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TransReView

U.S. Public Directors & Officers

Liability Insurance Market Analysis

2019 Update

November 2019

Premiums Up, Losses Also Up

Last year's report generated a number of thoughtful discussions amongst participants in the US public D&O liability market, as well as subsequent, complementary analyses that supported our research.

We have updated our report based on another 12 months' experience, and data.

To summarize: the market has turned, 2019's premium increases are a step in the right direction, but losses continue to accelerate, profitability remains elusive, and still more rate is needed to deliver a level of compensation commensurate with the risks being taken.

Key Findings

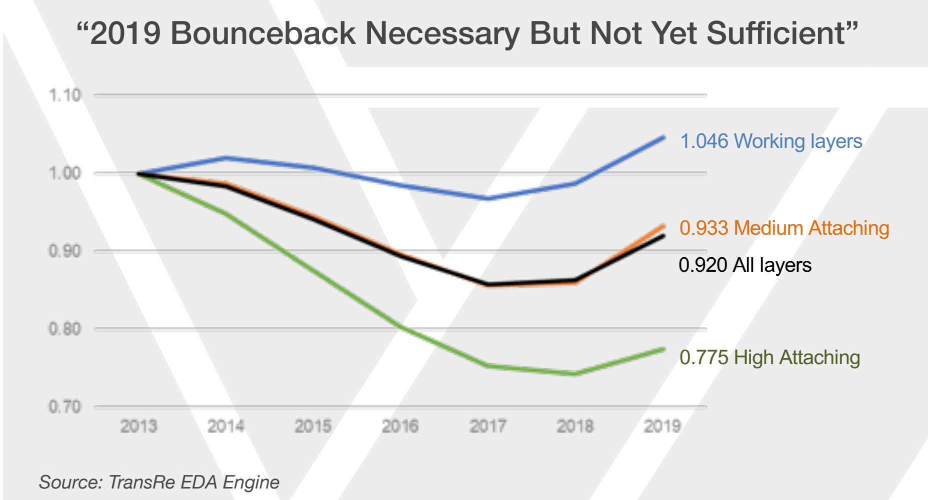
- Continuous innovation by plaintiffs' bar
- Same # Publicly Traded Companies + More SCAs = Higher Frequency
- Increasing severity of derivative actions
- Claim cost inflation + Social Inflation
- Event litigation & follow-on suits from regulatory actions
- Limit discipline + Increased scrutiny of broad/expanded coverage terms
- 2019 price improvements, despite continuing abundant capacity
- Inadequate compensation for risk assumed

Overall pricing down 8% since 2013

All layers are finding improvement, with the steepest being the mid layers, while high attaching layers have further to go

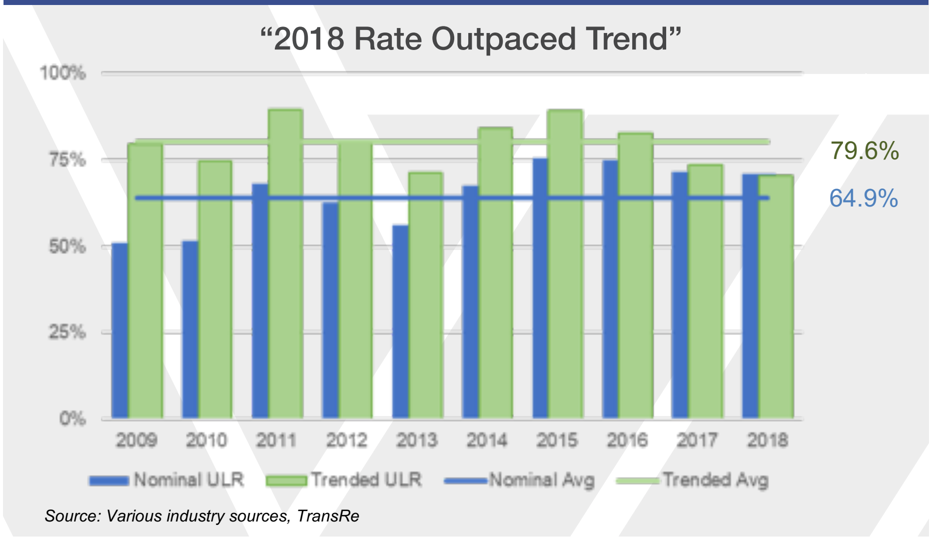
Price improvement is not easy – needs collaborative effort by buyer, their broker and insurer

TransRe Public D&O Price Index



2018 is the first year in a decade that rate outpaced trend

TransRe Public D&O & FI D&O/E&O Loss Ratio Analysis



We have included annual rate changes and a trend factor in our loss ratio analysis, to recognize changes in loss causation and loss size over time, as well as prices. We blended the trend and rate change factors from the different layers, to provide a portfolio manager’s perspective of performance.

TransReView:

79.6% Ultimate Trended Loss Ratio
15.0% Acquisition Costs
12.5% Internal Expenses

107.1% Underwriting Ratio

‘It’s just math’

Quantifying The Trends

Since 1984 TransRe has written almost $8.5 billion of management liability reinsurance (treaty and facultative), and has paid the associated losses and loss expenses. Over that period, we've accumulated significant experience, data and insight.

This report quantifies the data points that support the expressed opinions. The data set utilized includes publicly available information, licensed third party data from FactSet, Stanford Securities Litigation Analytics and SNL, as well as our proprietary TransRe Entity Data Analytics (EDA) Engine (Appendix A).

The data we use is dynamic and changes year over year, due to developing claims, more information into our EDA engine and changes in how carriers report data to us. The 2019 data is more limited than prior years, and is through June 30.

TransRe Public D&O Composite Rate Index

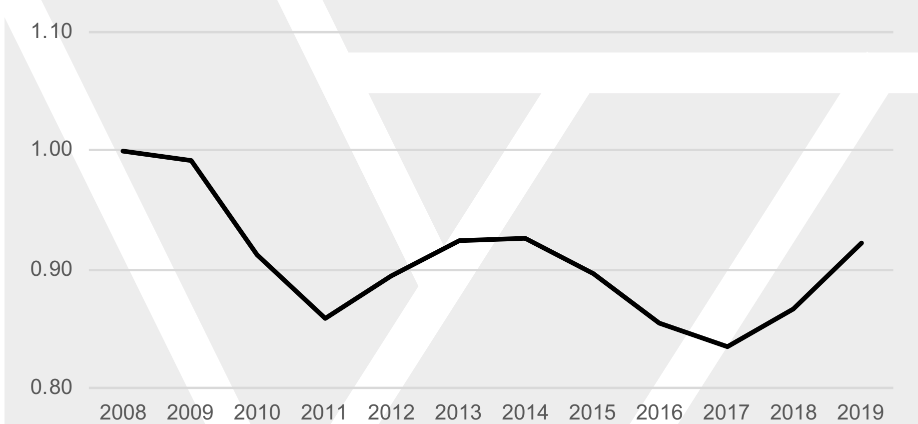
NEW

New for this year, we include our composite "rate change" index. The figures are based on rate changes reported in submissions reviewed through 10/1/19. In some instances, it does not reflect actual to price achieved. Policy Year 2019 rate changes are largely based on budgeted or partial year figures.

Tracks EDA price analysis.

Rates are still below 2008.

US Public D&O Composite Price Index



Source: Various industry sources, TransRe

TransRe Public D&O Price Index

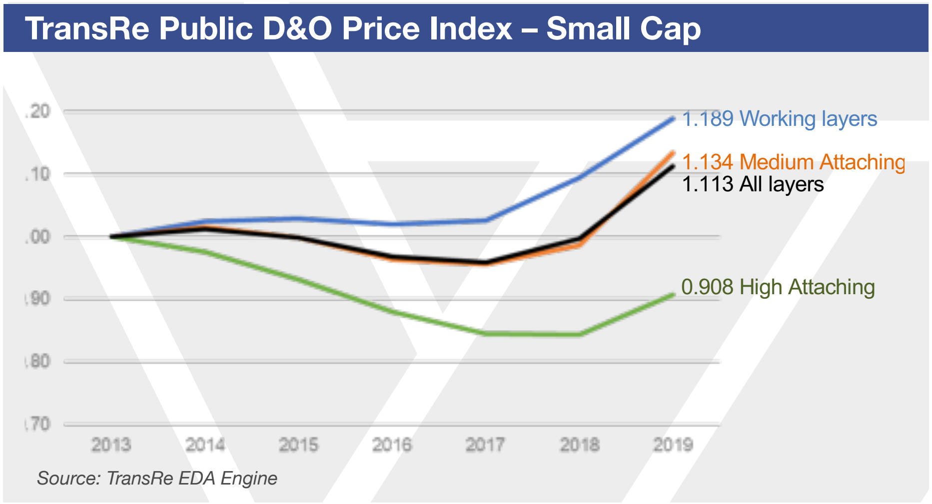
To generate observable insights, we segmented our EDA database by size of company and by attachment point bands. Each of the following price index charts use these definitions:

	Market Capitalization	Attachment Bands		
		High	Medium	Working
Large Cap	>$10B	≥ $100m	>$20 to <100m	Up to $20m
Mid Cap	>$1B up to 10B	≥ $50m	>$10 to <50m	Up to $10m
Small Cap	Up to $1B	≥ $25m	>$0 to <25m	0

Our overall price index (page 2) includes prices for all layers, all company sizes. That price breaks down as follows:

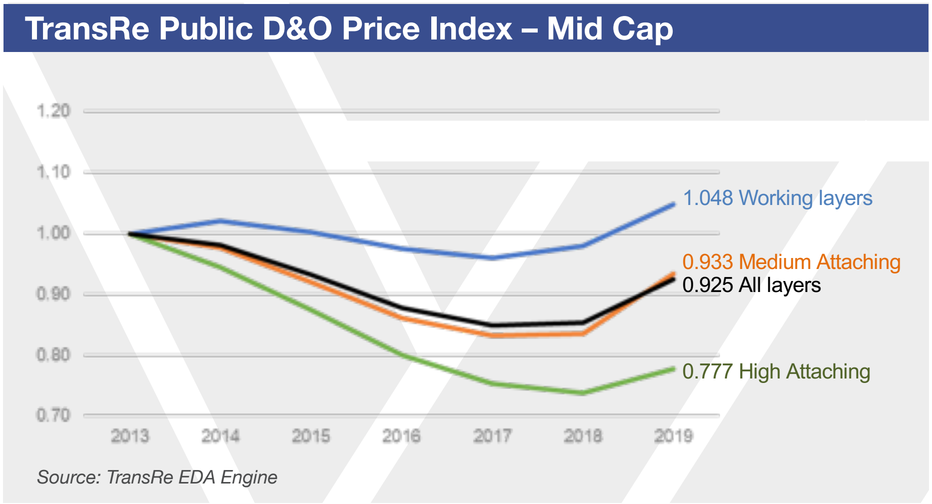
2019 renewal changes

Overall	+11.6%
Working Layer	+8.6%
Medium Attaching	+14.9%
High Attaching	+7.6%



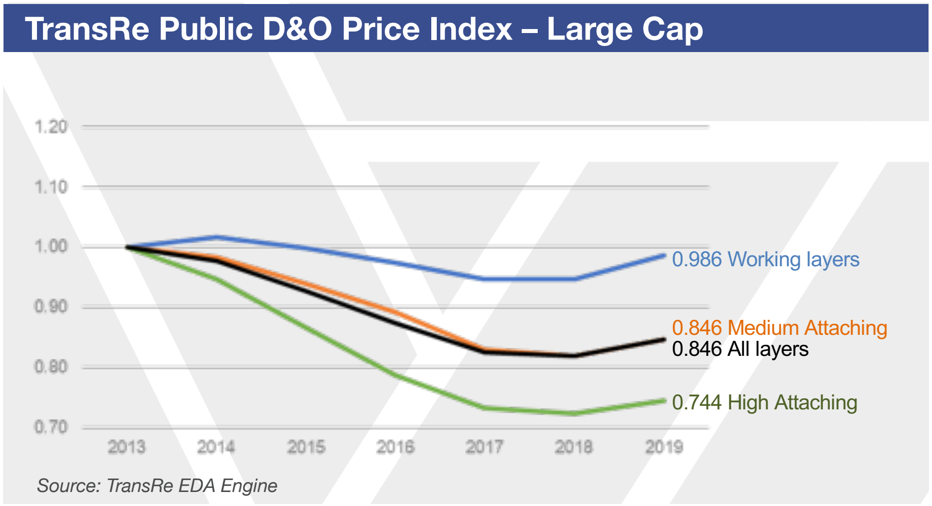
2019 renewal changes

Overall	+8.4%
Working Layer	+7.1%
Medium Attaching	+11.7%
High Attaching	+5.4%



2019 renewal changes

Overall	+3.4%
Working Layer	+4.1%
Medium Attaching	+3.2%
High Attaching	+2.8%



The price index blends new and renewing business. 2019 is through 6/30/19. It does not include the rapidly changing IPO market.

Rates are picking up

TransRe Loss View
Public D&O

TransRe analyzes industry experience by segment and in total, based on proprietary data. Each study covers more business than is assumed by us, and is more representative of actual underwriting results than is publicly available, because it correctly matches losses and ALAE with the associated premiums. The data is dynamic, and changes year on year as losses develop.

With the increased level of securities class action filings in recent years, we have supplemented the total chart with details of commercial public D&O.

Each chart shows both nominal and trended ultimate loss and ALAE ratio projections. These provide an estimate of the historic industry loss and ALAE ratio over time, and provide a view of how losses would expect to behave in today's dollars. Both charts exclude Global Financial Crisis losses.

Industry Public D&O and FI D&O/E&O Predominating* Loss Analysis

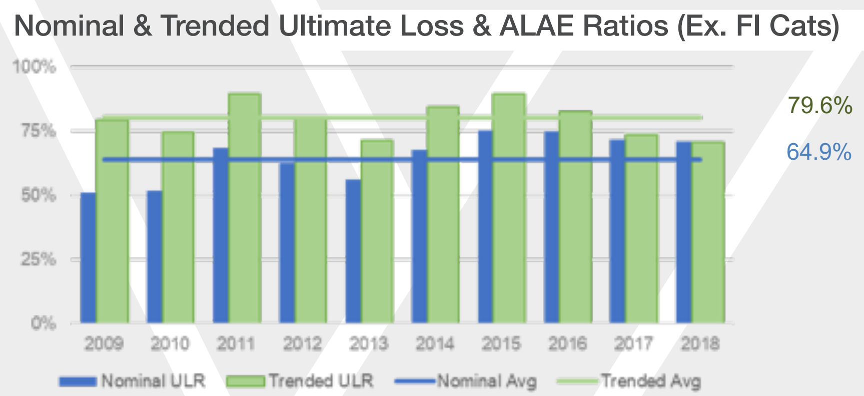
*Excludes private and not for profit , to the extent possible

2009-2013 Average

Nominal	57.8%
Trended	79.0%

2014-2018 Average

Nominal	72.1%
Trended	80.3%



Source: Various industry sources, TransRe

Industry Commercial Public D&O Predominating* Loss Analysis

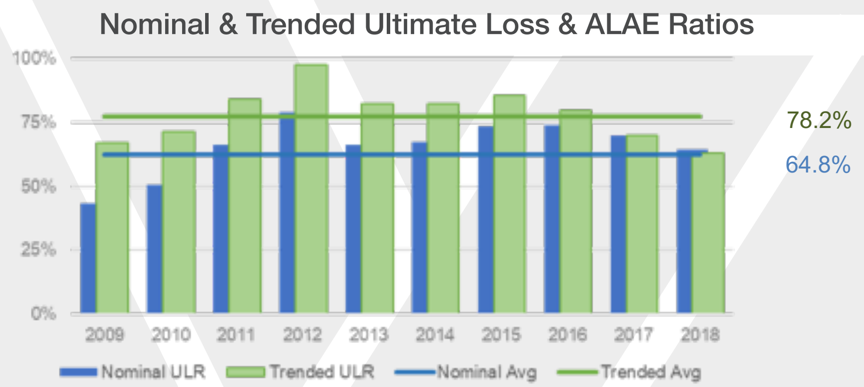
*Further excludes financial institutions D&O/E&O and all ancillary lines, to the extent possible

2009-2013 Average

Nominal	60.2%
Trended	80.1%

2014-2018 Average

Nominal	69.7%
Trended	76.1%



Source: Various industry sources, TransRe

Rate on rate is required to overcome the 'new normal' loss environment and a decade of price discount.

TransRe Loss View

In addition to the Price Index and the Loss Ratio Analysis, TransRe also analyzes publicly available industry data for further insight – specifically Schedule P (Other Liability Claims Made) and the D&O Supplement.

In Schedule P, loss adjustment expenses are split between defense & cost containment expenses (DCCE) and Adjusting and Other Payments. While imperfect, we follow industry practice when we use DCCE as a proxy for Allocated Loss Adjustment Expenses (ALAE).

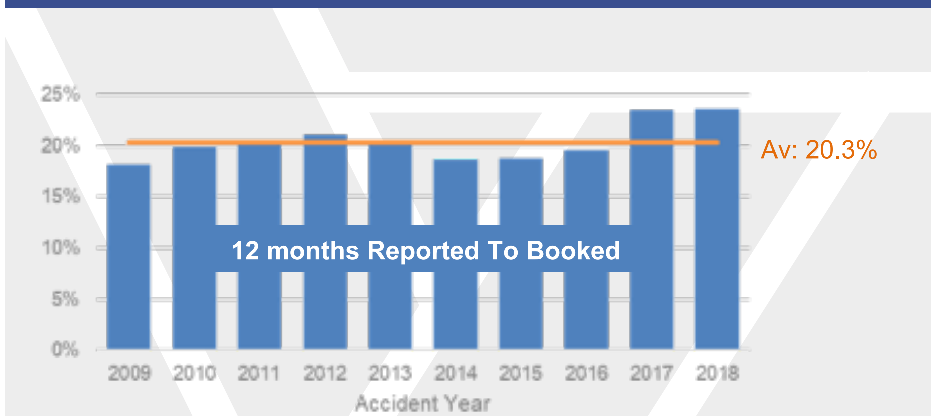
As a measure of reserve adequacy – we look at the 1st year reported as a percentage of current ultimate. That perspective reveals a pattern of industry reporting that suggests IBNR for recent years is optimistic.

Steady rise since 2015

2017/2018 now well above long term trend

If historical patterns hold, 2017-2018 IBNR likely to prove inadequate

12 Month Reported L&DCC: Booked Ultimate L&DCC



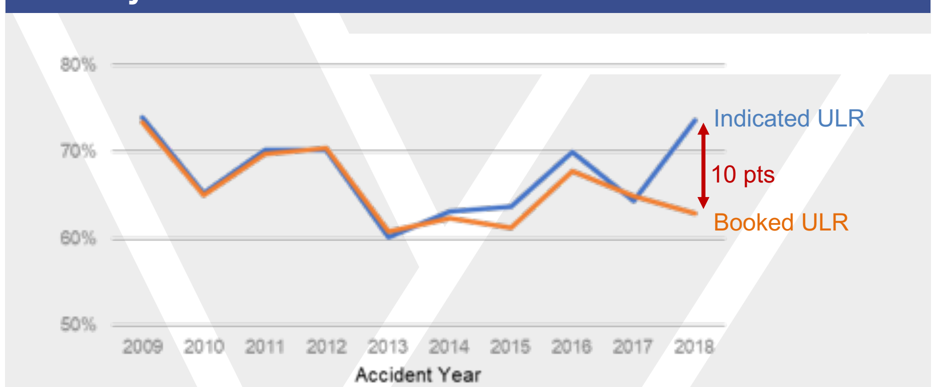
Source: SNL Industry OLCM Sch P Net Reported Loss & DCCE, TransRe

To offer an alternative view, we looked at the industry's booked loss ratios and then applied mechanical Loss Development Factors derived from Schedule P.

Sch P Net Development suggests booked loss/ DCCE ratios are optimistic. Ultimate likely to exceed booked

Booked Weighted Average: 64%

Indicated & Booked Ultimate Loss Ratios – Industry: Other Liability Claims Made



Source: SNL Industry OLCM Sch P Net Reported Loss & DCCE, TransRe

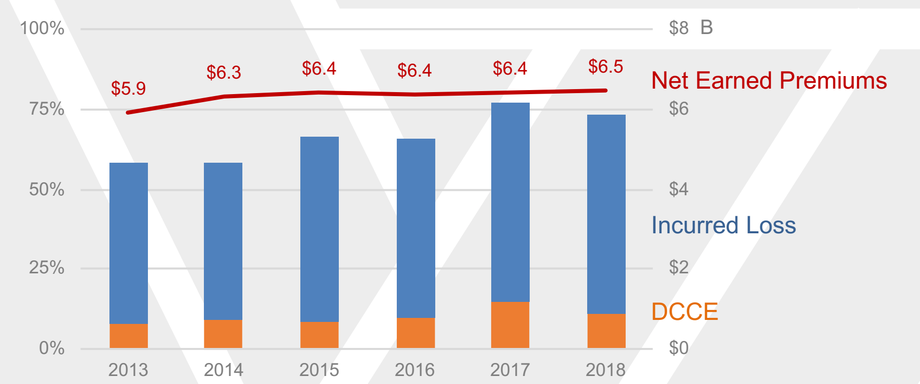
The D&O Supplement

The final two publicly available views are taken from the D&O supplement and Schedule P data. The D&O Supplement includes public, private and not-for-profit experience. The Schedule P Other Liability – Claims Made data includes D&O, E&O, Environmental, Product Liability, Cyber and Transactional. The supplement is more focused on directors & officers liability than Schedule P, but neither of them match losses & expenses with the associated premium by year. Since one is on a Calendar Year basis and the other on an Accident Year basis, this is not an apples to apples comparison.

2018 premium uptick partly offset by prior calendar year development

Loss and DCCE ratios improved in 2018, which tracks our EDA price analysis

D&O Supplement – Incurred Loss & DCCE Ratio to Earned Premiums, by calendar year

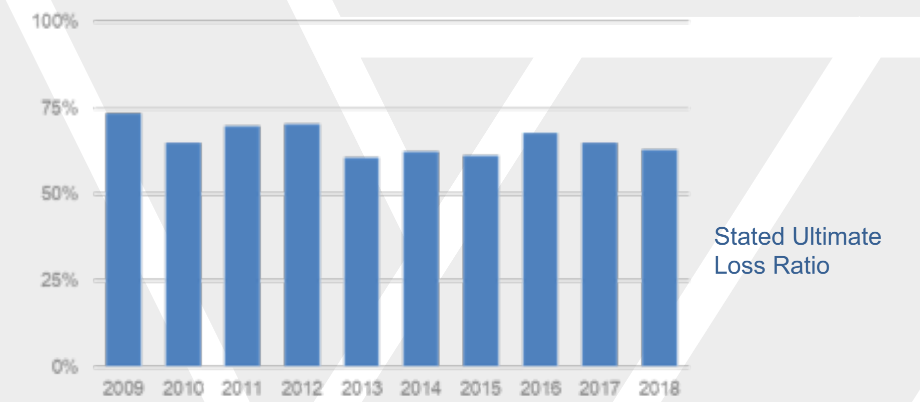


Source: SNL

Flat premium, ULRs >60% for all OLCM business, all years

Favorable cyber/ transactional results are disguising higher LRs for D&O, large private equity and lawyers' professional

Accident Year Ultimate Loss Ratios – (Industry: Other Liability – Claims Made)



Source: SNL Industry OLCM Sch P Net Reported Loss & DCCE, TransRe

The D&O Supplement, and Schedule P both support TransRe's D&O Loss Analysis: results have been unfavorable over time and carriers are taking initial steps towards reversing poor results.

D&O Supplement, Plentiful & Diverse Capacity

Overall, capacity for management liability remains plentiful. In addition, there has been a reduction in concentration away from the top five writers since 2011, which makes sense given the results.

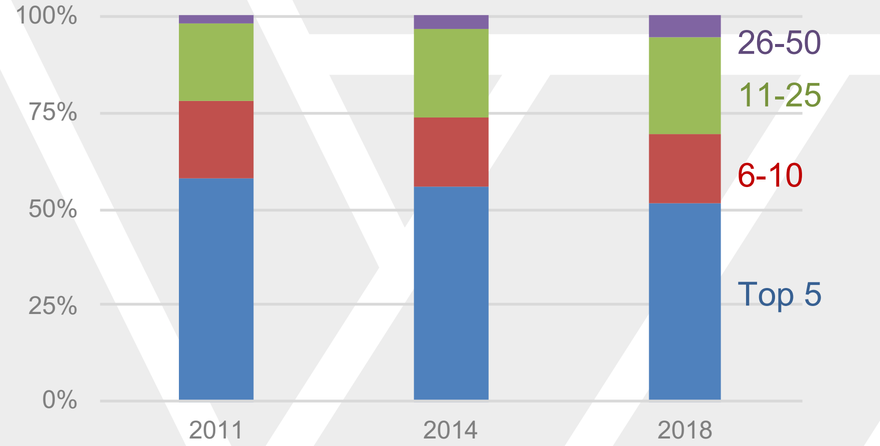
At the same time, broker concentration has continued, as a result of ongoing M&A activity.

The combination of these trends (concentrated distribution and widespread supply) is the proximate cause of the observed pricing pressure.

Top 10 under pressure

Dilution strains an insurer's portfolio balance, optimization and expense ratios

Insurer Market Shares



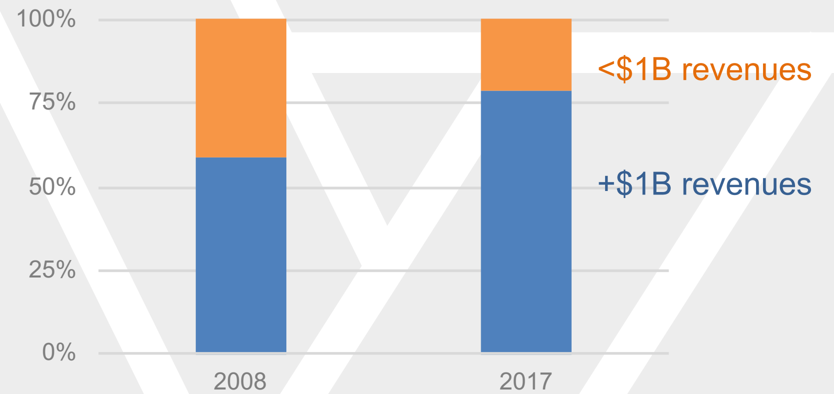
Source: SNL

#Brokers > $1B Revenues
2017 13
2008 5

Top 100' Total Revenues
2017 $42.3B
2008 $21.4B

Size = placement power

Broker Market Shares



Source: Hales Top 100 Brokers & Agents

More markets = more dilution
More dilution = individual portfolio strain
Carrier Dilution + Broker Concentration = Price Pressure

Closing Thoughts

The Management Liability market is undergoing a necessary correction. This is not (yet) a hard market, but we have begun to see disciplined underwriting, astute limit deployment and rate rises. To date, much of the rate improvement has been concentrated in the primary and 'working' excess layers.

Market conditions and drivers remain similar to last year:

Fewer publicly traded companies + more SCA's = higher frequency
Increasing severity of derivative actions
Claim cost inflation
Follow-on regulatory actions
Continuous innovation by plaintiffs' bar
Larger number of plaintiff firms
Continued M&A allegations predominately benefitting only the plaintiff and defense law firms

Rate solves a lot. Better industry loss ratios reflect an improved denominator, but the numerator, (losses) remains robust. We see a continuing rise in losses and associated loss expenses. We see new sources of claims emerging, and we see old sources evolving:

Cultural EPLI issues
Aggressive sales practices
Misguided management of data breaches
Proliferation of easier-to-plead Section 11 IPO cases
Social inflation, and
Societal issues – opioids, e-cigarettes and marijuana

Claim frequency is up for all business sectors and for all market capitalizations.

Prices are not keeping pace with loss costs. 2019 was the first time in a decade that rates outpaced trend (and by a miniscule amount). The interest rate outlook is 'lower, longer'. If the recent spike in frequency is the 'new normal' and stock-markets retreat from their current highs, we can expect more settlements, for larger amounts.

While we are encouraged by ongoing efforts to change course, those efforts must continue for the foreseeable future if acceptable profitability is to be achieved. Prudent limit utilization is an effective tool to navigate this difficult loss environment. Management must continue to scrutinize new business assumptions, and remember the adage: "The perfume of the premium tends to outweigh the stench of the risk".

The cycle is turning. It took a long, expensive time to get here, and it is still only 'better' not 'good' and nowhere near 'great'.

The only sustainable service is a profitable one. Rate on rate. It's just math.

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Analytic Science
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Claims
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Legal

About Us

TransRe offers all management and professional liability reinsurance, both on a treaty and facultative basis, for D&O, E&O, Healthcare, Cyber and Transactional liability.

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Questions?
Comments?
Feedback?

As we update this report periodically, and delve deeper into the quantification of the identified trends, we are happy to discuss how our Entity Data Analytics can help you and your business. Please call:

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Appendix A

Entity Data Analytics (EDA)

At the core of any data analytics initiative lies the foundation of data cleaning, standardization and aggregation. We have built a proprietary engine we call EDA (Entity Data Analytics) that allows us to run in-depth risk analysis and trend reporting on aggregated, normalized data down to the individual policy level. Our management liability (D&O and E&O) database included almost 190,000 policies that have almost $1 trillion of aggregate policy limit, which we sorted by industry, market capitalization, 52 week high/low and attachment levels. This data set is supplemented by several additional third party inputs. Together the data provides a collective mosaic of information from which we can extract further insights.

Originally built for us to manage our internal aggregates, EDA has become a powerful tool to help us analyze portfolio metrics. One such metric is our price monitor where we track pricing at the policy level over time, even if there has been a change of insurer. This enables us to do "like to like" policy comparisons for insureds who have the same coverage, limit and attachment points – we have matched an annual average of 2,500 such like to like policies.
EDA is a big data project, and the data inputs are not perfectly consistent. We have taken measures to normalize across all data without affecting (lowering) the signal to noise ratio. This has allowed us to identify material trends.

The data reflects our empirical evidence of the market. Not all insurers purchase reinsurance, and this TransReView does not include their data
What can we do for you?

Contact us to discuss how we can provide you with empirical views of your pricing and exposures comparing results to both the data base and your own strategy.

We can also custom-tailor reports for you on request - quarterly reports that compare your pricing to our Price Index or a "like to like" Matched Policy Index. These pricing reports give you insight into your pricing vs the market, by coverage, market cap, attachment band and Industry class.

Appendix B: Significant Settlements by filing year, 2009-2017

Significant = settlements in excess of $25m
Derivative cases in bold

2009
Bank of America
Bank of America
Barnes & Noble
Beazer Homes USA
CVS Caremark
EnergySolutions
General Electric
Huron Consulting
Idearc
MGM Resorts Intl
Pfizer
Popular
Psychiatric Solutions
R.H. Donnelley
Satyam Computer Svc
Sequenom
Sprint Nextel
State Street
STEC
Toll Brothers
Tronox .
Wachovia Corp

2010
Amedisys
BancorpSouth
Baxter Intl
BP,
Diebold .
FX Real Estate
Heckmann Corp
Massey Energy
Pfizer
PG&E
Regions Financial
St. Jude Medical
Toyota Motor
Wilmington Trust

2011
Avon Products
Bank of America
Community Health Systems
Computer Sciences Corp
Dendreon
Diamond Foods
El Paso Pipeline Partners
Google
Green Mountain Coffee
HCA Holdings
Hewlett-Packard Company
Hospira
Jiangbo Pharmaceuticals
MF Global,
News Corp
The Bank of New York Mellon
Turkcell Iletisim Hizmet
Weatherford Intl,
Wells Faro

2012
Big Lots
Career Education Corp
Chinacast Education Corp
Clear Channel
Duke Energy Corp
Duke Energy Corp
Facebook
Google
Groupon
Hewlett-Packard Company
J.P. Morgan Chase & Co
Kinross Gold Corp
Overseas Shipholding Group
Prudential Financial
Questcor Pharmaceuticals
SandRidge Energy
St. Jude Medical
Wal-Mart Stores
Walter Energy .
Weatherford Intl

2013
Activision Blizzard.
Bank Leumi Le-Israel Ltd.
Barrick Gold Corp
DFC Global Corp
Intuitive Surgical
J.C. Penney Company
Lumber Liquidators
Medtronic
Poseidon Concepts
Sanchez Energy

2014
Advanced Micro Devices
Altisource Portfolio Solutions
Barclays
Cliffs Natural Resources .
Cobalt Intl Energy
Deutsche Bank
General Motors
Genworth Financial
GT Advanced Technologies .
Intercept Pharmaceuticals
L-3 Communications Holdings
Magnachip Semiconductor
Microsoft
NII Holdings
Nu Skin Enterprises
Och-Ziff Capital Management
Ocwen Financial Corp
Petroleo Brasileiro SA - Petrobas
Ply Gem Holdings
Rayonier
RCS Capital Corp
Salix Pharmaceuticals
Valeant Pharmaceutical Intl

2015
3D Systems Corp
AAC Holdings
Alibaba Group Holding
Alibaba Group Holding
Clovis Oncology
Dole Food Company
Fiat Chrysler Automobiles N.V.
Marvell Technology Group,
SanDisk Corp
SunEdison
TerraForm Global
Volkswagen AG

2016
BHP Billiton Limited
Brixmor Property Group
Cnova N.V.
comScore
DeVry
Fitbit
HeartWare Intl
LendingClub Corp
New Senior Investment
Orbital ATK,
Stericycle
Sunrun
Third Avenue Trust
Wells Fargo
Wells Fargo

2017
Endo Intl
RH,
Yahoo! .
Twenty-First Century Fox

2018
Akorn
TrueCar
PPG Industries

Appendix C: Notable D&O Suits January – June 2019

Insured	Suit Filed	Fact Summary	Class Period
January-19			
Sogou Inc.	January 9, 2019	China's fourth largest Internet company; second largest search engine by mobile queries. Litany of materially false and misleading public statements regarding Chinese regulatory investigations and changes in strategy.	11/9/17-1/9/19
Danske Bank	January 9, 2019	Danske Bank, headquartered in Copenhagen, Denmark, provides various personal banking, business banking, corporate and institutional, and wealth management products and services, along with mortgage finance, real-estate brokerage, foreign exchange and equity services, and also trades in fixed income products. Money laundering allegations, whistleblower report, regulatory investigations, all leading to allegations of overstatement of stock price.	1/9/14-10/23/18
Maxar Technologies Inc.	January 14, 2019	Maxar is a leading global provider of advanced space technology solutions for satellites, Earth imagery, geospatial data and analytics; is at the nexus of the new space economy, developing and sustaining its infrastructure and delivering the products, services, systems and solutions that make it possible. Following Spruce Point Capital's 8/7/18 publication of a report asserting that Maxar "has pulled one of the most aggressive accounting schemes [it] has ever seen to inflate Non-IFRS earnings" and Maxar's 1/7/19 disclosure that its WorldView-4 satellite experienced a control failure, shares of the company declined from as high $67.30 in late 2017 to as low as $6.25 per share on 1/14/19.	3/29/18-1/7/19
Arlo Technologies, Inc.	January 22, 2019	Arlo Technologies, Inc. provides smart connected devices to monitor the environments in real-time with a Wi-Fi or a cellular network internet connection in the Americas, Europe, the Middle-East and Africa, and the Asia Pacific regions. Allegations of mishandling communications regarding integral battery componenent and the failure to launch their "flagship wire-free security camera system" called Arlo Ultra.	8/6/18-12/3/18
February-19			
The Kraft Heinz Company	February 24, 2019	Accusations against Kraft Heinz for misleading shareholders about its business prospects. Kraft Heinz's share price sank 27.5% on Feb. 22 after the company took a $15.4 billion writedown on its Kraft and Oscar Mayer brands and Canadian assets, as consumers shifted to healthier and fresher alternatives or private-label products.	5/4/17-2/21/19
Vanda Pharmaceuticals Inc.	February 25, 2019	Vanda, a biopharmaceutical company, focuses on the development and commercialization of products for the treatment of central nervous system disorders. Allegations that Vanda was promoting the off-label use of Fanapt and Hetlioz and Vanda was fraudulently receiving drug reimbursements from the government by abusing Medicare, Medicaid, and Tricare programs.	11/4/15-2/11/19
March-19			
Marriott International, Inc.	March 15, 2019	The derivative complaint alleges that Marriott's directors and officers breached their fiduciary duties by, inter-alia, failing to discovery Starwood Hotel's major data breach before acquiring it in 2016.	11/9/16-11/29/18
Mobile TeleSystems	March 19, 2019	Russia based Public Joint-Stock Company Mobile TeleSystems provides telecommunication services in Russia, Ukraine, Turkmenistan, and Armenia. The DOJ announced on March 7, 2019, that Mobile TeleSystems and its wholly-owned subsidiary agreed to pay $850 million in penalties to resolve charges in a $420 million bribery scheme in Uzbekistan.	3/19/14-3/7/19
May-19			
Lyft, Inc.	May 17, 2019	Lyft is a ridesharing company. The alleged misstatements involve Lyft's claims about its domestic market share, failure to disclose issues surrounding the safety of the company's bike sharing program, and labor issues. Lyft went public in late March 2019 and shares sold at $72.00 per share, valuing the company at $20.5 billion. Since then, shares of the company declined to $55.56 per share on April 15, 2019.	3/28/19 to 5/17/19
June-19			
FedEx Corporation	June 26, 2019	FedEx is a global logistics company that provides a broad portfolio of transportation, e-commerce, and business services. In July 2016, FedEx significantly expanded its international operations through its $4.8 billion acquisition of TNT Express N.V., a Netherlands-based logistics company with operations concentrated in Europe. On June 27, 2017, TNT's operations were crippled by a cyberattack known as NotPetya, which involved the spread of a malware virus throughout TNT's systems. The timing of the attack was particularly problematic for FedEx, as TNT's systems were paralyzed during the critical period involving the integration of TNT with the Company's legacy European operations. FedEx is alleged to continually assure investors about its recovery from the cyber attack and that any negative impact from the attack was minimal.	9/19/17-12/18/18

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