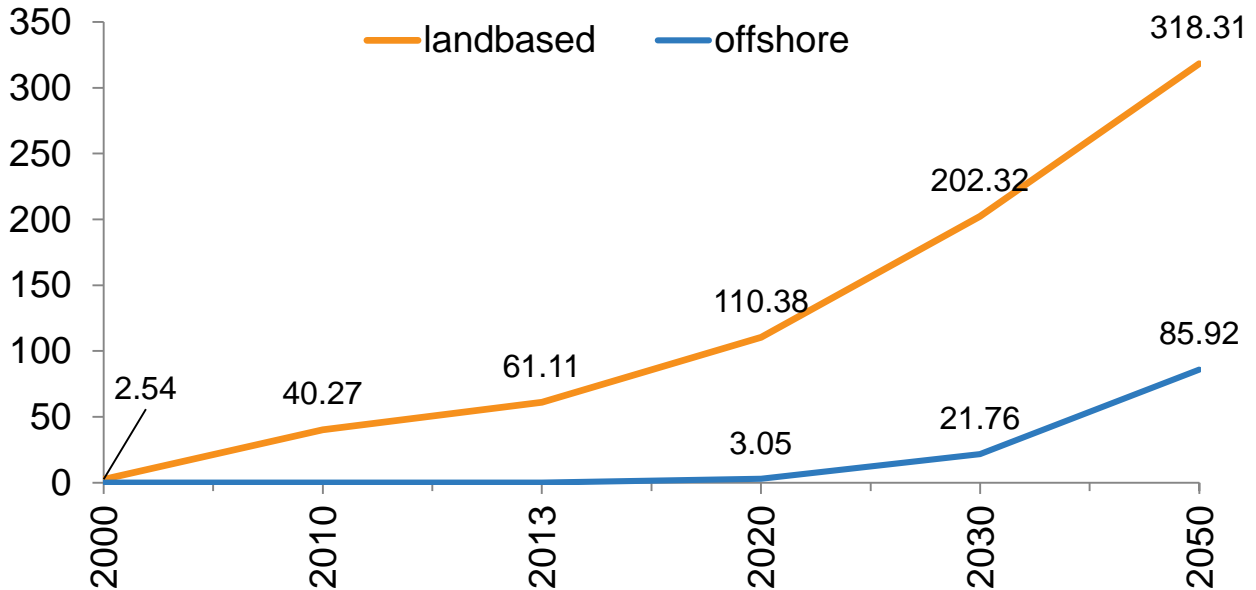
The U.S. wind industry has invested over **\$142 billion** in new wind projects over the last decade

Wind energy generated **6.5%** of the nation's electricity in 2018, enough to power **26 million homes**



Growth of Wind Power Capacity in the U.S.

Gigawatts



By 2050 total wind power capacity across 48 states will be 404.25 gigawatts, an increase of 180.15 gigawatts from 2030



Offshore wind farms pros and cons



Pros

- ▲ Offshore wind speeds are faster and steadier than on land
- ▲ Meet energy needs of high-density coastal areas
- ▲ Renewable energy with no pollution
- ▲ Domestic energy source
- ▲ Jobs

Cons

- ▲ Expensive and difficult to build and maintain
- ▲ Effects on marine animals and birds are not fully understood
- ▲ May be unpopular with residents



Key risks faced by wind farms



- ▲ Natural disasters
- ▲ Underperformance aka “wind drought”
- ▲ Mechanical issues
- ▲ Cable issues
- ▲ Start-up delays
- ▲ Lightning damage
- ▲ Prototype technology
- ▲ Substations and power delivery

Thank You!