



Risk Officers Forum Meeting
November 23, 2016

A CEO's Perspective on Risk Management

Donald P. Callahan
President & CEO
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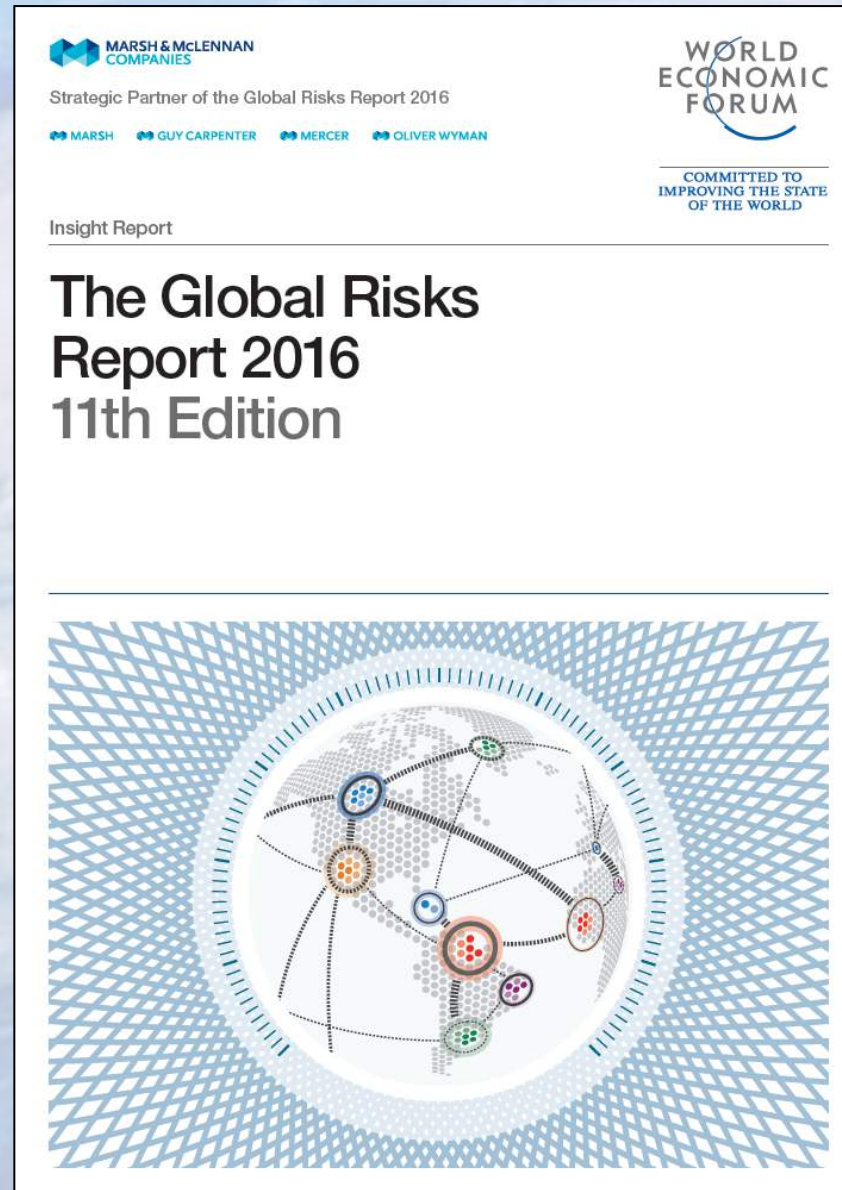
The Agenda

- **The Very Obvious Risks that Lie Ahead**
- **The Global Risks Report 2016: 11th Edition**
- **MMC and Guy Carpenter Risk Surveys**
- **A Micro Risk Management Case Study**
- **Reinsurance Update and Rate Forecast**

The Very Obvious Risks



The Global Risks Report

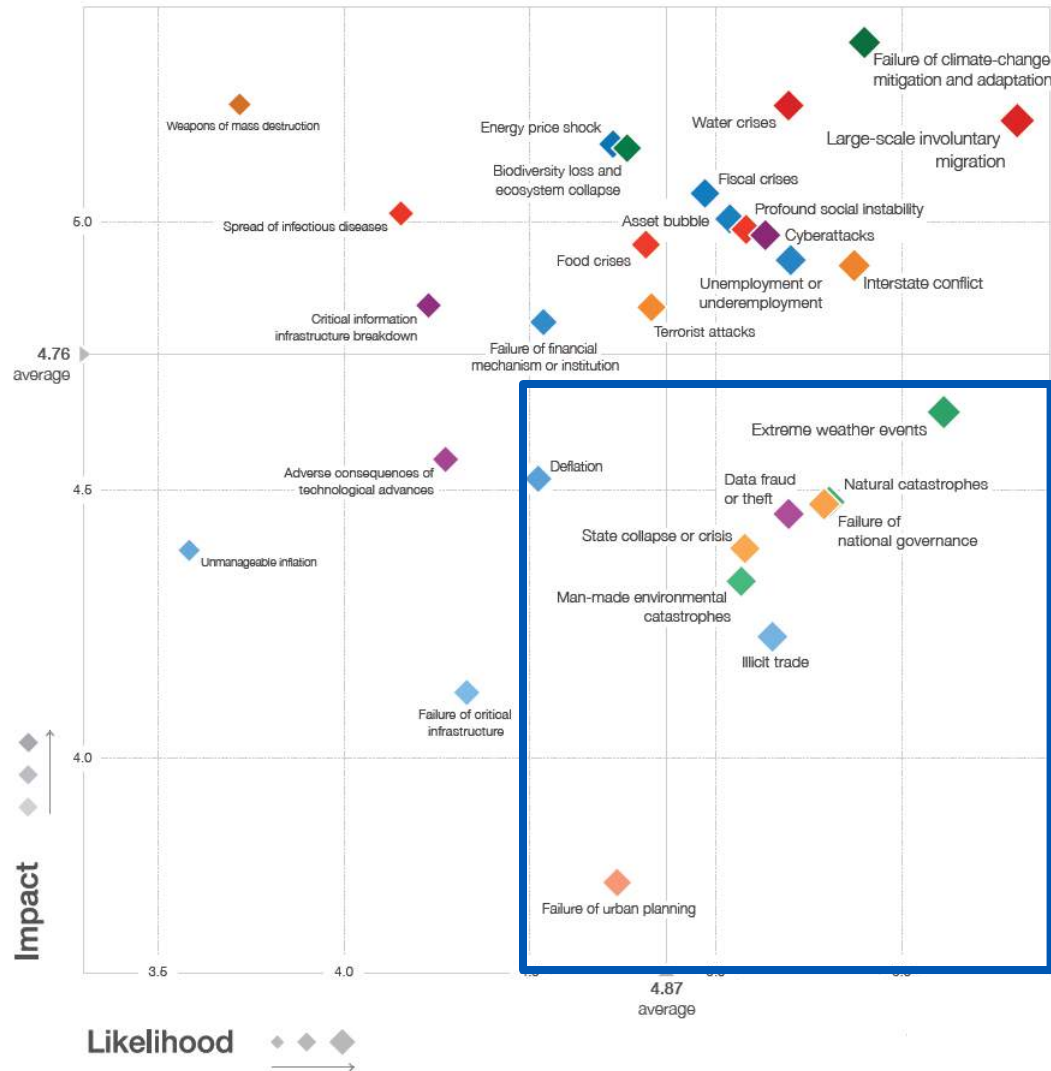


Joint Project

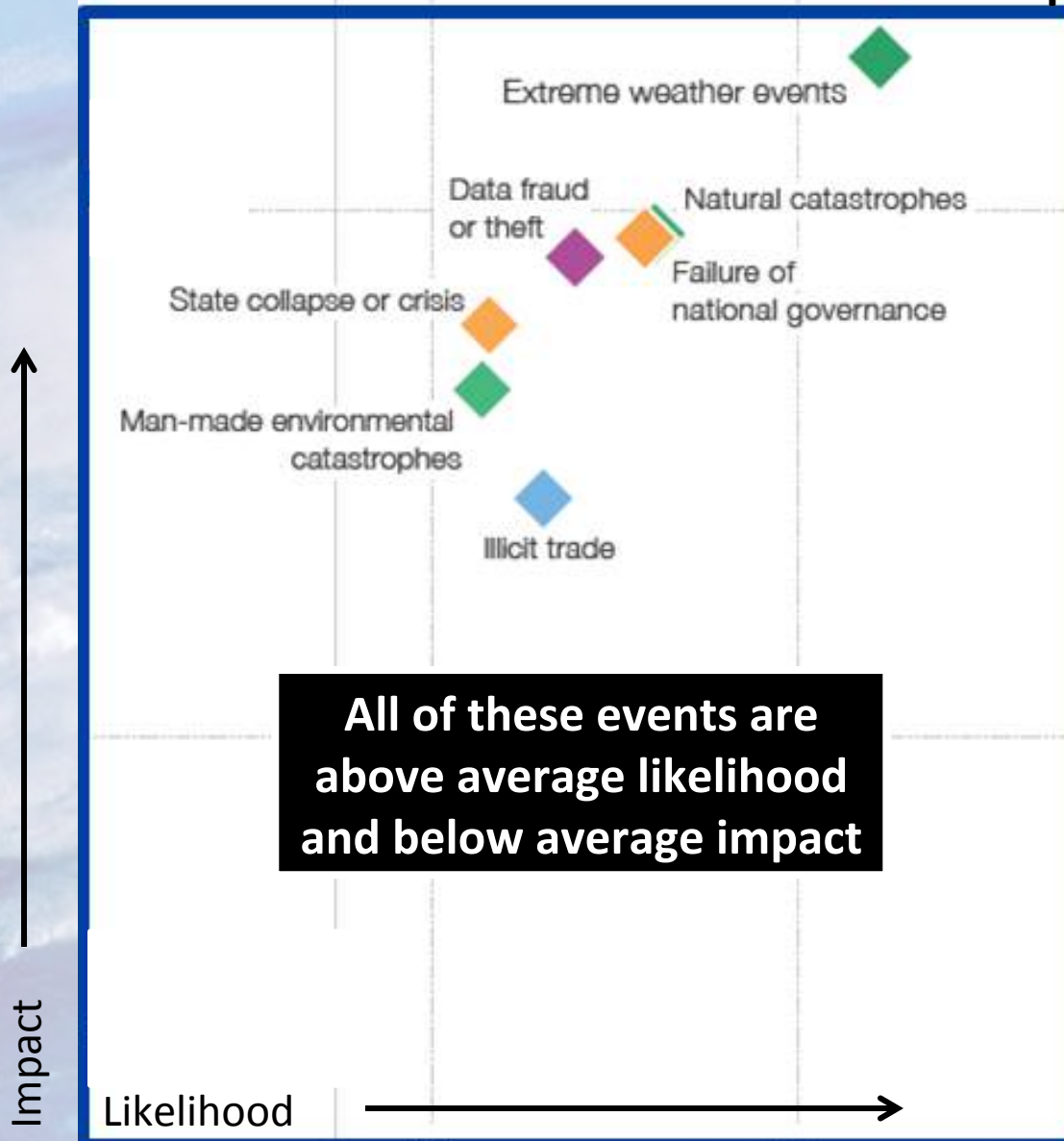
MMC - Mercer
Zurich Insurance
University of Singapore
Oxford University
The Wharton School

The 2016 Global Risks Landscape

Figure 1: The Global Risks Landscape 2016



The 2016 Global Risks Landscape








The 2016 Global Risks Landscape

Top 5 risks in terms of Likelihood

-  Large-scale involuntary migration
-  Extreme weather events
-  Failure of climate-change mitigation
-  Interstate conflict
-  Natural catastrophes

Top 5 risks in terms of Impact

-  Failure of climate-change mitigation
-  Weapons of mass destruction
-  Water crises
-  Large-scale involuntary migration
-  Energy price shock

Economic



Environmental



Geopolitical



Societal



Technological



Global Risks: Likelihood and Impact

Top 5 Risks in terms of Likelihood

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1st	Breakdown of critical information infrastructure	Asset price collapse	Asset price collapse	Asset price collapse	Storms and cyclones	Severe income disparity	Severe income disparity	Income disparity	Interstate conflict with regional consequences	Large-scale involuntary migration
2nd	Chronic disease in developed countries	Middle East instability	Slowing Chinese economy (<6%)	Slowing Chinese economy (<6%)	Flooding	Chronic fiscal imbalances	Chronic fiscal imbalances	Extreme weather events	Extreme weather events	Extreme weather events
3rd	Oil price shock	Failed and failing states	Chronic disease	Chronic disease	Corruption	Rising greenhouse gas emissions	Rising greenhouse gas emissions	Unemployment and underemployment	Failure of national governance	Failure of climate-change mitigation and adaptation
4th	China economic hard landing	Oil and gas price spike	Global governance gaps	Fiscal crises	Biodiversity loss	Cyber attacks	Water supply crises	Climate change	State collapse or crisis	Interstate conflict with regional consequences
5th	Asset price collapse	Chronic disease, developed world	Retrenchment from globalization (emerging)	Global governance gaps	Climate change	Water supply crises	Mismanagement of population ageing	Cyber attacks	High structural unemployment or underemployment	Major natural catastrophes

Top 5 Risks in terms of Impact

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1st	Asset price collapse	Asset price collapse	Asset price collapse	Asset price collapse	Fiscal crises	Major systemic financial failure	Major systemic financial failure	Fiscal crises	Water crises	Failure of climate-change mitigation and adaptation
2nd	Retrenchment from globalization	Retrenchment from globalization (developed)	Retrenchment from globalization (developed)	Retrenchment from globalization (developed)	Climate change	Water supply crises	Water supply crises	Climate change	Rapid and massive spread of infectious diseases	Weapons of mass destruction
3rd	Interstate and civil wars	Slowing Chinese economy (<6%)	Oil and gas price spike	Oil price spikes	Geopolitical conflict	Food shortage crises	Chronic fiscal imbalances	Water crises	Weapons of mass destruction	Water crises
4th	Pandemics	Oil and gas price spike	Chronic disease	Chronic disease	Asset price collapse	Chronic fiscal imbalances	Diffusion of weapons of mass destruction	Unemployment and underemployment	Interstate conflict with regional consequences	Large-scale involuntary migration
5th	Oil price shock	Pandemics	Fiscal crises	Fiscal crises	Extreme energy price volatility	Extreme volatility in energy and agriculture prices	Failure of climate-change mitigation and adaptation	Critical information infrastructure breakdown	Failure of climate-change mitigation and adaptation	Severe energy price shock

Economic

Environmental

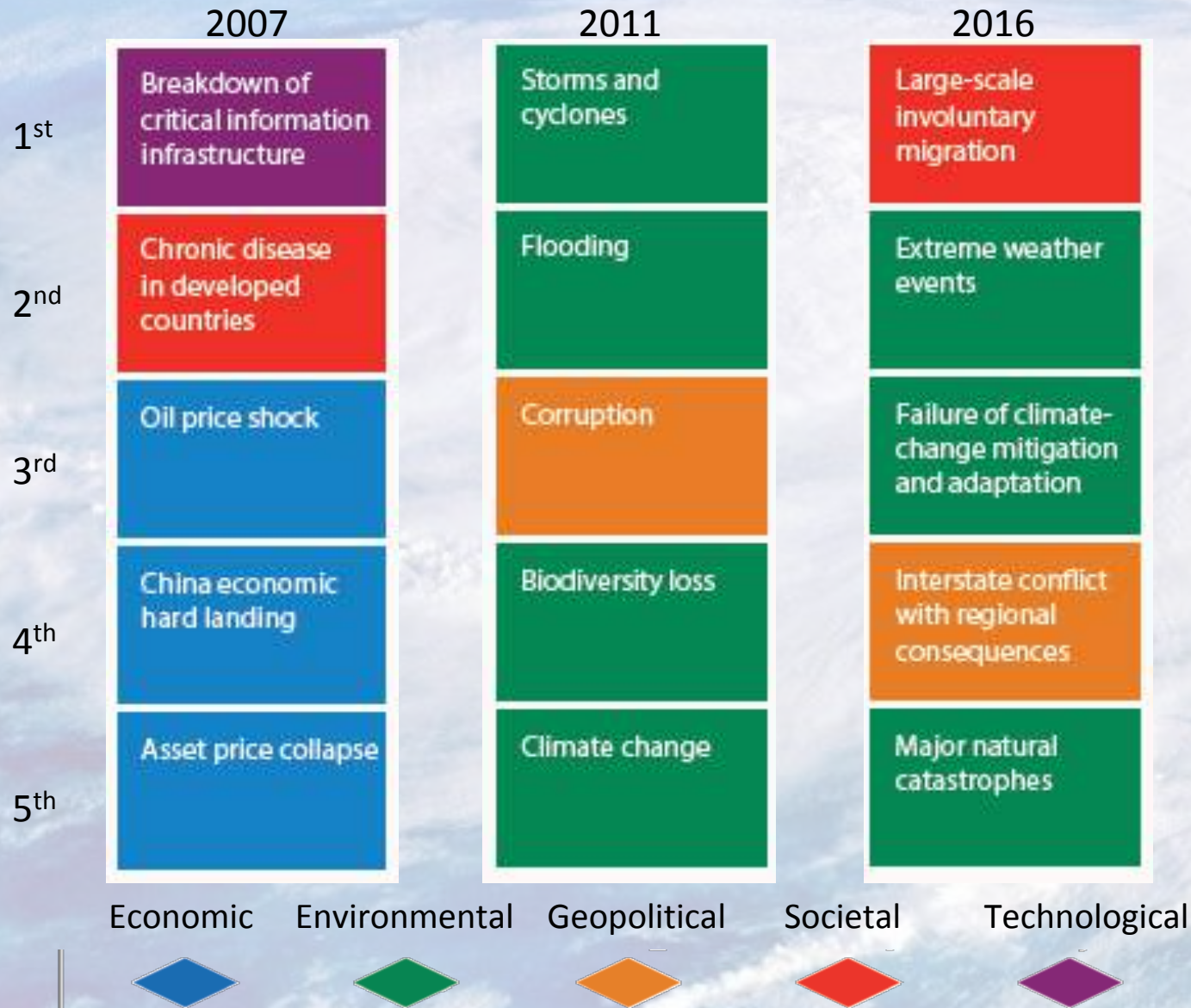
Geopolitical

Societal

Technological



Global Risks in Terms of Likelihood



The Talent Risk: What We Learned

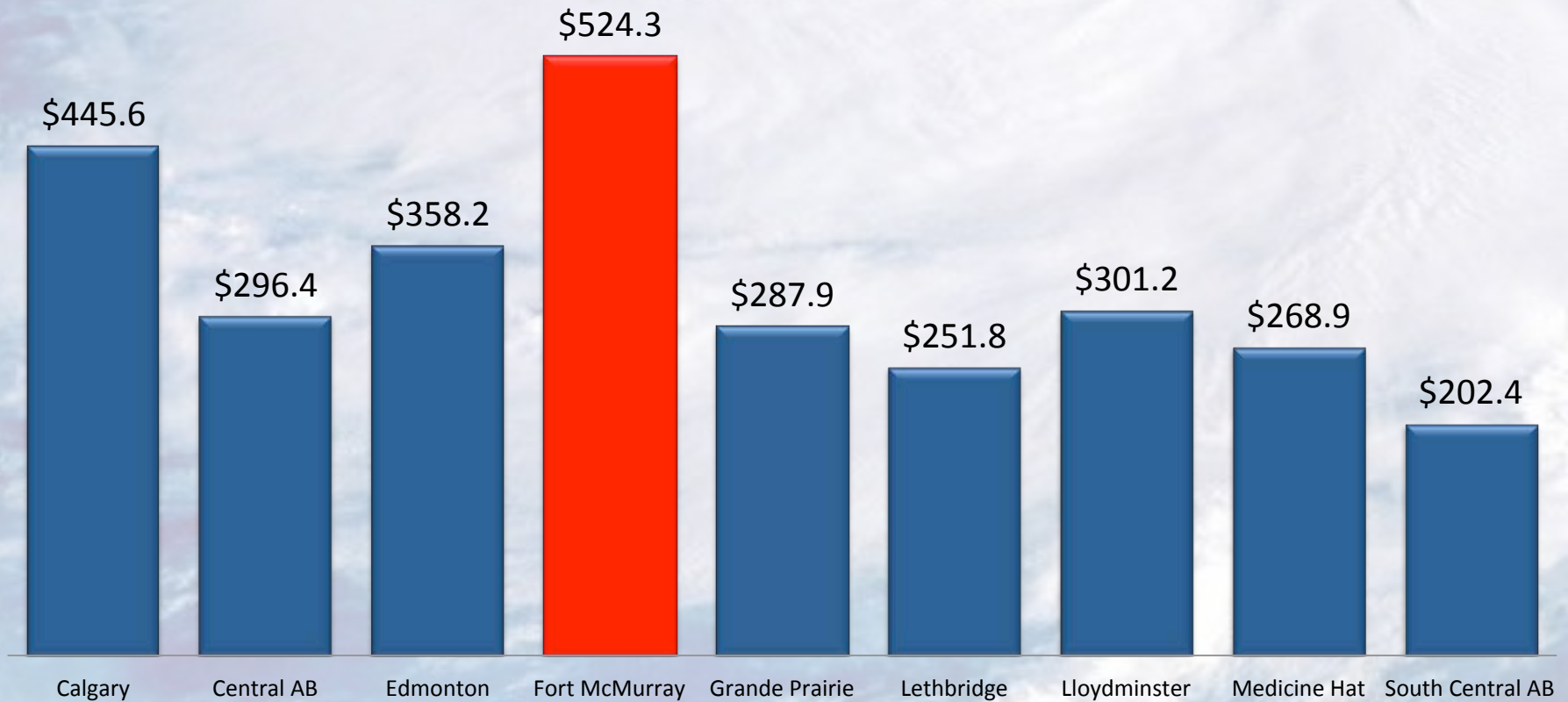
- **There is a dearth of talent between ages 35 and 50**
- **Senior people don't leave because of compensation**
- **Invariably, MBAs will always want to run a business**
- **Competitors know it's cheaper to poach than to train**
- **Millennials will energetically rise to the challenge**
- **Clients will be supportive if you are totally candid**
- **A parented company is in an advantaged position**
- **It usually is about leadership – but not always!**

Reinsurance Update



Reinsurance Update

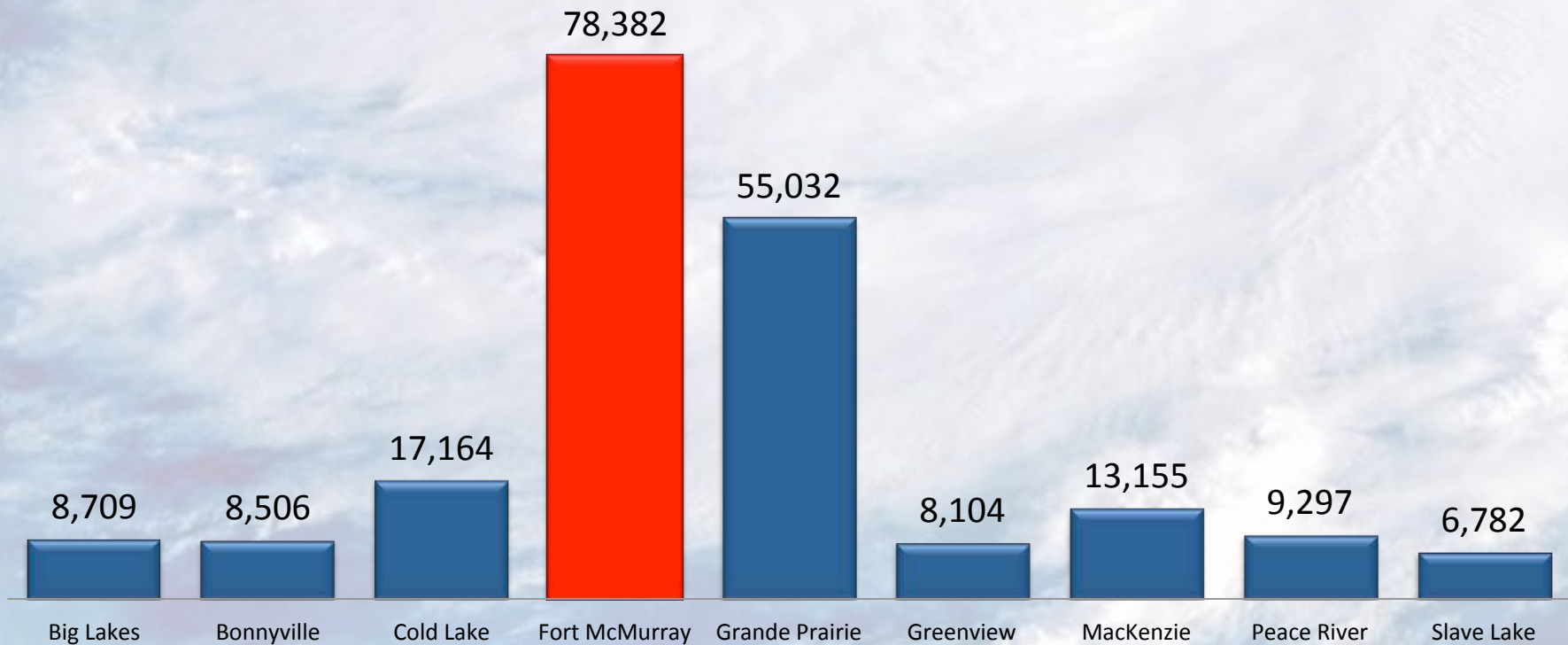
Alberta House Prices: March 2016 (\$ thousands)



Reinsurance Update

Largest Towns in Northern Alberta

The Northern Alberta Development Council: 2011 Population Above the 53rd North Parallel



Reinsurance Update

THE GLOBE AND MAIL 

[Home](#) » [Report on Business](#)



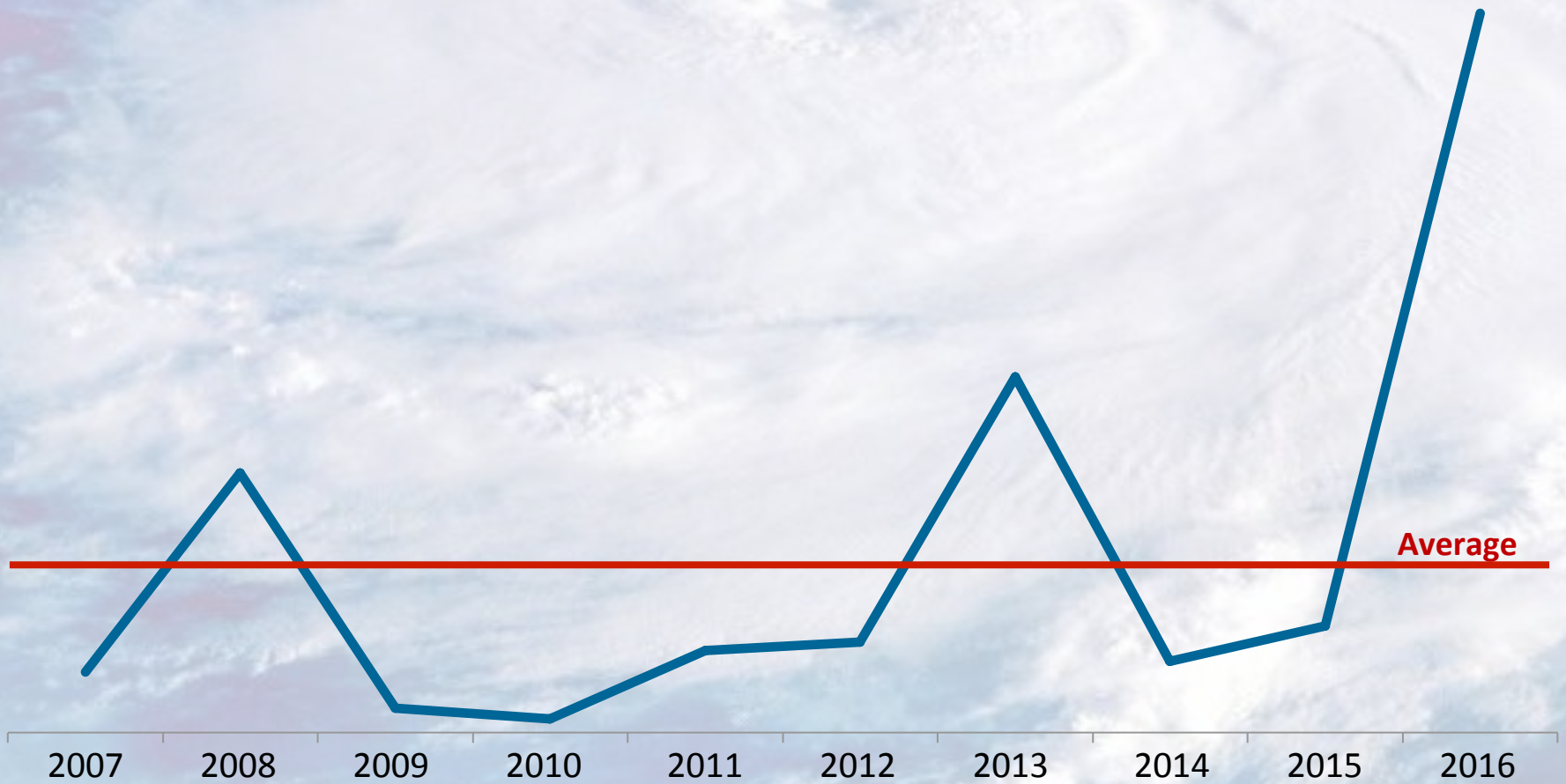
Major B.C. earthquake could put ‘national economy in jeopardy’

JACQUELINE NELSON
The Globe and Mail
Published Tuesday, Nov. 22, 2016 6:00AM EST
Last updated Tuesday, Nov. 22, 2016 6:00AM EST

- **“\$30 Billion is all the P&C industry can conceivably handle.”**
- **“With a quake of this magnitude, insurer failures are inevitable.”**
- **“There is a point at which the entire insurance industry is threatened.”**
- **No mention of available global capacity: another \$30Bn for \$500M**
- **No mention of take up rates, deductibles, legislated coverage, etc.**

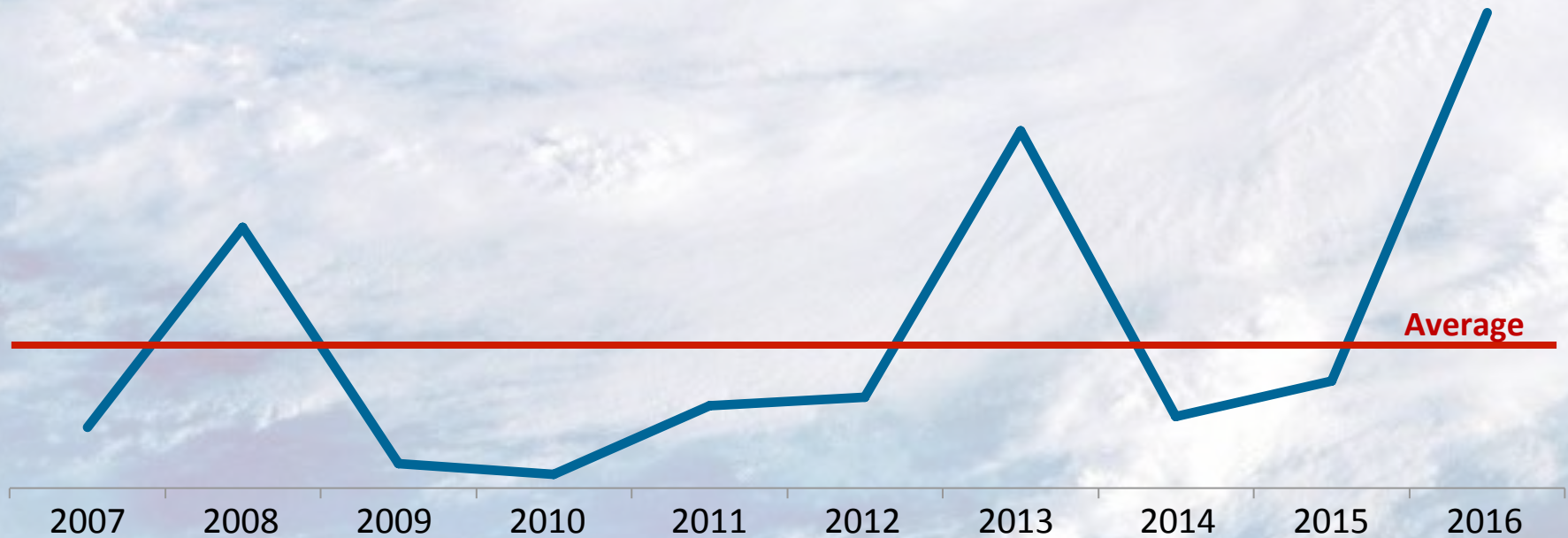
Reinsurance Update

Ten Year Property Per Risk Incurred: Selected First Layers



Reinsurance Update

**Ten Year Property Per Risk Incurred: Selected First Layers
Excluding Fort McMurray**



Reinsurance Update

 OLIVER WYMAN

**ONTARIO PRIVATE PASSENGER
AUTOMOBILE INSURANCE
COSTING OF PRODUCT CHANGES**

SEPTEMBER 11, 2015

Total AB Down 16.9%

Reinsurance Update

- **Reinsurers talking about the unmodeled wildfire peril**
- **FMM is ~5% of Katrina and ~0.5% of global capital**
- **But it's 75% reinsured & double local reins premium**
- **Property per risk losses are aberrationally high – why?**
- **Undeveloped casualty severity is at an all time low**

Reinsurance Forecast

- **Every layer & every program is vastly different**
- **Unaffected layers: as is or down 5% to 10%**
- **Broad generalization: impacted cat up 15% to 30%**
- **Broad generalization: impacted per risk up 10% to 20%**
- **Downward rate pressure on casualty – it's a bargain!**



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