GuyCarpenter

CASUALTY ACTUARIAL SOCIETY

2022 CASUALTY LOSS RESERVE SEMINAR

THE D&O CYCLE: WASH, RINSE AND REPEAT

SEPTEMBER 21, 2022

A business of Marsh McLennan

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- It is the responsibility of all seminar participants to be aware of antitrust regulations, to prevent any written or verbal discussions that appear to violate these laws, and to adhere in every respect to the CAS antitrust compliance policy.

Speaker: *Gregory Spore…*

…is Guy Carpenter's US Center of Excellence Leader for Financial Lines, which includes all Management and Professional Liability coverages. A graduate of Northwestern University, Gregory brings more than 30 years of experience leading highly successful financial lines underwriting and broker operations. After several years as a commercial Public D&O underwriting manager at Chubb, Gregory enjoyed a very successful twenty three-year run with Marsh, where he was Marsh US FINPRO Placement Leader responsible for over $3 Billion in premium.

The D&O Cycle: Wash, Rinse and Repeat

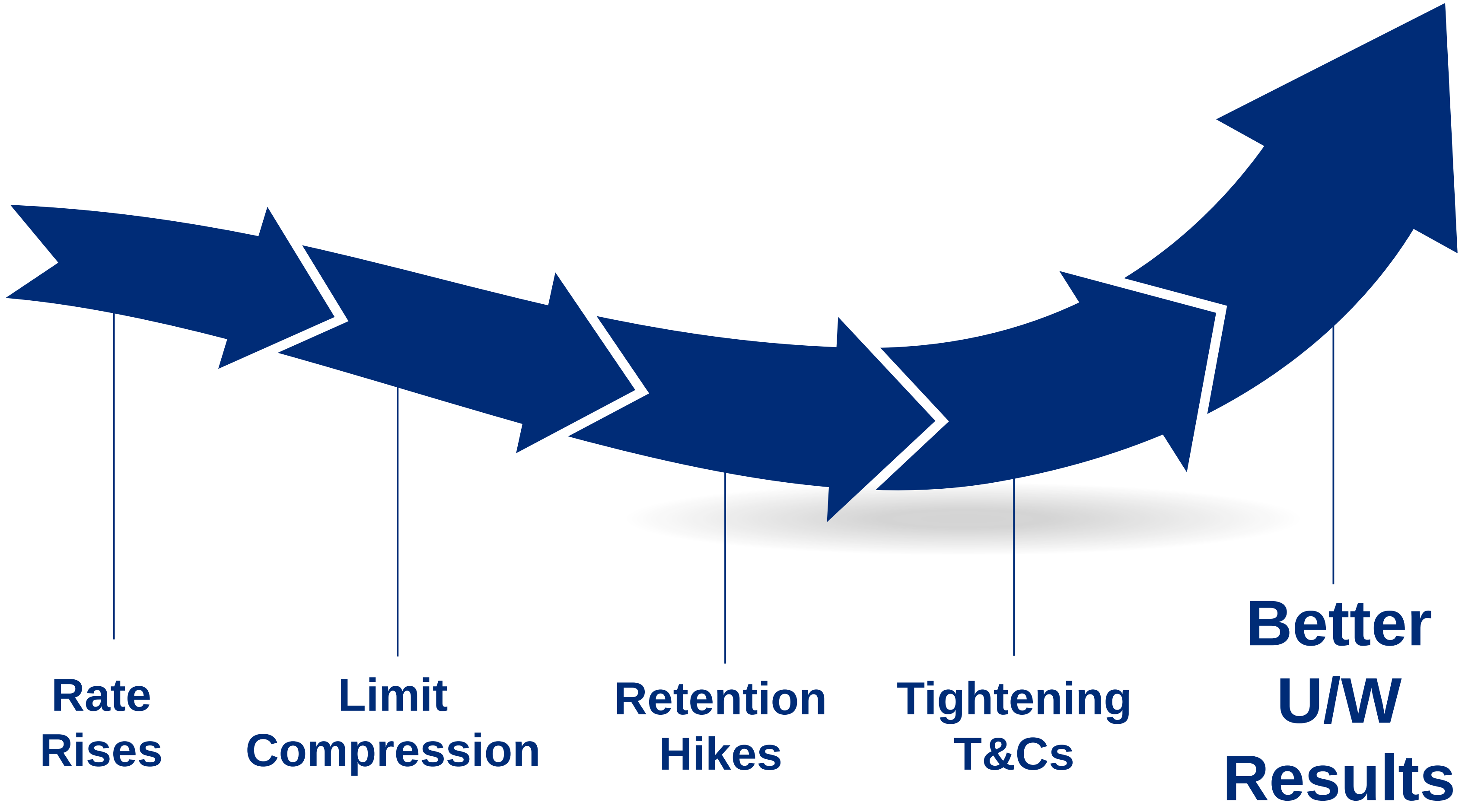
Market Update and Emerging Issues

Concurrent Session LOB-5, September 21

11:30 – 12:45 PM CT

Management and Professional Liability - Overview

Underwriting Actions in 2021 and 2022 = Market Conditions Remain Favorable



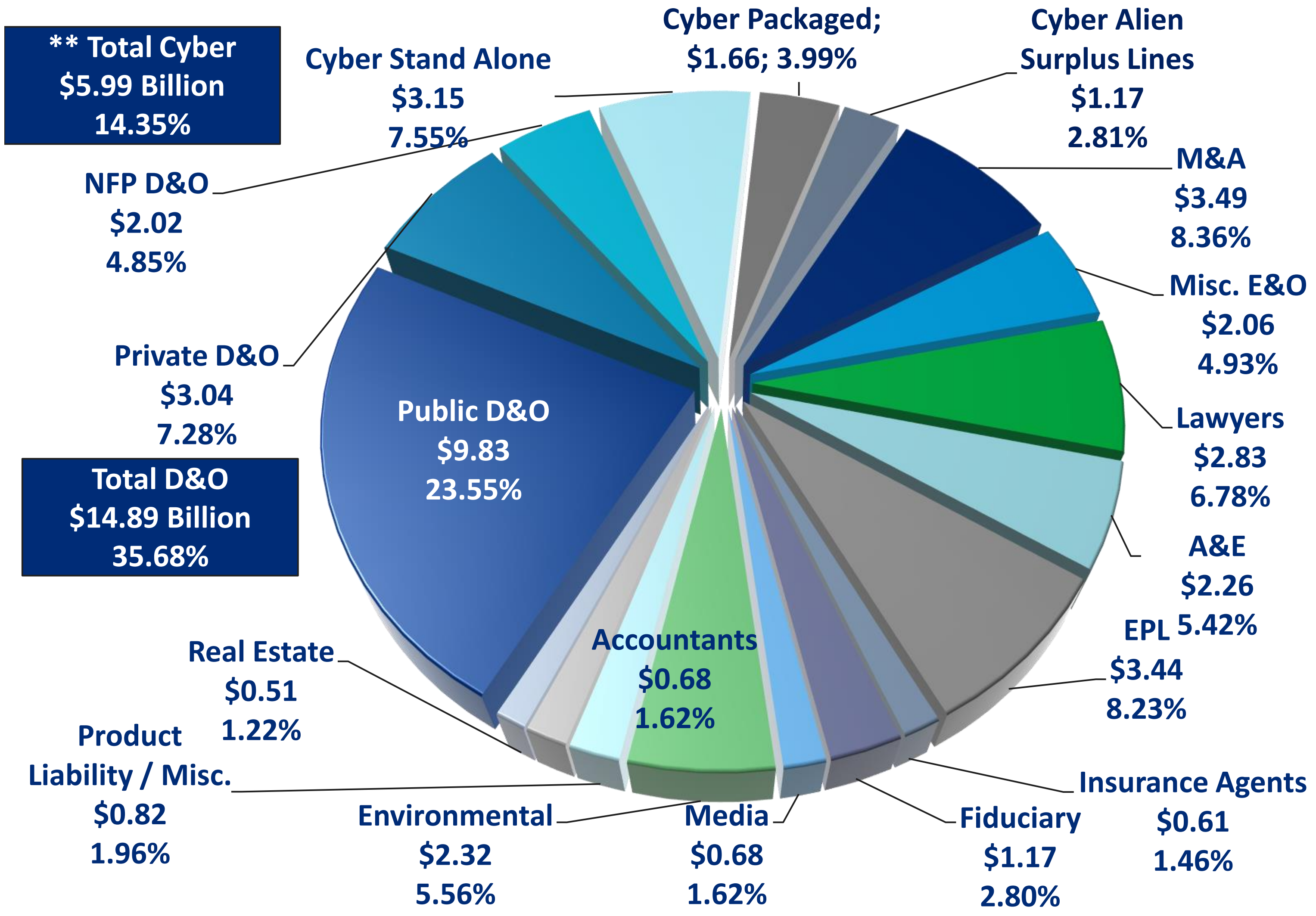
The End of a Long Firming?

- For Management and Professional Liability lines the 2021 to 2022 period has been characterized by re-underwriting, measured growth, healthy rates, tight T&C’s, short limits, high retentions and improving loss trends.
- Although rates have been decelerating for a number of quarters after peaking in 2021, rates remain high by historical standards.
- Bottom line, market conditions remain favorable.

Other Liability Claims Made OLCM Statutory Statistics 2001 to 2021

2022 Casualty Loss Reserve Seminar

US OLCM Market Size: $41.73 Billion Direct Written Premium 2021



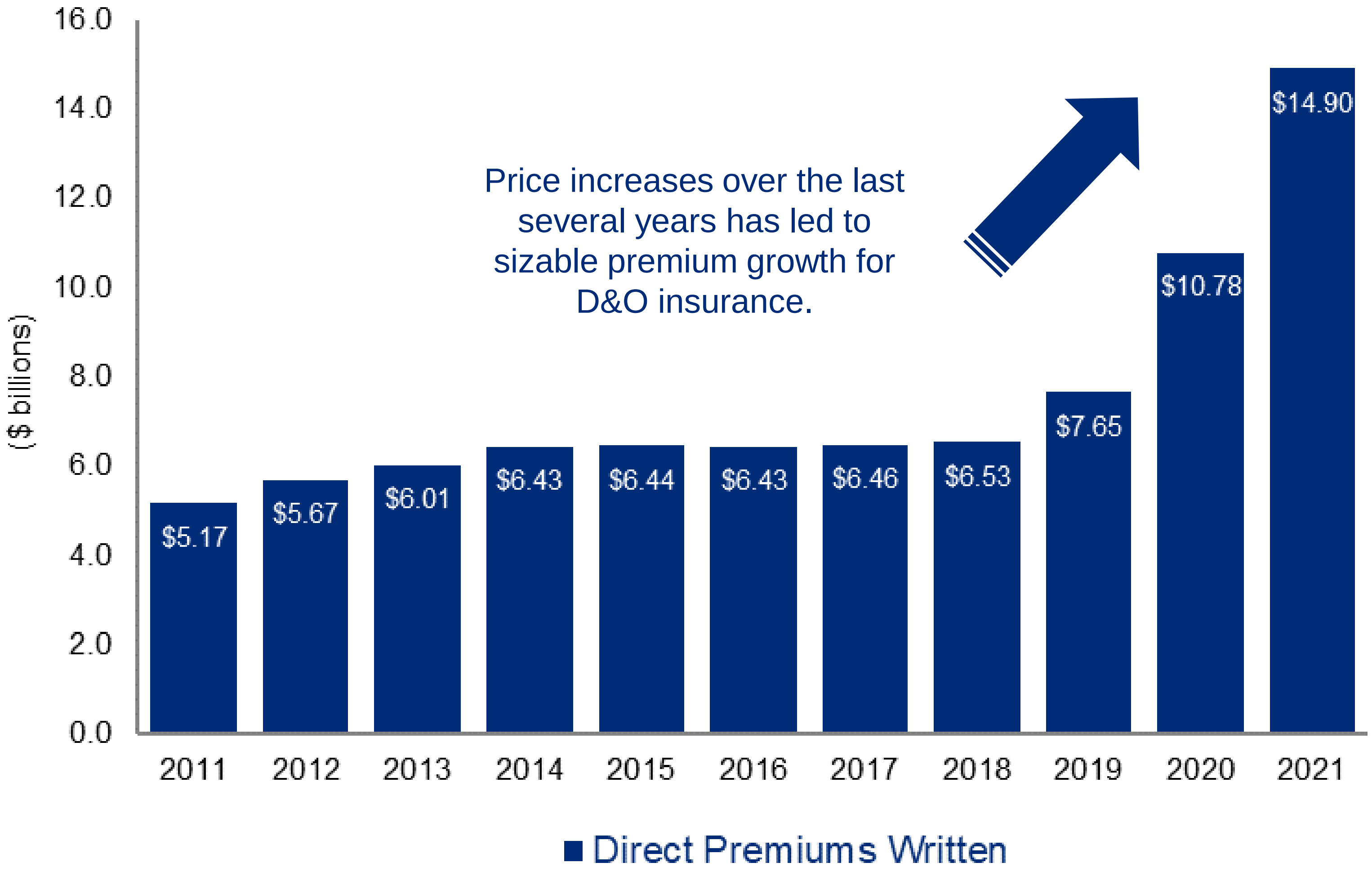
2021 OLCM DPW Rank	Name	DPW ($000,000)	DPW % D&O
1	AXA XL	$3,539	64.5%
2	Chubb	$3,396	40.0%
3	AIG	$2,471	49.0%
4	CNA	$2,375	22.0%
5	Berkshire	$2,243	27.0%
6	Fairfax	$2,038	42.3%
7	Travelers	$1,881	25.0%
8	W.R. Berkley	$1,763	33.9%
9	Liberty Mutual	$1,669	12.0%
10	Tokio Marine	$1,362	71.3%
11	Nationwide	$1,334	22.1%
12	Sompo	$1,063	51.9%
13	Zurich	$1,038	50.5%
14	Markel	$1,010	31.7%
15	AXIS	$926	39.2%
16	Swiss Re America	$909	16.7%
17	Alleghany	$864	57.4%
18	Arch	$862	55.5%
19	American Financial	$836	38.3%
20	Hartford	$813	33.2%
21	QBE	$784	11.9%
22	Everest	$599	32.7%
23	Starr	$596	TBD
24	Beazley	$521	32.7%
25	Argo	$508	37.8%
% of Total			
84.8%	**Top 25 Writers**	**$35,399**	
15.2%	**All Other**	**$6,336**	
100.0%	**Industry**	**$41,735**	**35.7%**

** Note: Other Liability Claims Made (OLCM) US Statutory data breaks out D&O and Cyber Liability premium figures only. All other individual product lines shown are estimates and may not reflect actual amounts.

Source: * 2021 OLCM Schedule P D&O and Cyber Supplemental(s)

2022 Casualty Loss Reserve Seminar

US D&O Standalone Direct Premium Written 2011 to 2021



- Directors and officers' coverage has increased significantly following sizable rate increases in the past three years.
- Continued double-digit rate increases, and the formation of over 1,000 new US public companies in 2021, for D&O liability helped drive the upward premium trend.
- DPW for 2021, is more than double that for 2018, demonstrating considerable momentum for the line.
- DPW grew ***38.2%*** in 2021, ***40.9%*** in 2020 and ***17.2%*** in 2019

Source: Source: Statutory Filings D&O Supplement, D&P Analysis

2022 Casualty Loss Reserve Seminar

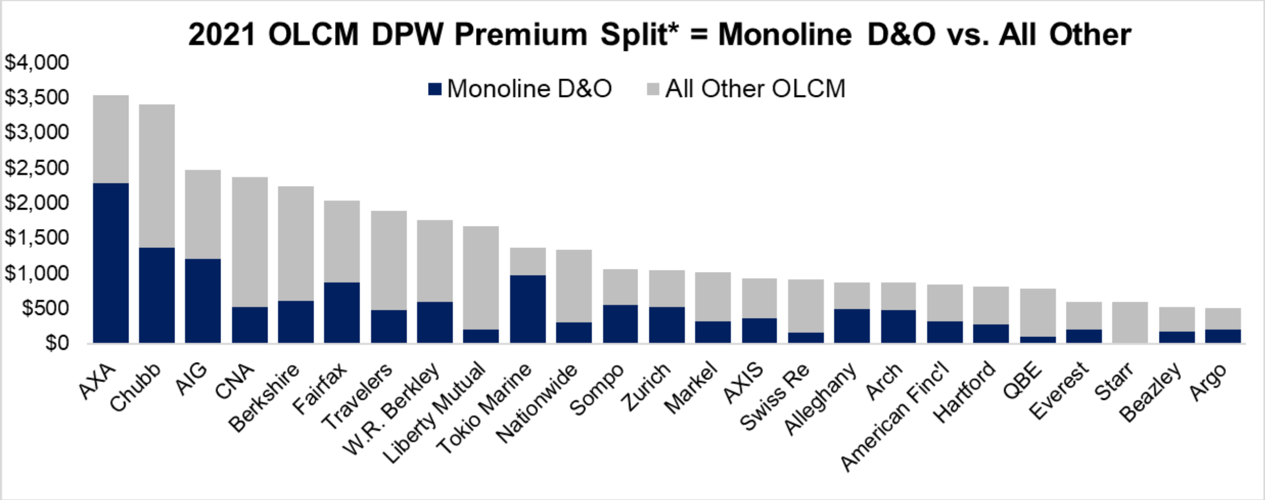
US D&O Top 15 Carriers: $11,625 Billion (78% of Total) Direct Premium Written 2021

Monoline D&O 2021 Rank	Group	Monoline D&O 2021 DPW	2020	YOY Chg.	2016	5-Year CAGR	OLCM	Mkt Share	Monoline D&O % of OLCM
1	AXA	$2,284	$1,453	57%	$734	25%	$3,539	15.3%	65%
2	Chubb	$1,357	$1,087	25%	$826	10%	$3,396	9.1%	40%
3	AIG	$1,208	$981	23%	$1,015	4%	$2,471	8.1%	49%
4	Tokio Marine	$971	$753	29%	$553	12%	$1,362	6.5%	71%
5	Fairfax	$862	$515	67%	$161	40%	$2,038	5.8%	42%
6	Berkshire	$606	$411	48%	$178	28%	$2,243	4.1%	27%
7	W.R. Berkley	$597	$351	70%	$143	33%	$1,763	4.0%	34%
8	Sompo	$552	$434	27%	$151	30%	$1,063	3.7%	52%
9	Zurich	$524	$369	42%	$126	33%	$1,038	3.5%	50%
10	CNA	$523	$438	19%	$407	5%	$2,375	3.5%	22%
11	Alleghany	$495	$371	34%	$160	25%	$864	3.3%	57%
12	Arch	$478	$258	86%	$107	35%	$862	3.2%	56%
13	Travelers	$471	$422	12%	$306	9%	$1,881	3.2%	25%
14	AXIS	$363	$252	44%	$133	22%	$926	2.4%	39%
15	Old Republic	$335	$247	35%	$81	33%	$347	2.2%	96%
	Top 15	**$11,625**	**$8,342**	39%	**$5,081**	18%	**$26,167**	**78.0%**	**44%**
	All Others	$3,274	$2,438	34%	$1,354	19%	$13,868	22.0%	24%
	Industry	**$14,899**	**$10,780**	38%	**$6,435**	18%	**$40,035**	**100.0%**	**37%**

Ranked by Mono-line D&O Direct Premiums Written Through 2021

2022 Casualty Loss Reserve Seminar

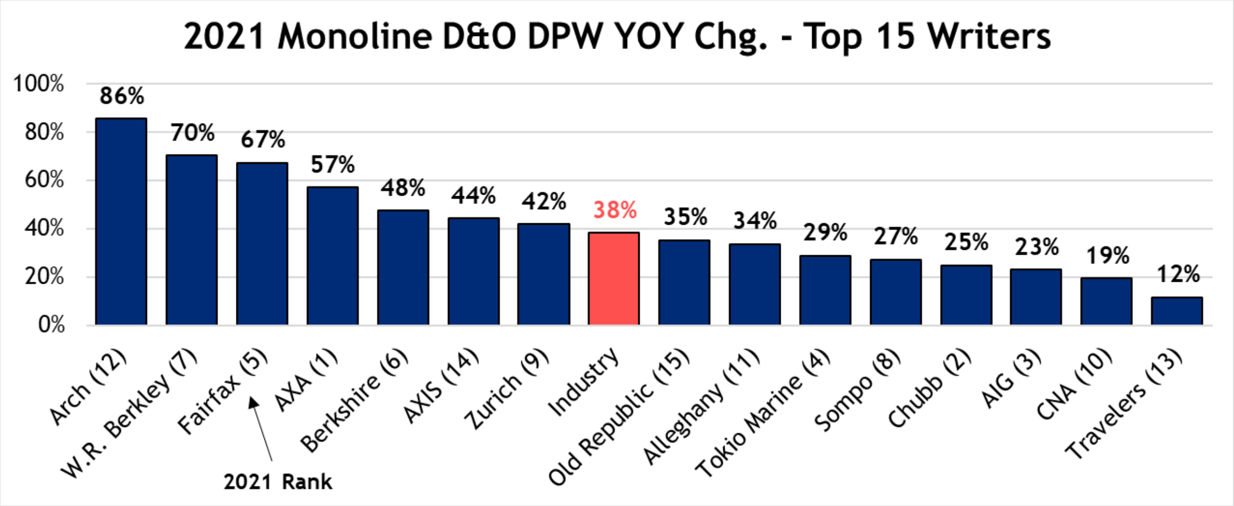
US D&O Top 15 Carriers: $11,625 Billion (78% of Total) Direct Premium Written 2021



- **While Moderating, Pricing Environment Conducive To Strong Growth In 2021** … The significant growth in mono-line D&O premium seen in recent years can be at least partially attributed to favorable price increases, particularly those seen throughout 2020 and early 2021. While momentum has slowed from a pricing perspective through YE-21, it's likely to remain positive through the first half of 2022 driven by continued inflationary pressures / litigation environment (litigation finance is a factor and not going away).

- New capacity has entered in the market over the last 12-18 months, which will likely have a more meaningful impact on pricing trends in 2022 than it did last year, especially for excess layers.

- Above is a closer look at the top OLCM writers & the trends shown for D&O specifically. Highlighting the notable differences in mix by company, the following exhibit breaks down the split between mono-line D&O and all other OLCM DPW in 2021.

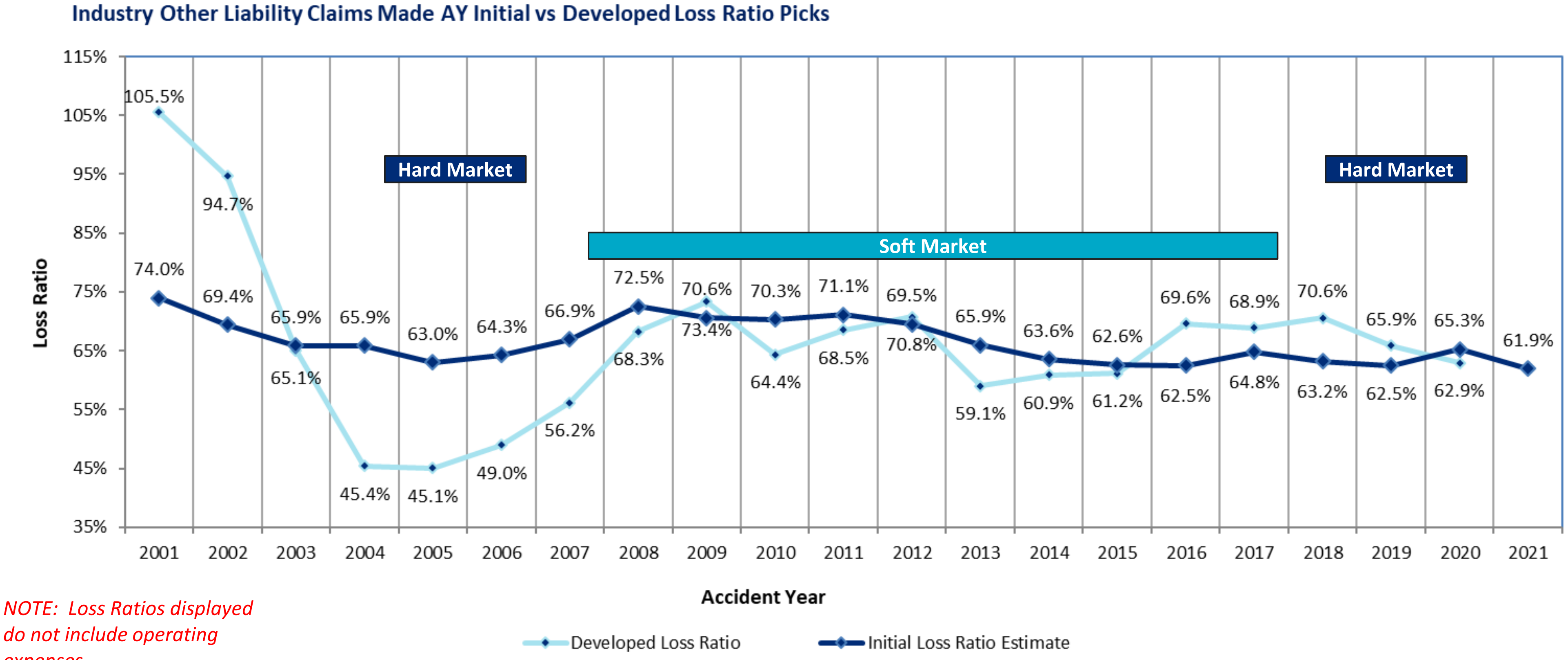


Source: Source: Statutory Filings D&O Supplement, D&P Analysis

2022 Casualty Loss Reserve Seminar

OLCM Industry loss trends: 20 Year historical look – initial loss pick to current

Other Liability Claims Made (OLCM) includes most professional liability lines, D&O, E&O and any other liability business written on a claims made basis. The line is highly concentrated within the top 25 writers (nearly 85% of industry premium).



The 2021 OLCM AY net loss ratio "pick" of 61.56% for the industry is well below the 2020 initial pick (-3.45 pts), as well as the adversely developing levels of Accident Years 2016-19, all currently in the 65 -71% range.

Accident Year 2020 was a major source of favorable development. The releases from AY 2020 were pushed back into AYs 2016 to 2019

NOTE: Loss Ratios displayed do not include operating expenses

Data Source: Schedule P: Found in the financial statements released by the company. The schedule P must be filed with the State Insurance Commissioner in all states in which they hold policies. It shows estimated reserves by business line as well as claim information and gross and net losses.

2022 Casualty Loss Reserve Seminar

OLCM Industry loss trends: 2011 to 2020 Historical Look – Initial loss pick to current

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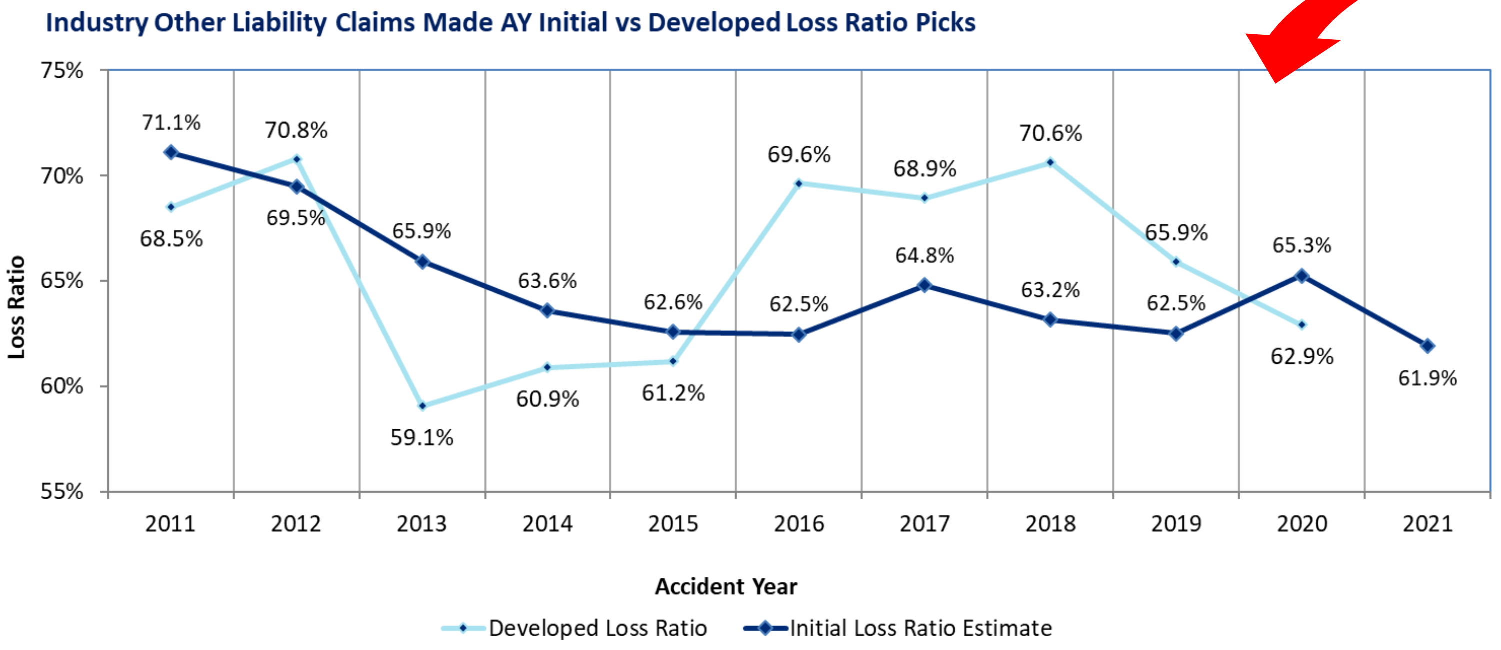
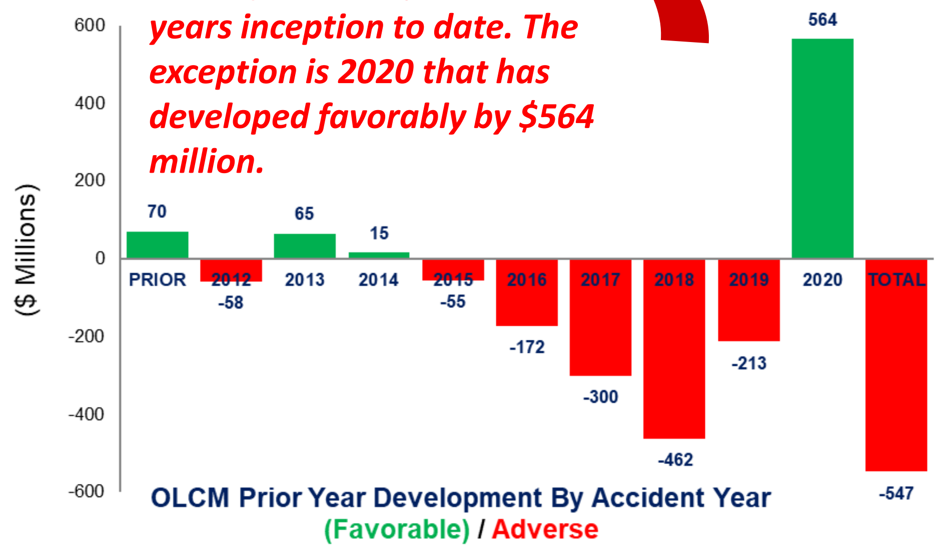


OLCM has shown adverse development 4 of the last 5 years inception to date. The exception is 2020 that has developed favorably by $564 million.



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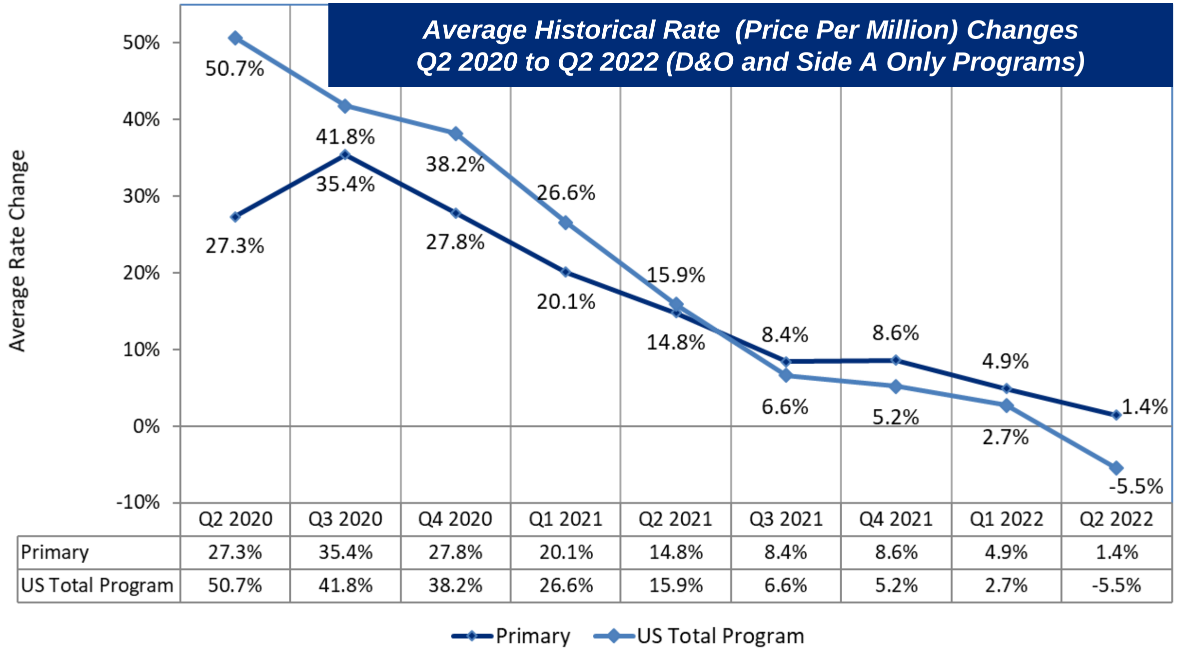
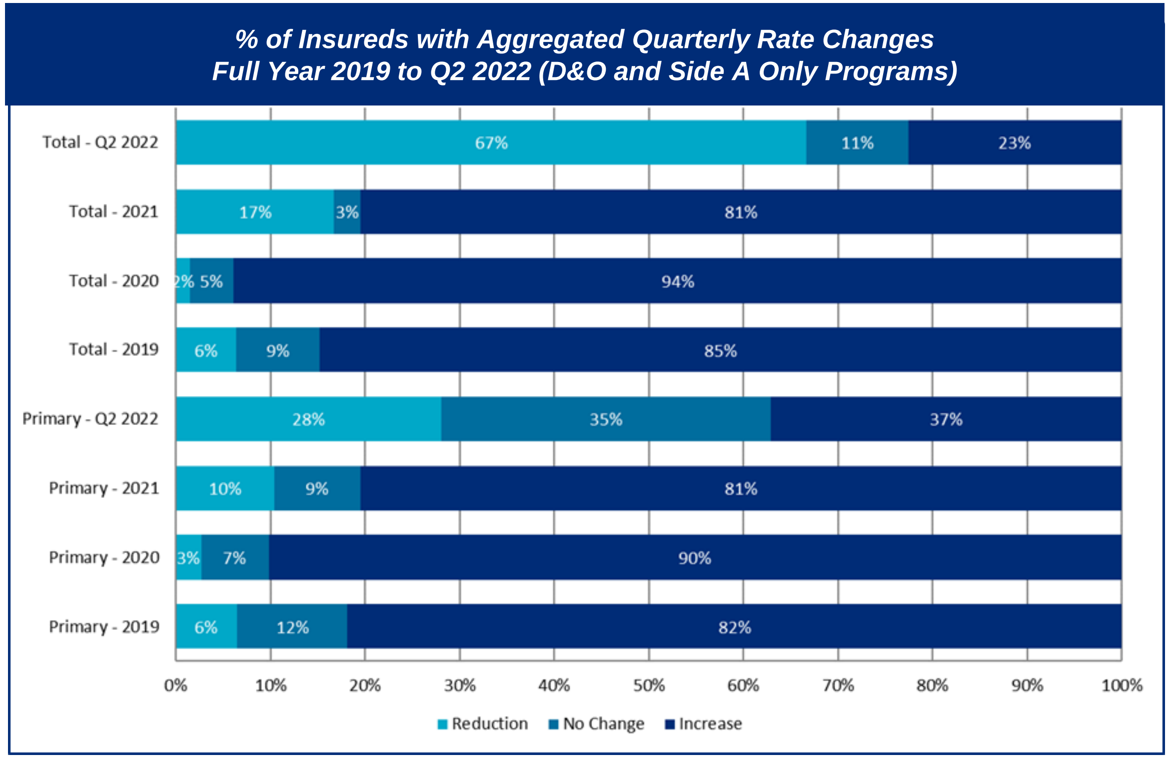
D&O Liability Insurance Public

Financial Lines

D&O US Public Market Update: All Industries Q2 2022



	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022
Primary	27.3%	35.4%	27.8%	20.1%	14.8%	8.4%	8.6%	4.9%	1.4%
US Total Program	50.7%	41.8%	38.2%	26.6%	15.9%	6.6%	5.2%	2.7%	-5.5%



Program Observations: General – Q2 2022

- Rate Trends: After a prolonged hard market in the Public D&O space, rates turned negative in the 2nd Quarter, due to a confluence of market developments:
- 23% of US public D&O clients experienced a total program rate increase in Q2 2022, less than the 81% figure in 2021, and 94% in all of 2020.
- 67% of US public D&O clients experienced a total program rate decrease in Q2 2022, but only 37% received a decrease on the primary.
- US public company D&O clients with market caps of $2 to $10 Billion experienced the largest average total program decrease of all market cap bands at -7.2%.

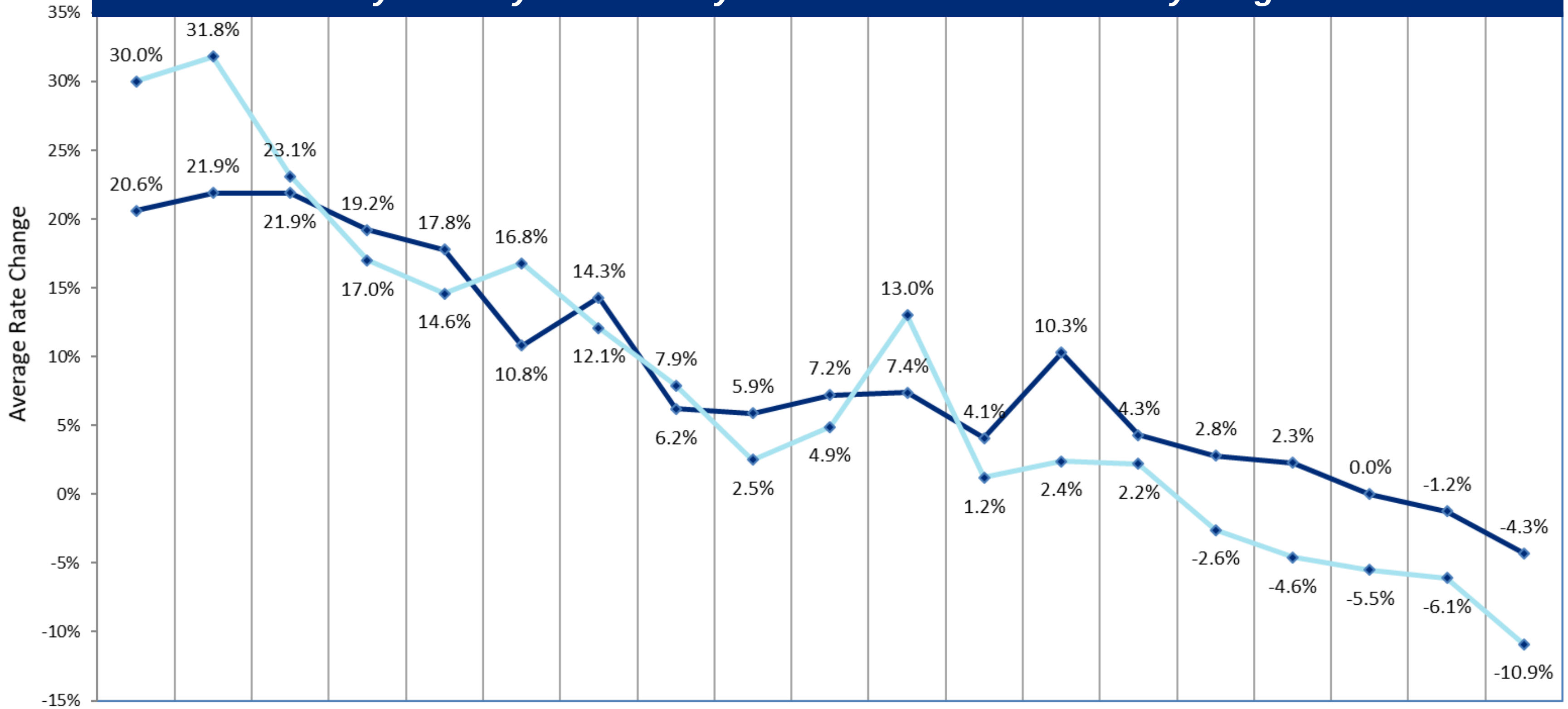
Macro Issues/Trends: All Industries

- Dip in the number of securities class action suits in H1-22 (103 vs 108 YOY or -4.6%).
- The H1-22 figure is down slightly compared to the 1996 to 2019 semiannual average of 112 filings.
- The annualized pace of 206 filings would be the lowest total since 2015, following several years of elevated activity, which has been a key driver of pressure in the D&O market.
- The decline in 2021 and 2022 was driven by a significant drop in the # of federal court merger objections (65 in 2020 vs 12 in 2021 and only 5 in 2022).

Financial Lines

D&O US Public Market Update: All Industries January 2021 to July 2022

US Publicly Traded Insureds – Average Historical Rate (Price Per Million) Changes Monthly January 2021 to July 2022 - D&O and Side A Only Programs **



	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22
Primary	20.6%	21.9%	21.9%	19.2%	17.8%	10.8%	14.3%	6.2%	5.9%	7.2%	7.4%	4.1%	10.3%	4.3%	2.8%	2.3%	0.0%	-1.2%	-4.3%
Total Program	30.0%	31.8%	23.1%	17.0%	14.6%	16.8%	12.1%	7.9%	2.5%	4.9%	13.0%	1.2%	2.4%	2.2%	-2.6%	-4.6%	-5.5%	-6.1%	-10.9%

Primary   Total Program

After 42 months of uninterrupted rate increases, March 2022 marked the first month since October 2018 where the average total program price per million declined.

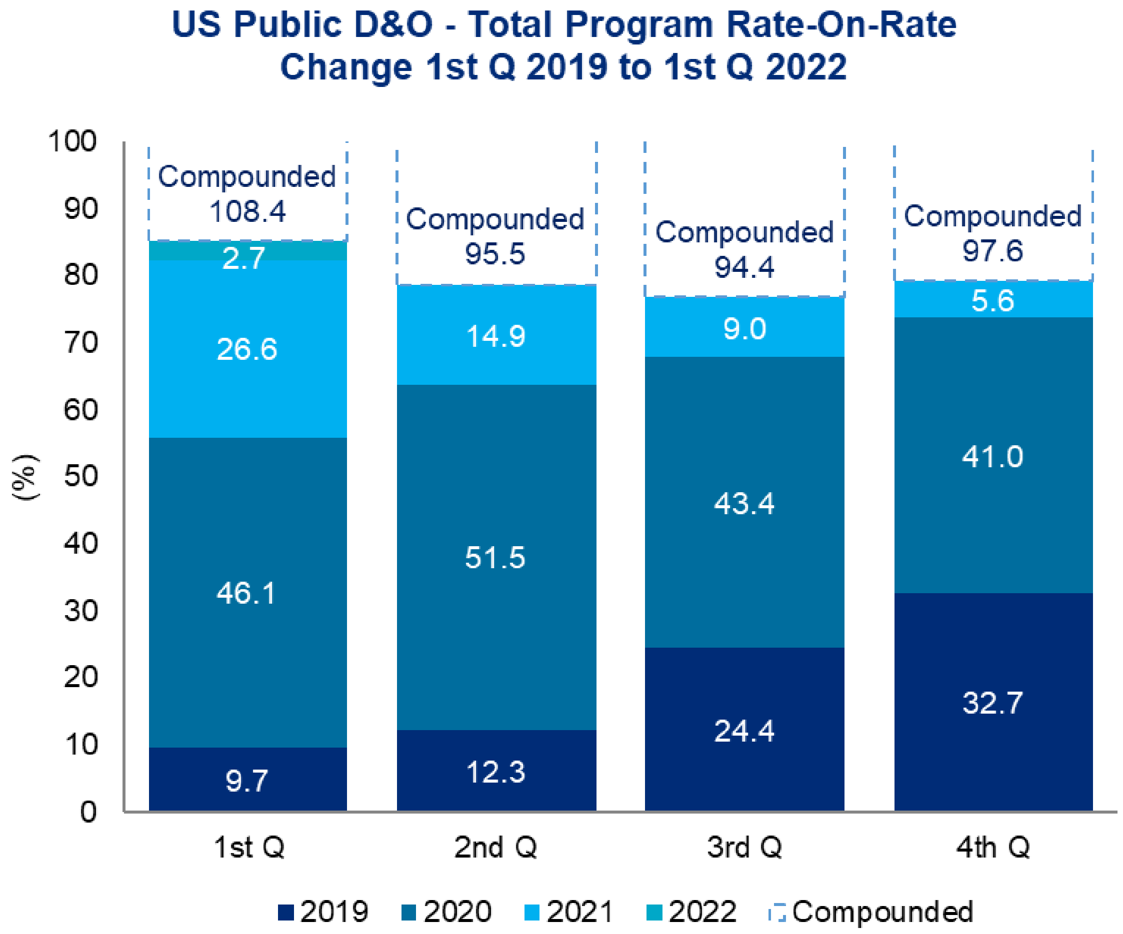
However, given the level of pricing increase experienced in the past 3 ½ years, all accounts are still paying substantially more than before the beginning of the market correction.

Source: Marsh

2022 Casualty Loss Reserve Seminar

D&O US Public Market Update: Strong Total Program Compounding Rate Increases

D&O rate increases are moderating, but tempering of rate is appropriate considering the improved return profile.



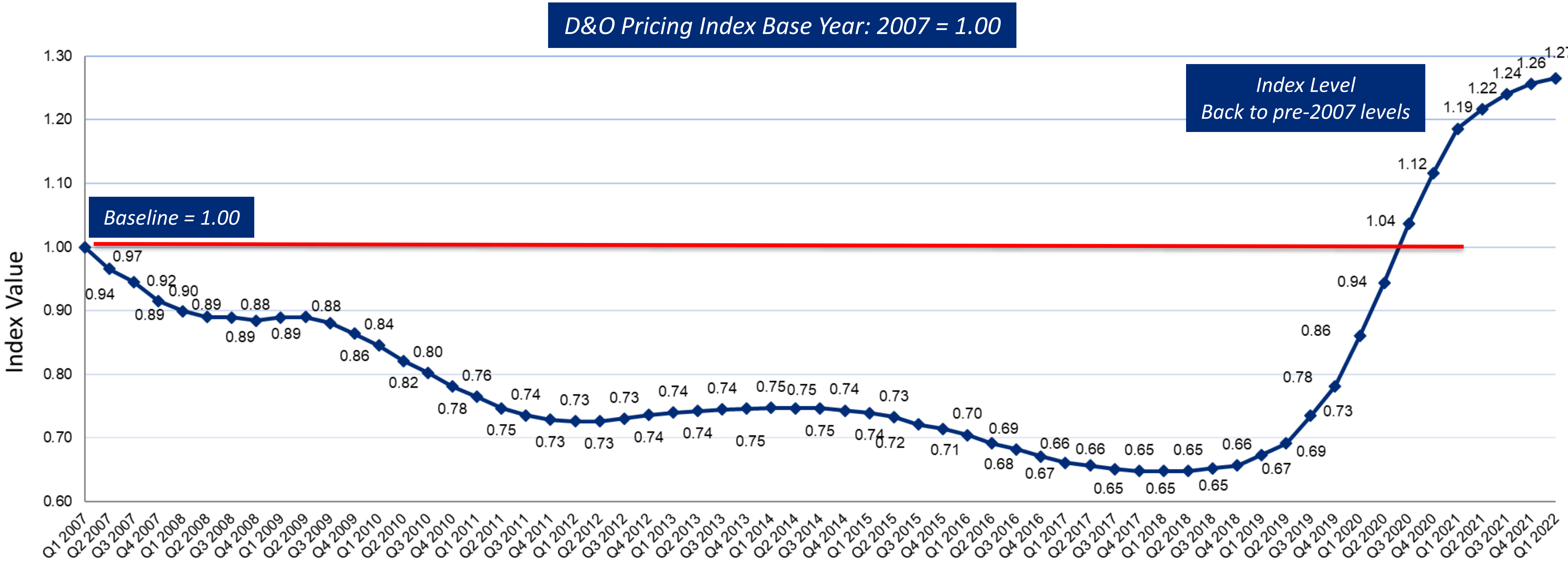
D&O insurers have been successful in pushing through strong rate changes. The business being written currently is being done so at far more attractive rates than was the case at this point three years ago.

Cumulative Three + Year Rate Increases = Improved Return Profile

Source: Marsh

2022 Casualty Loss Reserve Seminar

D&O US Public Market Update: D&O Index Q3 2007 to Q1 2022



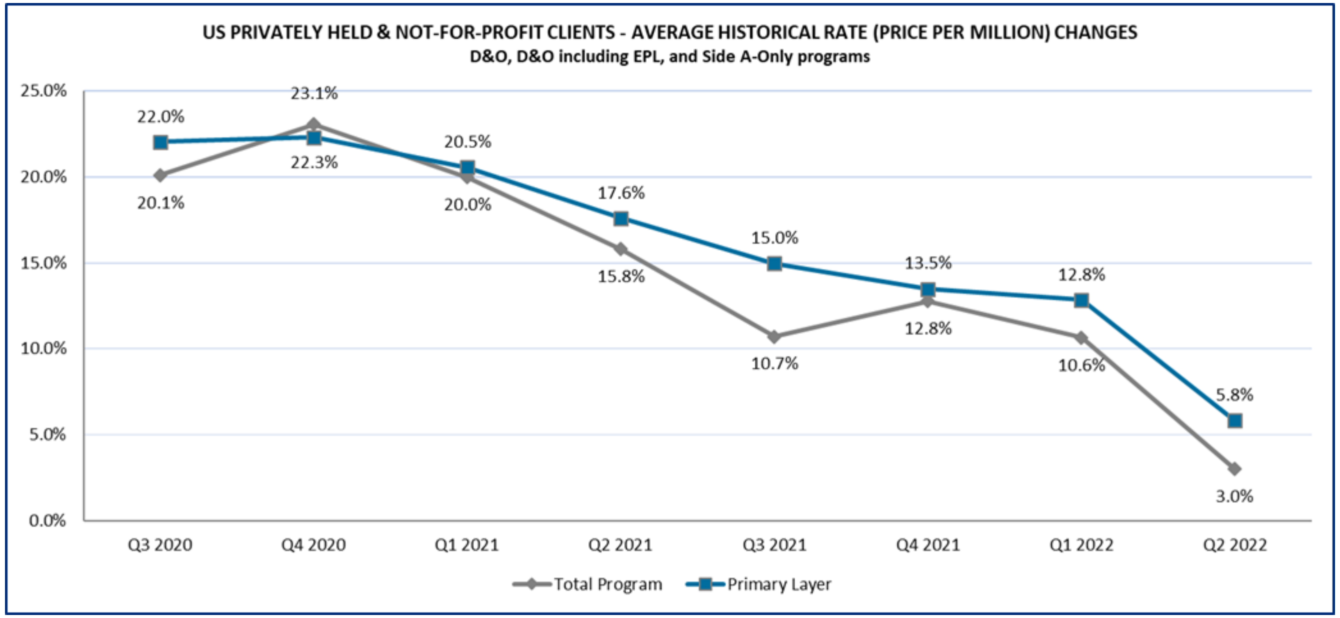
- *While, the pace of upward pricing momentum has slowed over recent quarters, this is the 3rd round of rate increases i.e. rate on top of rate on top of rate.*
- *The D&O industry is now back to pre-2007 levels. Unfortunately, data before 2007 is not available. Estimated to be back to 4th Q 2003, from all time industry high levels achieved mid-year 2003.*

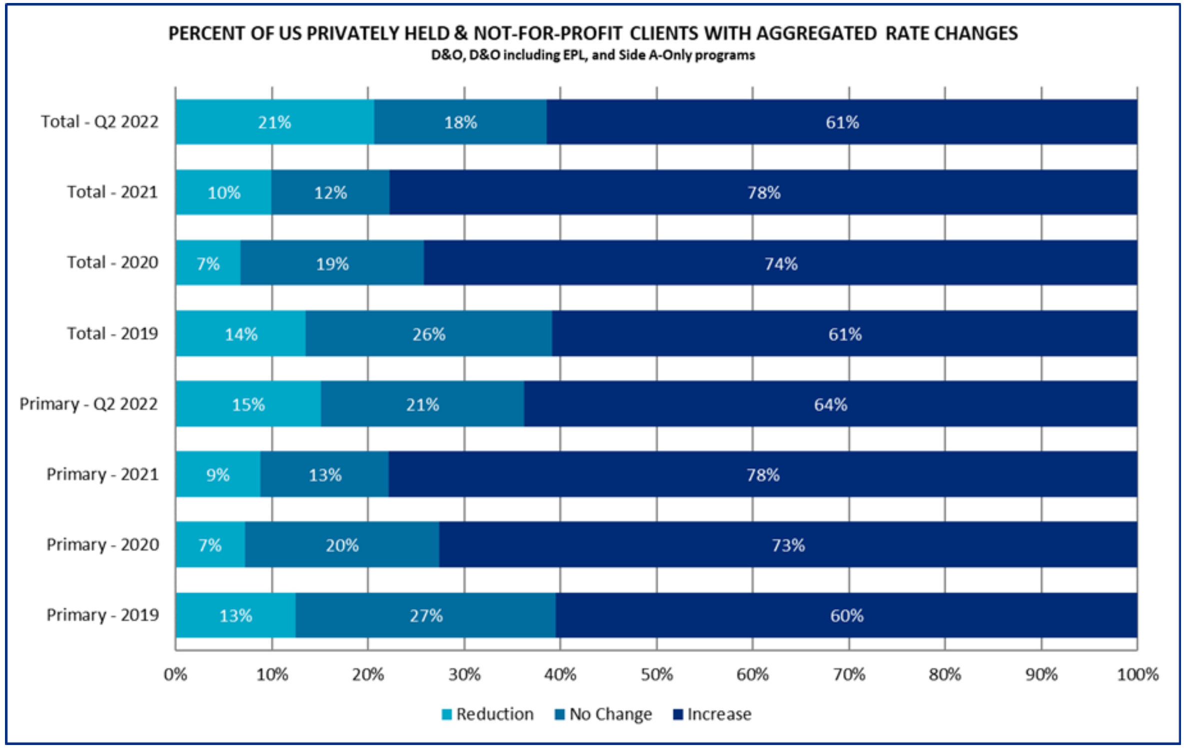
Source: Marsh

D&O Liability Insurance Private and Not for Profit (NFP)

Financial Lines

D&O Large Private and NFP Market Update: Q2 2022





Macro Issues / Trends: All Industries

- D&O quarterly rate increases continued down from the prior quarter. Increased competition particularly on excess layers combined with prolonged rate increases is resulting in average increases continuing to drop as predicted. This trend is expected for the remainder of the year. Examples of above average increases for financially distressed risks, risks in "high risk industries" (such as ESOPs, Coops, Unicorns risks with an announced de-spac transaction) still exists.
- FI and PEMA saw a significant spike from the prior quarter. This change was largely driven by an uptick of challenging FI placements in the prior quarter, including FINTECH companies with Crypto or Blockchain exposures, Banker E&O placements, and Lender E&O placements, particularly ones adversely impacted by Covid. PEMA rates were largely closer to the 10% to 15% range on average.
- While Healthcare rates have come down on average as well, hospital systems, longer term care and large physician offices are experiencing above average renewal rates. We continue to see upward pressure in co-insurance, and retentions on Employment Practices policies, as well as reduction of capacity on most accounts, carriers are reducing from $10M to $5M by and large.

Financial Lines

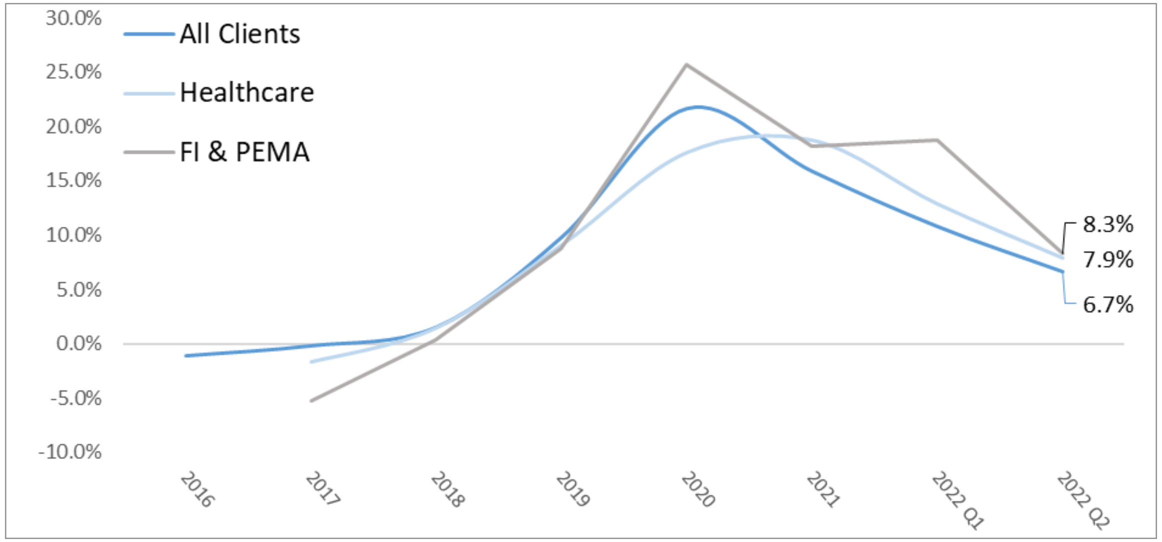
D&O Small Private and NFP Market Update: Rate Change Overview

Rate Outlook	Avg Q2 '22	Trend	Outlook
All Clients	+6.7%	▼	3% to 8%
Healthcare	+7.9%	▼	7% to 15%
PEMA & FIs	+8.3%	▼	7% to 15%

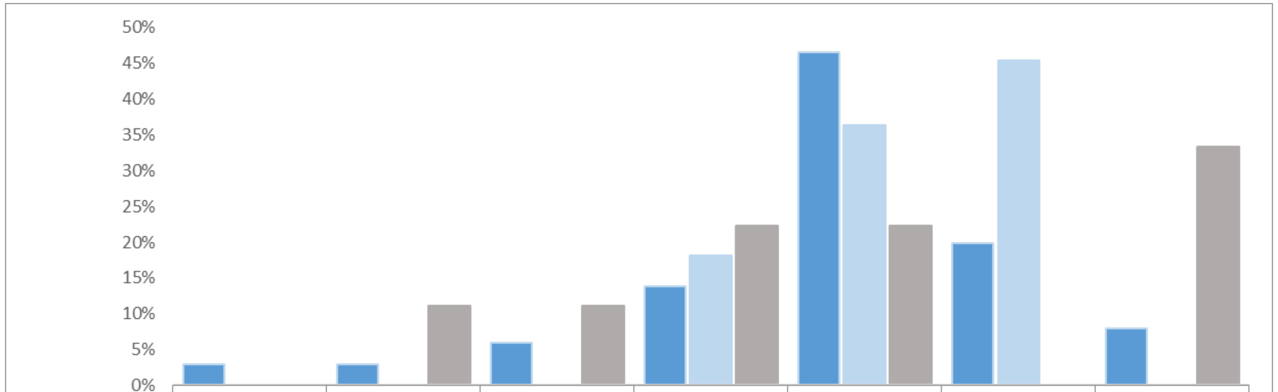
Placement Comments

- As expected, the continued trend of Commercial D&O quarterly rate increases are down from the prior quarter. Increased competition particularly on excess layers combined with prolonged rate increases is resulting in average increases continuing to drop. This trend is expected for the remainder of the year, however, there are plenty of examples of increases of 10% or more; California renewals for example, hard to place risks or risks with claims or clients in "high risk industries" (such as ESOPs, Coops, Unicorns or risks with an announced de-spac transaction) still exists.

Average Rate Changes by Year



Distribution of Rate Changes, 2022 Q2



	-20% +	-10% to -20%	Flat to -10%	Flat	Flat to +10%	10% to 20%	20% +
All Clients	3%	3%	6%	14%	47%	20%	8%
Healthcare	0%	0%	0%	18%	36%	45%	0%
FI PEMA	0%	11%	11%	22%	22%	0%	33%

Source: Marsh

D&O Liability Insurance Exposure & Litigation

Financial Lines

D&O Claim and Macro Trends

Claim Trends

- Federal Securities Class Actions
- Derivative Claims Frequency / Severity
- Event Driven Claims
- Social Inflation /Escalating Defense Costs

Macro Trends

- ✓ Stock market volatility
- ✓ Rising interest rates
- ✓ Economic inflation
- ✓ Supply chain issues
- ✓ Labor issues
- ✓ War in Ukraine
- ✓ Continued disruptive effects of the pandemic
- ✓ Regulatory environment
- ✓ ESG

Event-Driven Litigation

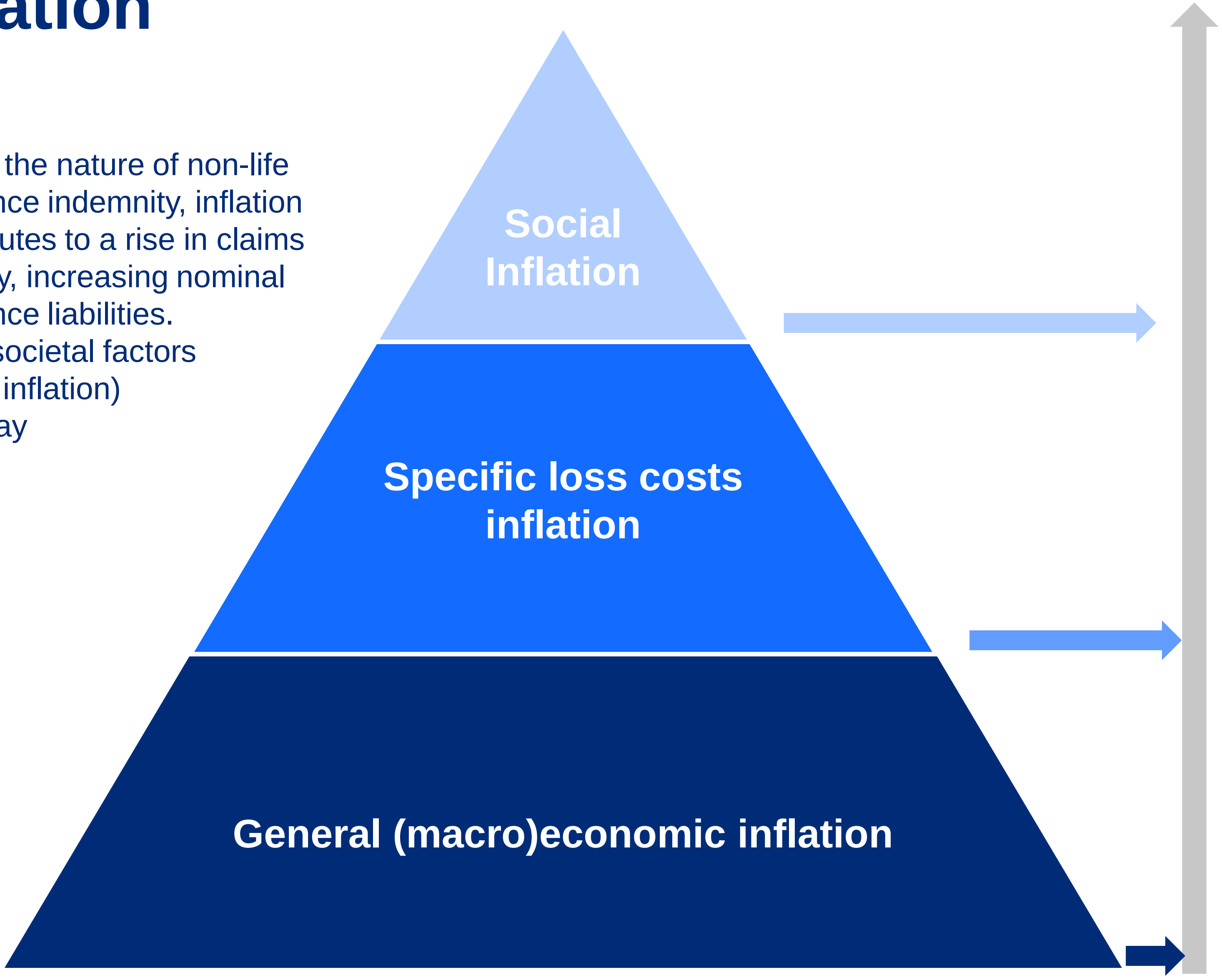
A Driver of Class Action Activity

#METOO SEXUAL HARASSMENT	DATA PRIVACY	MONEY LAUNDERING	ENVIRONMENT	OPIOID CRISIS / RX DRUG PRICING	Coronavirus (COVID-19)
CBS	Capital One	Danske Bank	bhpbilliton	Depomed	Carnival
Liberty Tax	Equifax	Sands Las Vegas Sands Corp.	bp	endo	Inovio
Papa John's Pizza	facebook	Swedbank	Mitsubishi	QRx Pharma	Kodak
Signet Jewelers	Google	Westpac	Vale	teva	NCL Norwegian Cruise Line
Teladoc Health	Marriott	wirecard		Valeant	SC Worx
Wynn Resorts	Yahoo!				Sorrento Therapeutics
					zoom

Inflationary Pressures to Drive Up Claims Costs

Contributing Factors to Overall Claims Inflation

Due to the nature of non-life insurance indemnity, inflation contributes to a rise in claims severity, increasing nominal insurance liabilities.
Many societal factors (social inflation) also play a role.



Social inflation is the explanation for overall claims costs rising above the rate of inflation of the specific input costs to claims in general – includes wide range of factors.

Within overall inflation, specific claims inflation will be driven by:

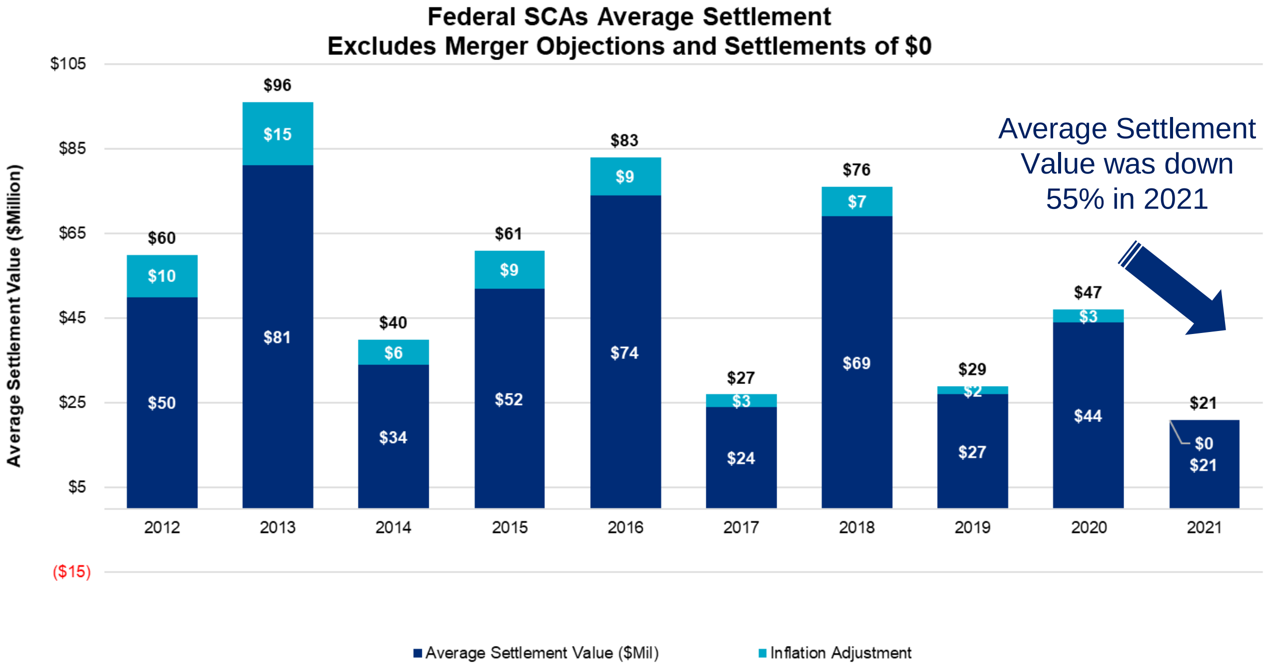
- Replacing or fixing property or
- Paying **medical costs** for injured parties
- Compensating individuals for **loss of earnings**
- Paying **legal costs** in defending claims brought against individuals or companies

General macro-inflationary measures include a basket of good representative of the cost of **all goods and services** within an economy – claims costs will be drawn from this overall basket of goods.

Calendar Year Data

Financial Lines – By Calendar Year (CY)

Federal SCA – Average Settlement Value – January 2012 to December 2021



Note: Excludes Merger Objections, and Settlements for $0 to the Class

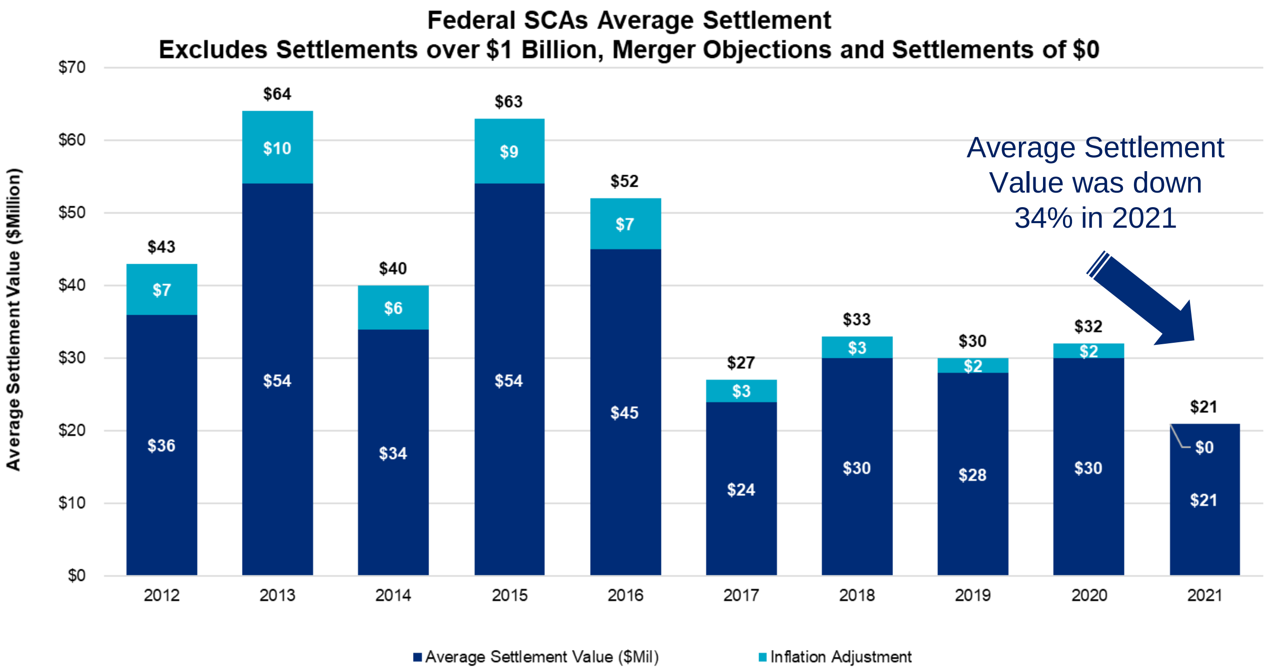
Trends in Settlement Values

- In 2021, aggregate settlements amounted to $1.8 billion. This amount is $400 million lower than the inflation-adjusted $2.2 billion aggregate settlement amount in 2019, and considerably lower than the inflation-adjusted amounts of $3.1 billion and $5.2 billion in 2020 and 2018, respectively.
- The average settlement value in 2021 was $21 million, which is more than 50% lower than the 2020 inflation-adjusted average of $47 million and marks the lowest recorded average in the last 10 years.
- The inflation-adjusted average settlement value has ranged from a low of $21 million in 2021 to a high of inflation-adjusted $96 million in 2013, partly due to the presence or absence of one or two “outlier” or “mega” settlements, which for this purpose are single case settlements of $1 billion or higher.
- Unlike in 2020 when there was one “mega” settlement, there were no cases resolved with a settlement amount above $1 billion in 2021. In fact, the highest recorded settlement amount is 2021 was $155 million.
- Settlement values do not include defense costs.

Source: NERA: Recent Trends in Securities Class Action Litigation: 2021 Full-Year Review

Financial Lines – By Calendar Year (CY)

Federal SCA – Average Settlement Value – January 2012 to December 2021



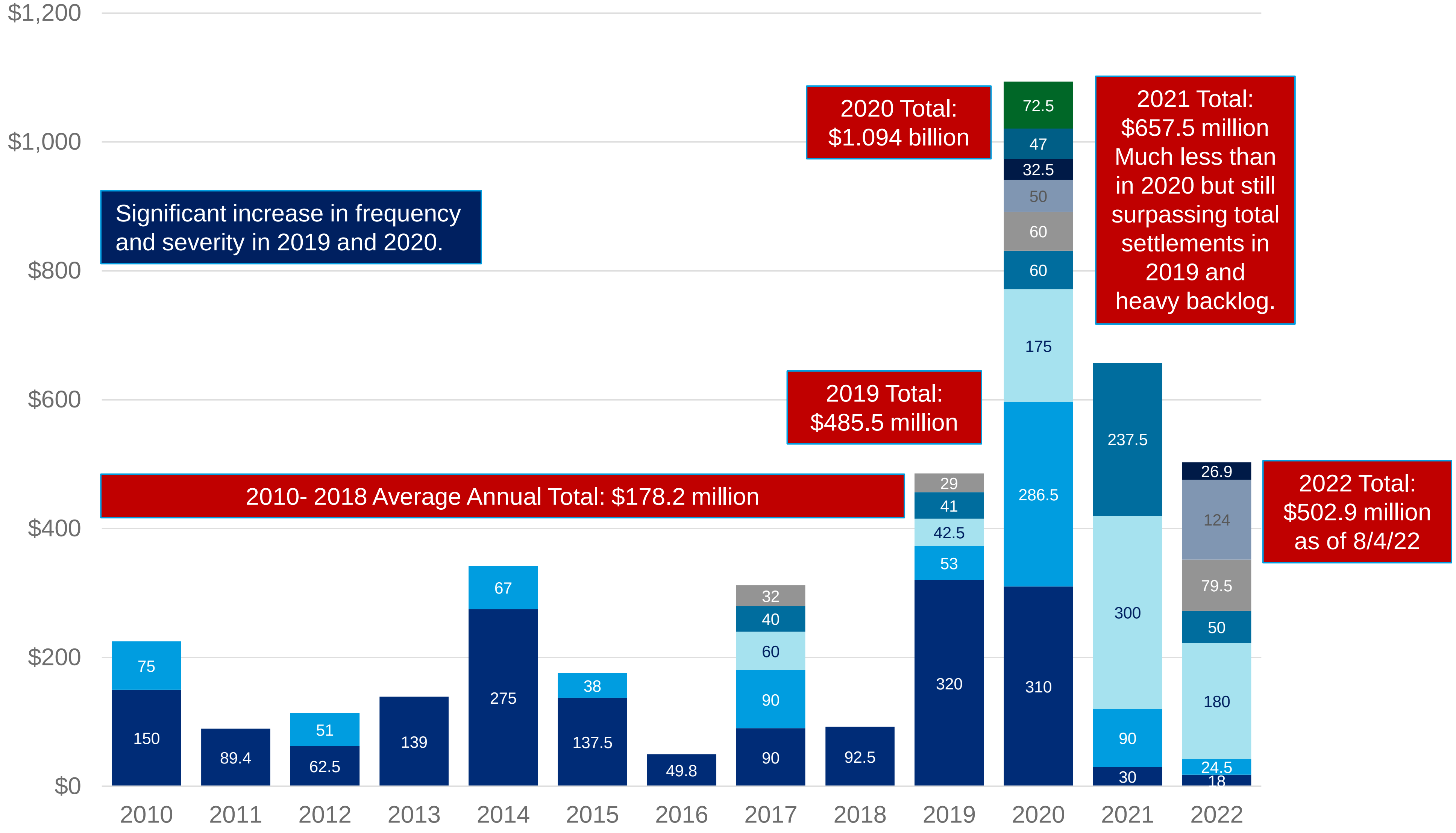
Note: Excludes Settlements over $1 Billion, Merger Objections, and Settlements for $0 to the Class

Trends in Settlement Values

- To understand what "typical" cases look like, NERA also analyze the average settlement values for cases with a settlement amount under $1 billion, thus excluding these "outlier" settlement amounts. For the analysis of settlement values, NERA's data is limited to non-merger-objection cases with positive settlement values.
- Excluding settlements greater than $1 billion the inflation-adjusted annual average settlement values trend is fairly stable, ranging from $21 million to $33 million in the last five years. In this group of settlements, the average settlement value for 2021 was $21 million, still the lowest annual average within the most recent 10 years.
- Settlement values do not include defense costs.

Financial Lines – By Calendar Year (CY)

Large Shareholder Derivative Settlements by CY – 2010 to 2022*



*Each block represents a settlement over $20 million. Not intended to be a comprehensive listing.

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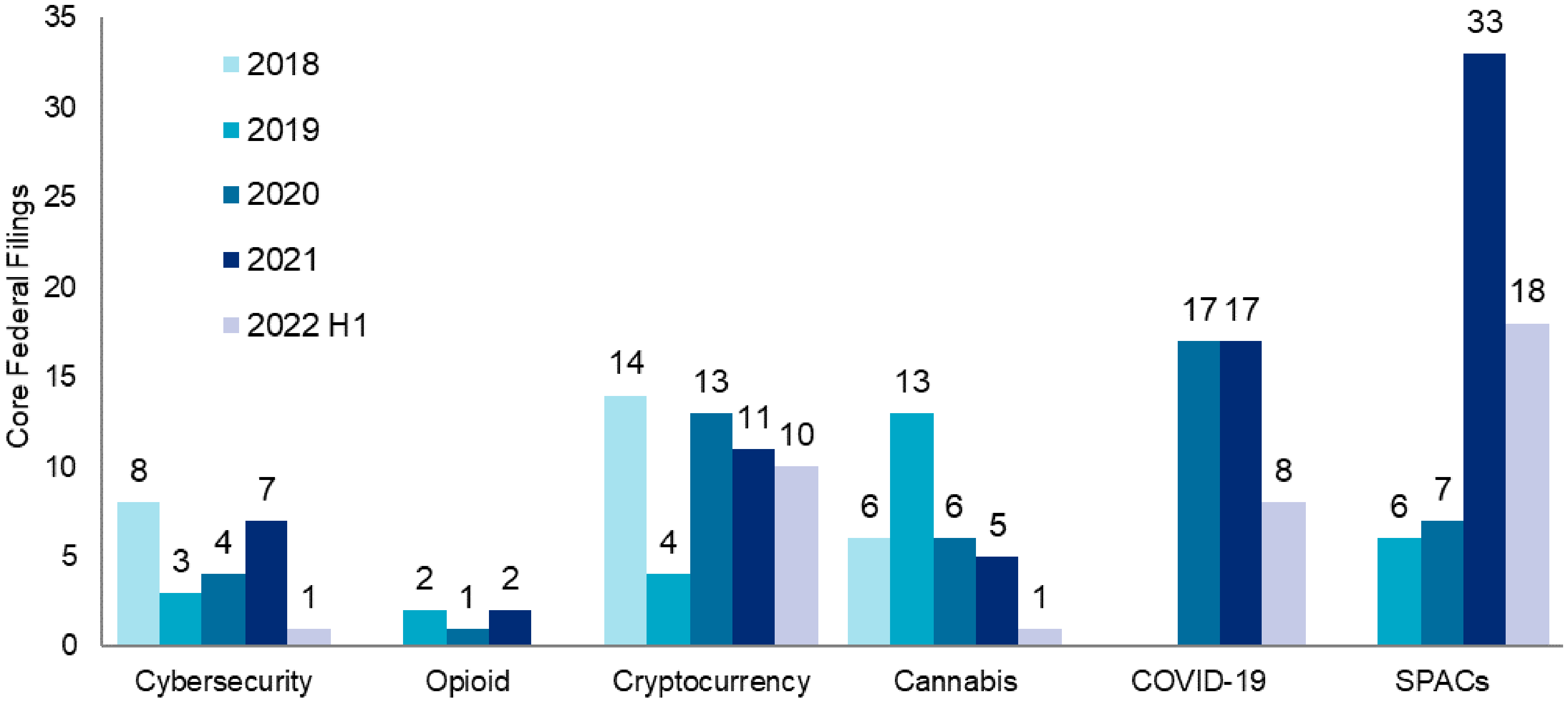
Source: Guy Carpenter research. 2022* Through 8/4/22.

Accident Year Data

Financial Lines

Summary of Trend Cases—Core Federal SCA Filings 2018– H1 2022



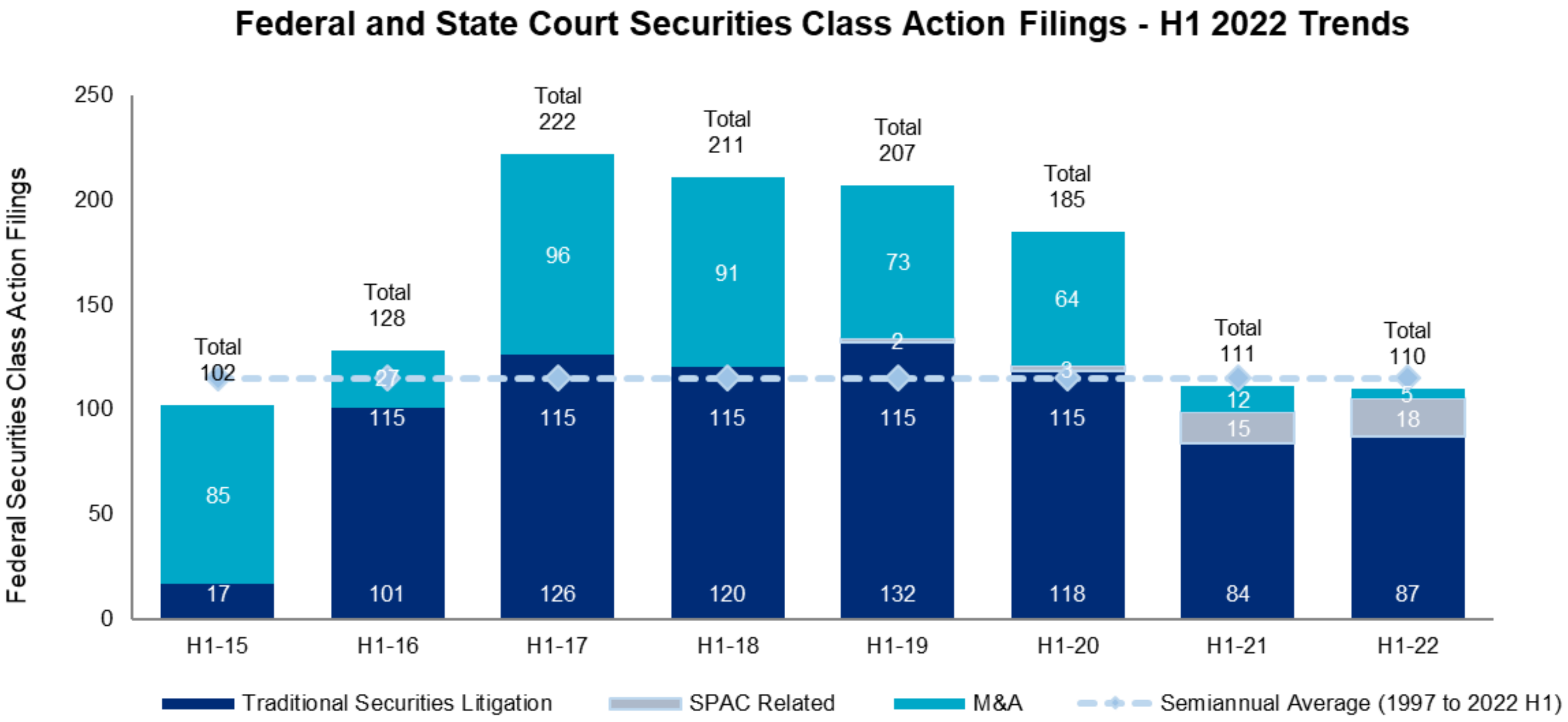
Commentary

- COVID-19 filings have remained at a high level, while cryptocurrency- related and SPAC filings are on pace to exceed previous years.
- Cases concerning SPACs continued to be the dominant trend, with 18 filings in the first half of 2022, followed by cryptocurrency-related (10) and COVID-19-related (8). SPAC cases are on pace to exceed 2021's all time high of 33.
- Cryptocurrency-related filings remained elevated and are projected to be at an all-time high. Filings in this trend included suits against cryptocurrency exchanges and those against the coin issuers themselves.
- No new opioid cases have been filed since June 2021.
- Cannabis filings continued to decrease, reaching their lowest point since 2016.
- Cybersecurity filings are on pace to decrease by over 71%, with only one filing so far this year.

Source: Cornerstone Research SCA Filings – 2022 Mid-Year Assessment

Financial Lines

Federal and State Court Securities Class Action Filings - H1 2022 Trends



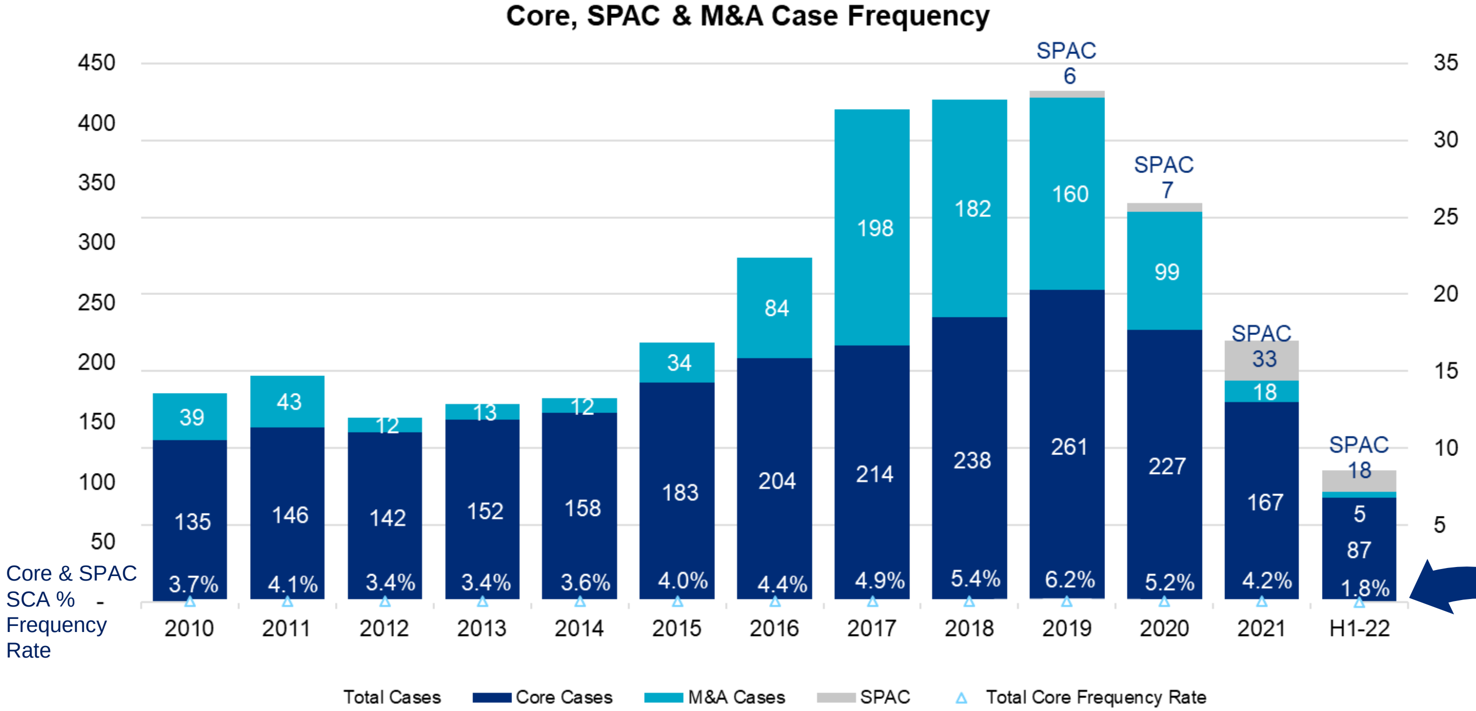
Commentary

- Plaintiffs filed 110 new class action securities cases (filings) across federal and state courts in 2022 H1, up slightly relative to 2021 H2. After declining from 2019 H2 to 2021 H1, core filings (those without M&A allegations) have slightly increased over two consecutive semiannual periods.

- The number of state filings with causes of action under the Securities Act of 1933 (1933 Act) in the first half of 2022 was consistent with the three prior semiannual periods and still dramatically below 2018 H1–2020 H1 levels.

Financial Lines

Federal and State SCA Filings and # of Companies Listed in the US – 2010 to H1 2022



Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Listings	**4,764**	**4,660**	**4,529**	**4,411**	**4,416**	**4,578**	**4,593**	**4,411**	**4,406**	**4,318**	**4,514**	**4,759**	**5,741**

Note, listed companies were identified by taking the count of listed securities at the beginning of each year. So the % of U.S. exchange-listed companies subject to a core filing in 2022 H1 was 1.8%, largely because of a **21% increase** in the number of exchange listed firms over the course of 2021.

Core and SPAC SCA % Frequency Rate Projected for Full Year 2022 is **3.6%**

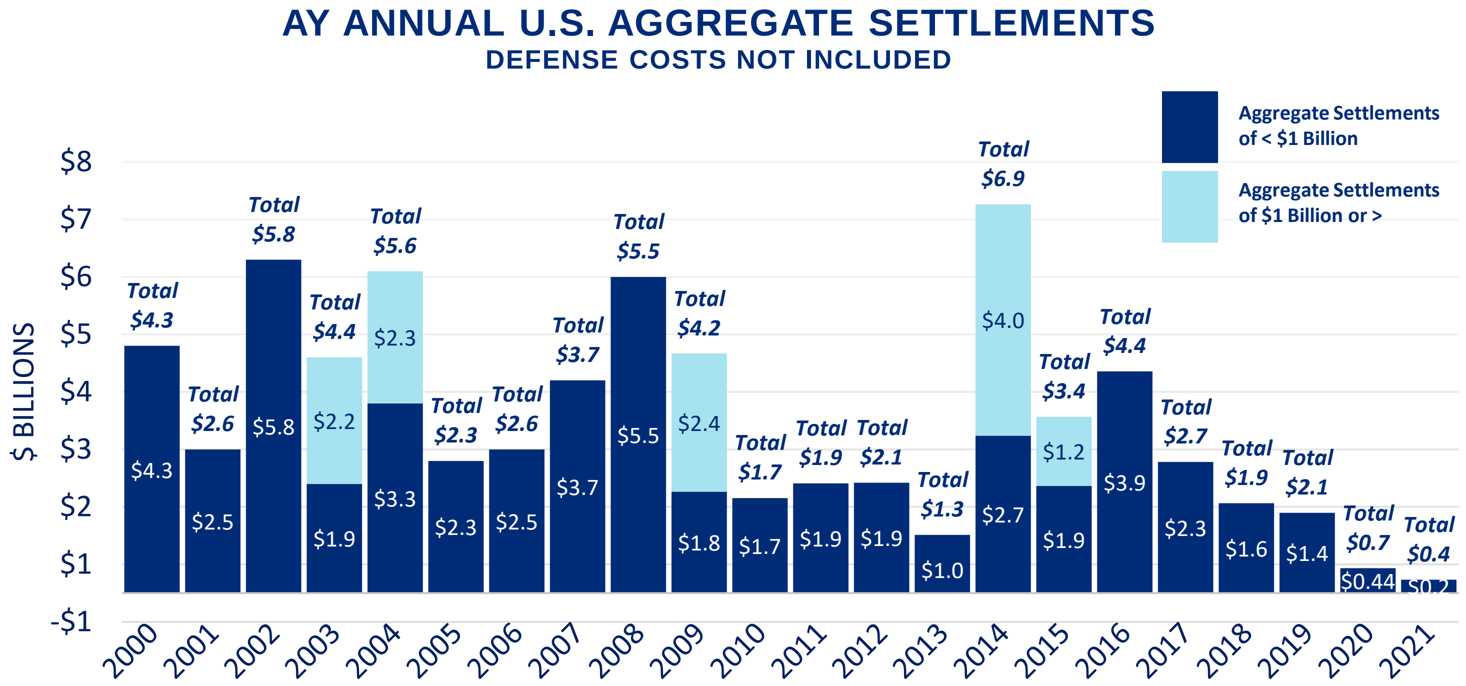
Core SCA Frequency Rates Continue Trend Downward

- Securities Filings Declined in 2021 Relative to Recent Elevated Years, Closer to Long-Term Levels.
- The number of federal court securities class action lawsuits filed during 2021 declined significantly compared to the number filed in 2020, and the number of 2021 filings was sharply below the elevated number of securities suits filed each year during the period 2017-2019.
- The most significant factor in the 2021 drop-off was the decline in the number of federal court merger objection class action lawsuit filings during the year, although there were other factors at work as well.
- The Impact of Federal Court Merger Objection Lawsuit Filings: The most significant factor in the decline in the number of securities suit filings in 2021 was the decline in the number of federal court merger objection class action lawsuits. There were only 18 federal court merger objection class action lawsuits filed in 2021, representing only about 8.5% of all federal court securities class action lawsuit filings during the year. By way of comparison, there were 102 federal court merger objection class action lawsuit filings in 2020, representing 31.8% of all securities suit filings during the year.
- In 2020 SPAC related filings as a % of core overall was 2.9%. In 2021, it was 16.5%. In H1-22, it was 17.1%.
- There were 105 Core and SPAC related SCA filings in the H1-2022. Projecting 210 for full year 2022, the frequency rate would be 3.6%.

Financial Lines – By Accident Year (AY)

SCA’s Litigation Only: US Aggregate Settlements 2000 to H1 2022

483 Open SCA Filings@ 6/30/22

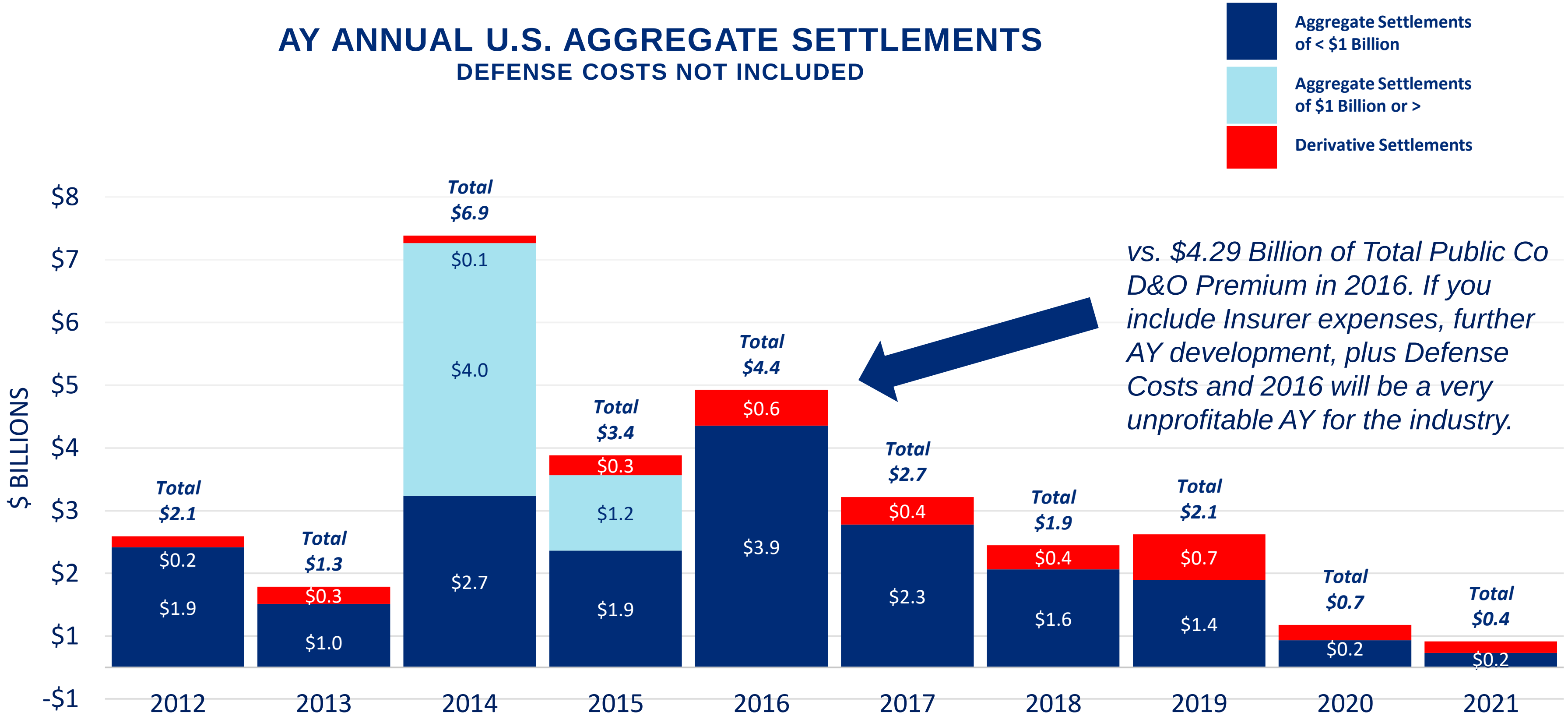


*** 2001 AY**	***NOT INCLUDED IN CHART***: $8.8 Billion Total Aggregate Settlements of < $1 Billion Enron Corp ($7.2 Billion) and Nortel Networks ($1.6 Billion)
*** 2002 AY**	***NOT INCLUDED IN CHART***: $13.7 Billion Total Aggregate Settlements of $1 Billion or > WorldCom, Inc. ($6.2 Billion), Tyco Int. ($3.2 Billion), AOL Time Warner ($2.7 Billion), and Household Int. ($1.6 Billion)

$1 Billion and Above SCA Settlements	
2001 AY	Enron Corp ($7.2 Billion)
2002 AY	WorldCom, Inc. ($6.2 Billion)
2002 AY	Tyco International ($3.2 Billion)
2014 AY	Petrobras ($3.0 Billion)
2002 AY	AOL Time Warner ($2.7 Billion)
2009 AY	Bank of America ($2.4 Billion)
2001 AY	Nortel Networks ($1.6 Billion)
2002 AY	Household Int. ($1.6 Billion)
2004 AY	Nortel Networks ($1.3 Billion)
2015 AY	Valeant Pharma ($1.2 Billion)
2003 AY	Royal Ahold NV $1.1 Billion
2003 AY	Merck & Co. ($1.1 Billion)
2014 AY	American Realty Capital ($1.0 Billion)

Financial Lines – By Accident Year (AY)

SCA and Derivative Litigation: US Aggregate Settlements 2000 to H1 2022



$1 Billion and Above Settlements	
2014 AY	Petrobras ($3.0 Billion)
2015 AY	Valeant Pharma ($1.2 Billion)
2014 AY	American Realty Capital ($1.0 Billion)

Source: 2022 Stanford Securities Class Action Clearinghouse

IPO and SPAC IPO Pricing and de-SPAC Performance Statistics

Transactional US Public D&O market (i.e. IPOs, SPAC IPOs and de-SPACs)

Falling valuations, economic uncertainty and volatility have a chilling effect on transactional activity

The 2021 the IPO market was one for the history books. A stunning 397 IPOs raised $142.4 billion in the busiest year by deal count since 2000 and the biggest year for proceeds ever. Traditional IPO's plus SPAC IPO's produced over 1,000 new public companies in 2021 (613 + 397 = 1,010 @ 1/1/22).

- In 2022, transactional Public D&O activity vs 2021 is down significantly year-over-year. Inflation is skyrocketing, prompting the Federal Reserve to raise interest rates and investors to pull their money out of the transactional space. Additionally regulatory scrutiny of the SPAC market is increasing, which has made these deals less enticing.

Summary trends:

Total Gross Proceeds			
	2021	2022	% Change
IPO Gross Proceeds	$96.4 Billion	$4.5 Billion	-95.3%
SPAC IPO Gross Proceeds	$122.4 Billion	$12.4 Billion	-89.9%
Totals	**$218.8 Billion**	**$16.9 Billion**	**-92.3%**

*** Data as of 2021 YTD @ 8/29/21 vs 2022 YTD @ 8/29/22**

Total Pricings & de-SPAC Transactions			
	2021	2022	% Change
IPO Pricings	283	56	-80.2%
SPAC IPO Pricings	417	74	-82.3%
de-SPAC Transactions	119	65	-45.4%
Totals	**819**	**195**	**-76.2%**

*** Data as of 2021 YTD @ 8/29/21 vs 2022 YTD @ 8/29/22**

Outlook:

There are clear conditions that need to be met before activity resumes, but with recession fears looming over investors, all signs point to a relatively quiet remainder of the year. However, the transactional public D&O market has time and again demonstrated its ability to recover from downturns, and there are plenty of issuers ready to jump when the window reopens.

Traditional IPOs – D&O Risks and Trends

IPO Statistics 2012 to 2022: Number of IPOs By Month and Year @ August 29, 2022

	Month	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Q1	Jan	12	17	14	0	9	17	1	9	24	8
	Feb	8	20	10	4	7	11	10	13	34	8
	Mar	11	27	10	4	9	16	8	3	43	2
Q2	Apr	13	30	15	8	20	12	16	4	32	8
	May	30	21	20	15	17	21	26	6	25	9
	Jun	18	32	35	11	15	28	21	29	61	4
Q3	Jul	21	33	17	10	10	20	22	29	55	7
	Aug	18	9	10	7	5	9	4	18	9	10
	Sep	21	18	7	16	14	23	14	36	30	-
Q4	Oct	30	28	16	19	19	22	20	37	41	-
	Nov	27	26	14	4	26	6	13	9	34	-
	Dec	13	14	2	7	9	8	8	28	9	-
	Total	**222**	**275**	**170**	**105**	**160**	**193**	**163**	**221**	**397**	**56**

Notes: Includes all US IPOs with a market capitalization over $50 million. Excludes best efforts offerings, SPACs, Reg A + IPOs, closed-end funds and non-operating trusts.

IPO Trends

- In 2022, the IPO landscape has changed. Interest rates rising, and anticipation they could rise further, and inflation have caused a massive repricing of assets, especially risky assets like the stock of startup companies that are going public.
- Seven IPOs raised a combined $228 million in the slowest July in what's shaping up to be the slowest year for the IPO market in over a decade
- So far 2022 has been the "year of the micro-cap IPO", with average gross proceeds of less than $100M.
- Average Traditional IPO return: 7/1/20 to 7/1/22 -40.0%; ($202.4 Billion; IPO's: 591)
- Given the market conditions, many prospective Public D&O insureds have put their IPO plans on hold. To see an IPO comeback before the end of the year, the Federal Reserve needs to get inflation under control.

Source: 2022 Renaissance Capital

SPACs - 2022 Issuance Slump

SPAC Statistics: Summary and Status by Year as of August 29, 2022

Year	SPAC Filed for IPO 2022 (includes carry over from 2021)	SPAC IPO Complete (Searching)	SPAC Business Combination Announced	Total Active SPAC IPOs	Liquidated	SPAC Business Combination Completed (De-SPAC- New Public Co)	% De-SPAC Completed	Gross Proceeds (mms)	Average IPO Size (mms)	Total SPAC's
2022	40	69	5	74	0	0	N/A	$12,424.7	$167.9	**74**
2021	79	449	78	527	3	83	13.5%	$162,532.3	$265.1	**613**
2020	2	55	24	79	12	157	63.3%	$83,379.0	$336.1	**248**
2019	0	0	2	2	2	55	93.2%	$13,608.3	$230.5	**59**
2018	0	0	0	0	2	44	95.7%	$10,751.9	$233.7	**46**
2017	0	0	0	0	3	31	91.2%	$10,048.5	$295.5	**34**
2016	0	0	0	0	2	11	84.6%	$3,499.2	$269.2	**13**
2015	0	0	0	0	3	17	85.0%	$3,902.4	$195.1	**20**
2014	0	0	0	0	4	8	66.7%	$1,749.8	$145.8	**12**
2013	0	0	0	0	2	8	80.0%	$1,455.3	$145.5	**10**
2012	0	0	0	0	3	6	66.7%	$490.5	$54.5	**9**
2011	0	0	0	0	3	12	80.0%	$1,081.5	$72.1	**15**
2010	0	0	0	0	4	3	42.9%	$502.6	$71.8	**7**
2009	0	0	0	0	0	1	100.0%	$36.0	$36.0	**1**
Totals	**121**	**573**	**109**	**682**	**43**	**436**		**$305,462.0**		**1,161**

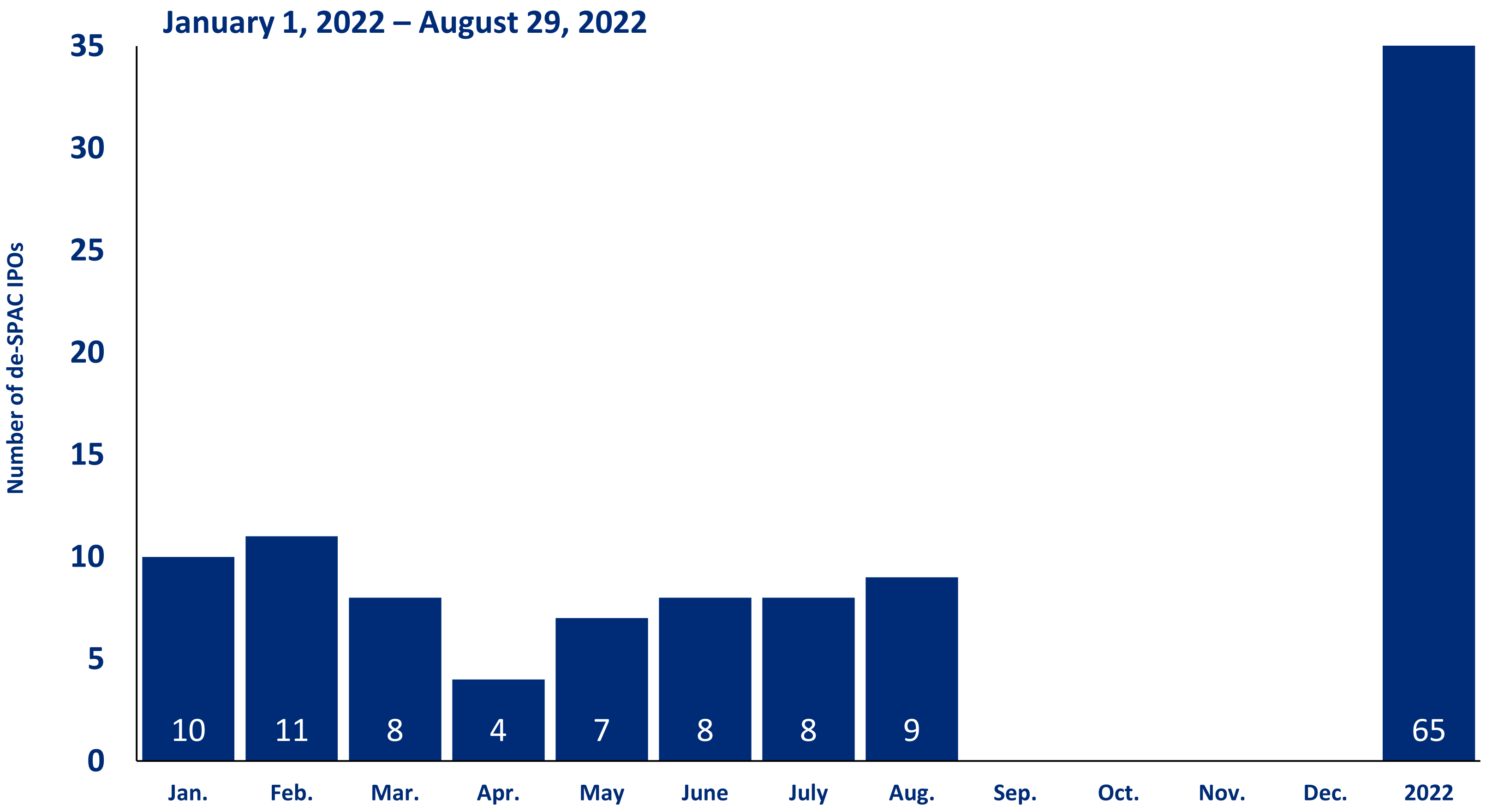
2022 SPAC Issuance Slump

- In 2020 and 2021 SPACs were the preferred way for companies to go public. But in 2022 changing market conditions and the threat of regulation are making Wall Street lose its appetite.
- Terminations continued to rise with six canceled mergers, up from two the previous month. We anticipate liquidations to pick up in the second half of 2022 as well.
- There were no SPAC IPOs in July, the first completely quiet month since February 2017, and five blank check companies withdrew their offering plans as the SPAC market continues to wither. Eleven new mergers were announced (in line with June), four mergers were completed (down from nine), and six mergers were terminated (up from four).

Source: 2022 SPAC Insider

de-SPACs – Completed Transactions

de-SPAC Statistics 2022: Number of de-SPACs By Month @ August 29, 2022

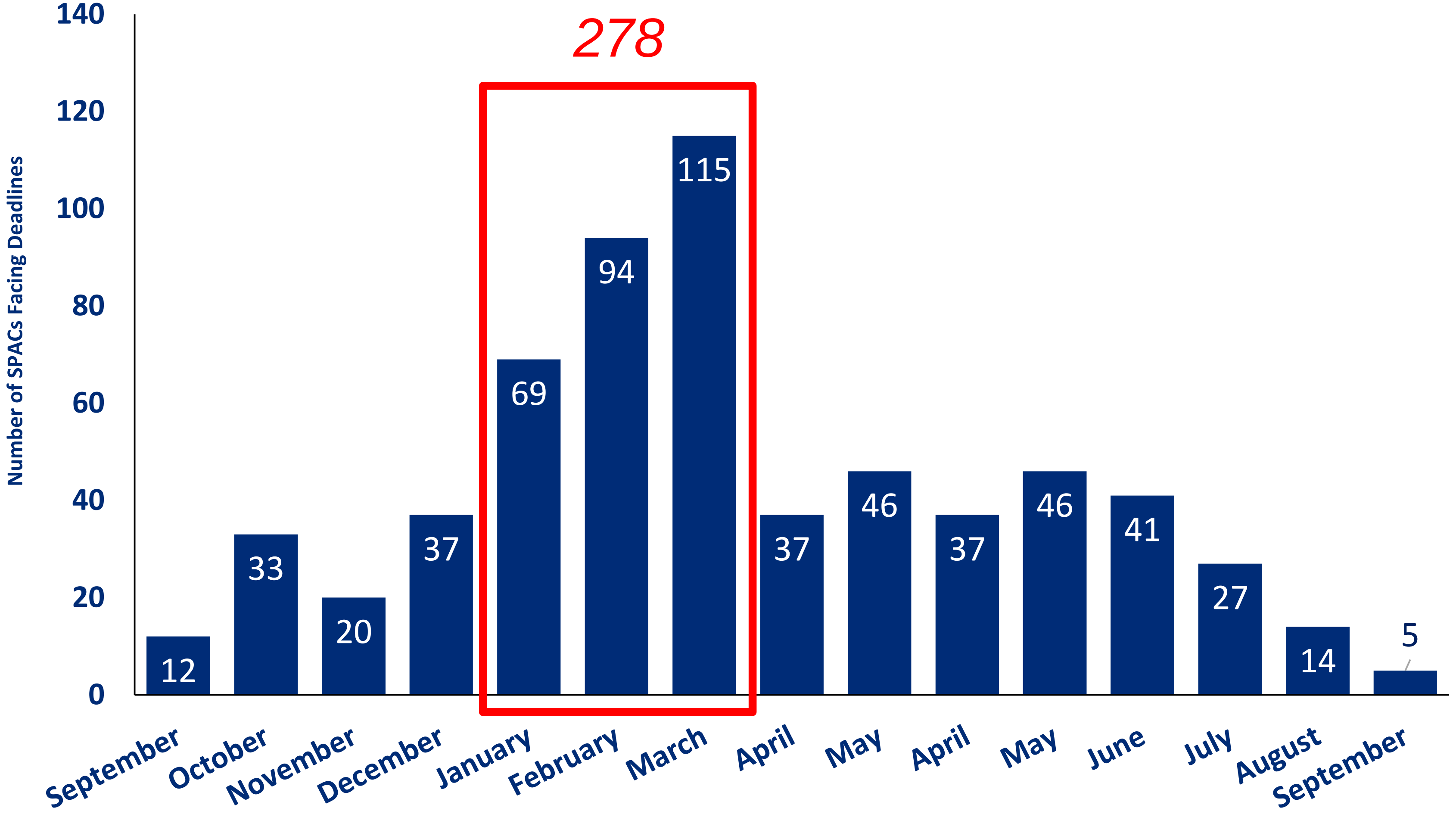


- *So far, 65 mergers have been completed in 2022, and the group averages a -46% return from the $10 offer price. Just eight (15%) are trading above issue. The SEC's recently proposed regulatory framework also creates headwinds for new SPAC formation.*

- *With nearly 600 SPACs still looking for targets and 100+ pending merger agreements, deal announcements and completions continue to drive news. But as high redemption rates and merger terminations become increasingly commonplace, we expect the number of liquidations to soar in the coming months.*

Looming SPAC Deadlines

Number of SPACs Facing Deadlines Sept. 2022 to Sept. 2023: Month by Month Breakdown

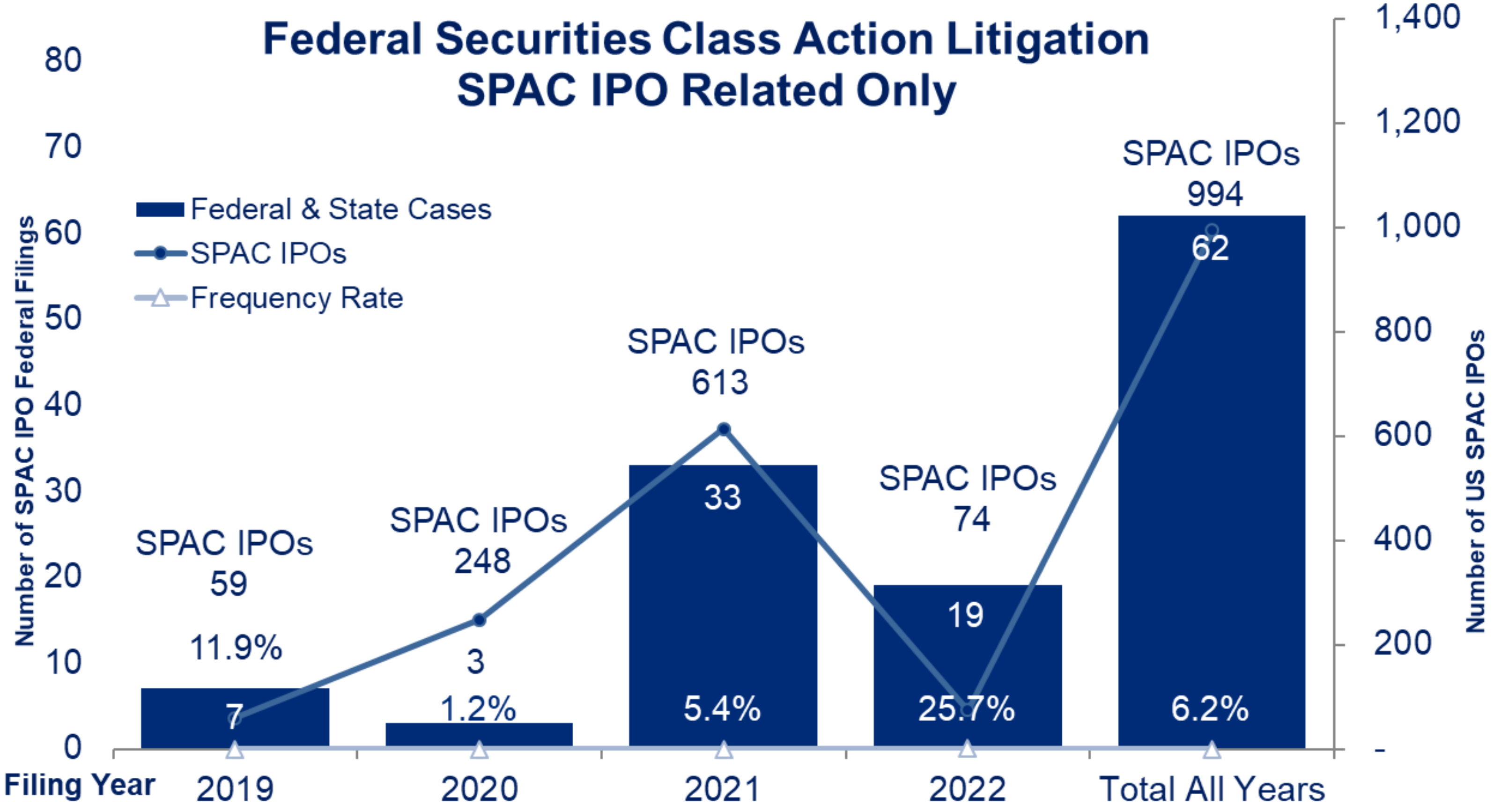


- *There are 278 SPACs in the market looking for deals with timelines expiring between January and March 2023*
- *Redemption rates increased materially throughout 2021 and remained over 75% in 2Q 2022*
- *Scarcity of PIPE capital is driving the need for non-traditional financing*

SPAC Related D&O Litigation

SPAC Related Securities Litigation

Period 1/1/19 to 8/29/22 Frequency Total Filings: 62



- *To date, the claims experience has been favorable. However, with the increased activity in SPACs comes the increased possibility of SPAC related litigation.*
- *The frequency of Federal SPAC IPO SCAs from January 1, 2019 to August 29, 2022, is 6.2% (i.e. 62 Claims after 994 SPAC IPOs).*
- *Most of these SPAC-related lawsuits arose following the merger of a SPAC, with a target company. 56 of the 62 filings (90.0%) were filed after the de-SPAC transaction was completed.*
- *Many of these lawsuits have only just been filed and it remains to be seen how they will fare. In many of these cases, the plaintiffs will face an uphill battle attempting to show that the complaints have adequately alleged scienter, as their relative strength is questionable.*

Source: Stanford Law School (Stanford Securities Litigation Analytics)

SPAC Related Securities Litigation

Total Settlements: 6 as of December 31, 2021

There have been only SIX SPAC related Securities Class Action ("SCA") claim settlements in the past 10 years:

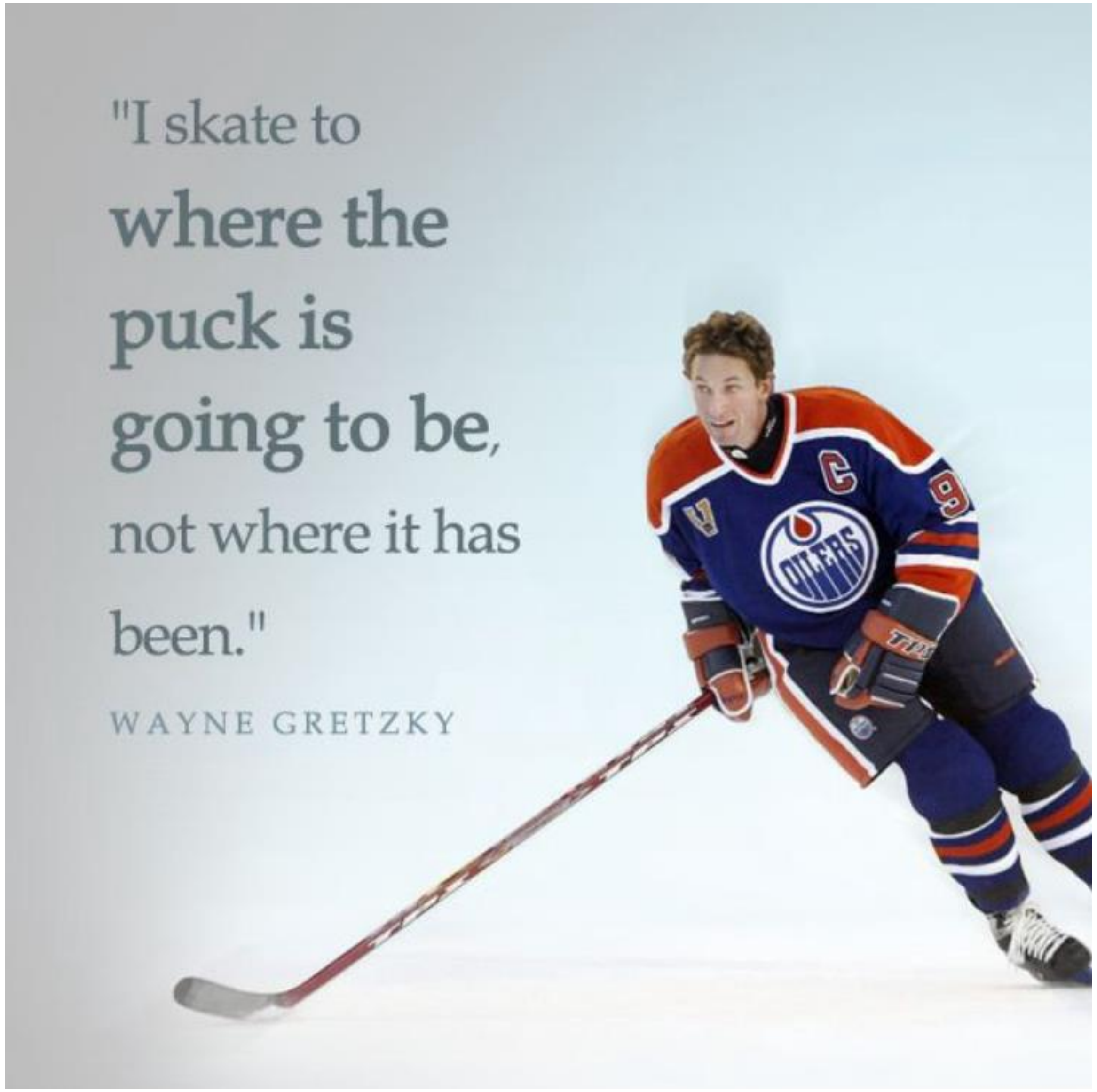
Litigation Defendant Company Name	Filing Date	Settlement Date	Settlement Total
Akazoo S.A. f/k/a Modern Media Acquisition Corp.	4/24/10	4/23/21	$35,000,000
Tile Shop Holdings, Inc. f/k/a JWC Acquisition Corp.	11/15/13	6/14/17	$9,500,000
Endeavor Acquisition Corp. (Business Combo w/American Apparel)	8/25/10	7/29/14	$4,800,000
SA Exploration Holdings, Inc. f/k/a Trio Merger Corp.	8/18/19	8/12/21	$3,550,000
Ability, Inc. f/k/a Cambridge Capital Acquisition Corp.	5/25/16	9/13/19	$3,000,000
Wins Finance Holdings, Inc. f/k/a Sino Mercury Acquisition Corp.	4/4/17	Pending Final Order	$1,260,000

The SCAs occurred after a business combination and typically allege poor due diligence (e.g. it is discovered after the business combination that the target company's financials were not accurate or their business prospects were misleading)

Source: Stanford Law School (Stanford Securities Litigation Analytics)

Q&A

2022 Casualty Loss Reserve Seminar



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Statements or analysis concerning or incorporating tax, accounting or legal matters should be understood to be general observations or applications based solely on our experience as reinsurance brokers and risk consultants and may not be relied upon as tax, accounting or legal advice, which we are not authorized to provide. All such matters should be reviewed with the client's own qualified advisors in these areas.

This presentation (report, letter) is not intended to be a complete actuarial communication. Upon request, we can prepare one. We are available to respond to questions regarding our analysis.

There are many limitations on actuarial analyses, including uncertainty in the estimates and reliance on data. We will provide additional information regarding these limitations upon request.

As with any actuarial analysis, the results presented herein are subject to significant variability. While these estimates represent our best professional judgment, it is probable that the actual results will differ from those projected. The degree of such variability could be substantial and could be in either direction from our estimates.

The estimated cash flows may vary significantly from amounts actually collected, particularly in the event that a reinsurer is unwilling or unable to perform in accordance with the terms of the reinsurance contract.

In performing this analysis, we relied on the company for estimates regarding exposure data. We did not perform an independent review of these estimates.

GuyCarpenter

A business of Marsh McLennan