



ANNUAL MEETING

November 9-12, 2020 • Online Event

Impact of COVID-19 on the Property Casualty Insurance Industry

Moderator

- Ben Carrier, FCAS
Managing Director
Aon

Speakers

- Brian Z. Brown, FCAS, MAAA
Principal and Consulting Actuary
Milliman, Inc.
- Justin Brenden, FCAS, MAAA
Chief Reserving Actuary
Third Point Re



Polling Question

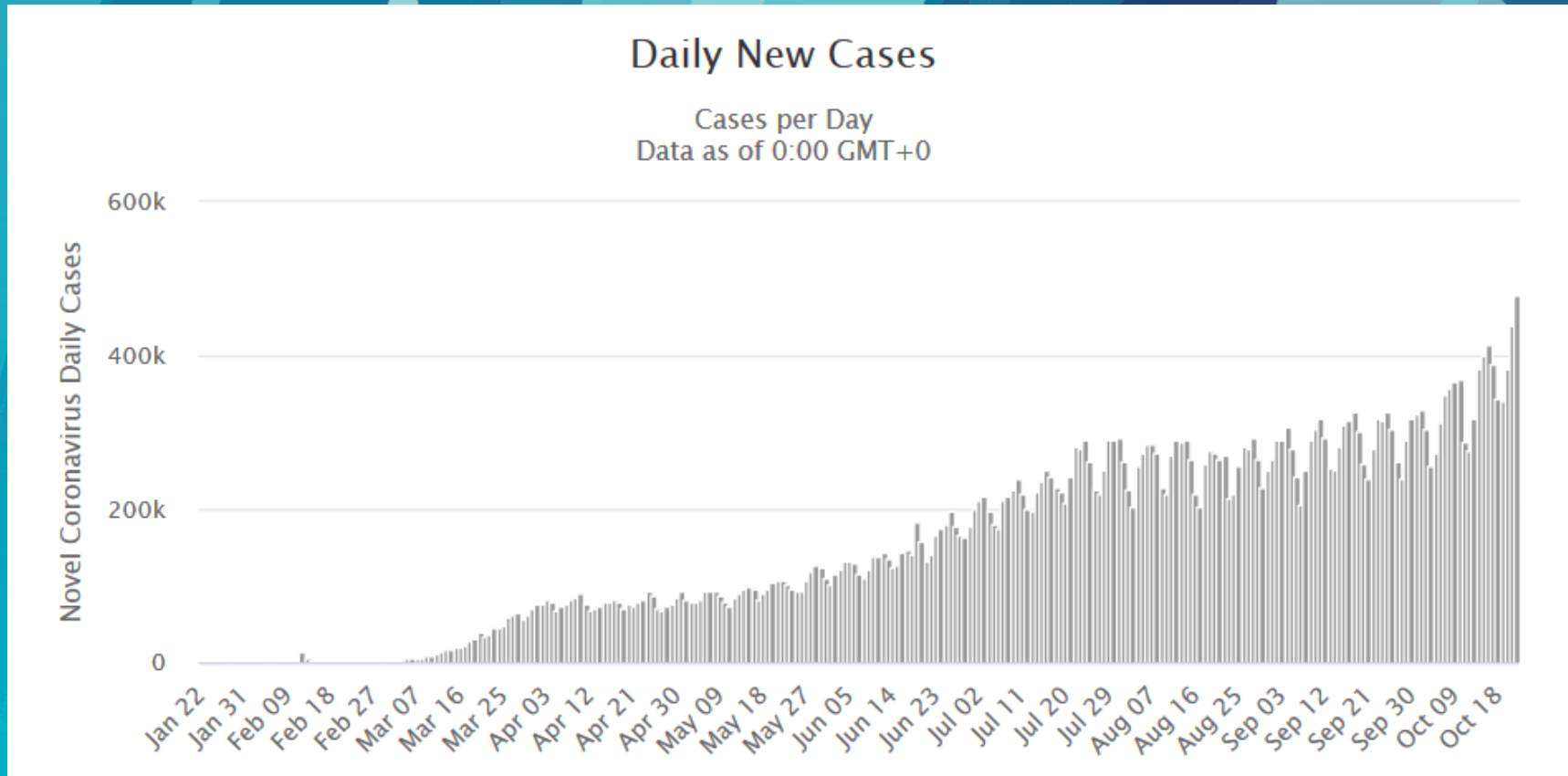
- Which COVID-19 affected segment or line of business do you have the most exposure to or experience in?
 - Auto
 - Workers Compensation
 - General Liability
 - Professional Liability
 - Contingency
 - Mortgage
 - A&H
 - Travel
 - Surety / Trade Credit
 - Other (write in)

COVID-19 Pandemic

- Disease was first identified in December 2019
- January 30, 2020 - 7,818 confirmed cases worldwide and the World Health Organization (WHO) declared a Public Health Emergency of International Concern
- WHO made the assessment that COVID-19 could be characterized as a pandemic on March 11, 2020
- As of October 19, 2020, 40 million confirmed cases worldwide and 1.1 million deaths
- In the United States, decline in real GDP at an annual rate of 5% in first quarter and 31.4% in the second quarter
- U.S. employment fell by 20 million jobs in April, erasing job gains of the last 10 years. Despite subsequent recovery, 11 million fewer jobs in September than in February

COVID-19 Daily Confirmed Cases

40.7 million global cases as of October 22, 2020

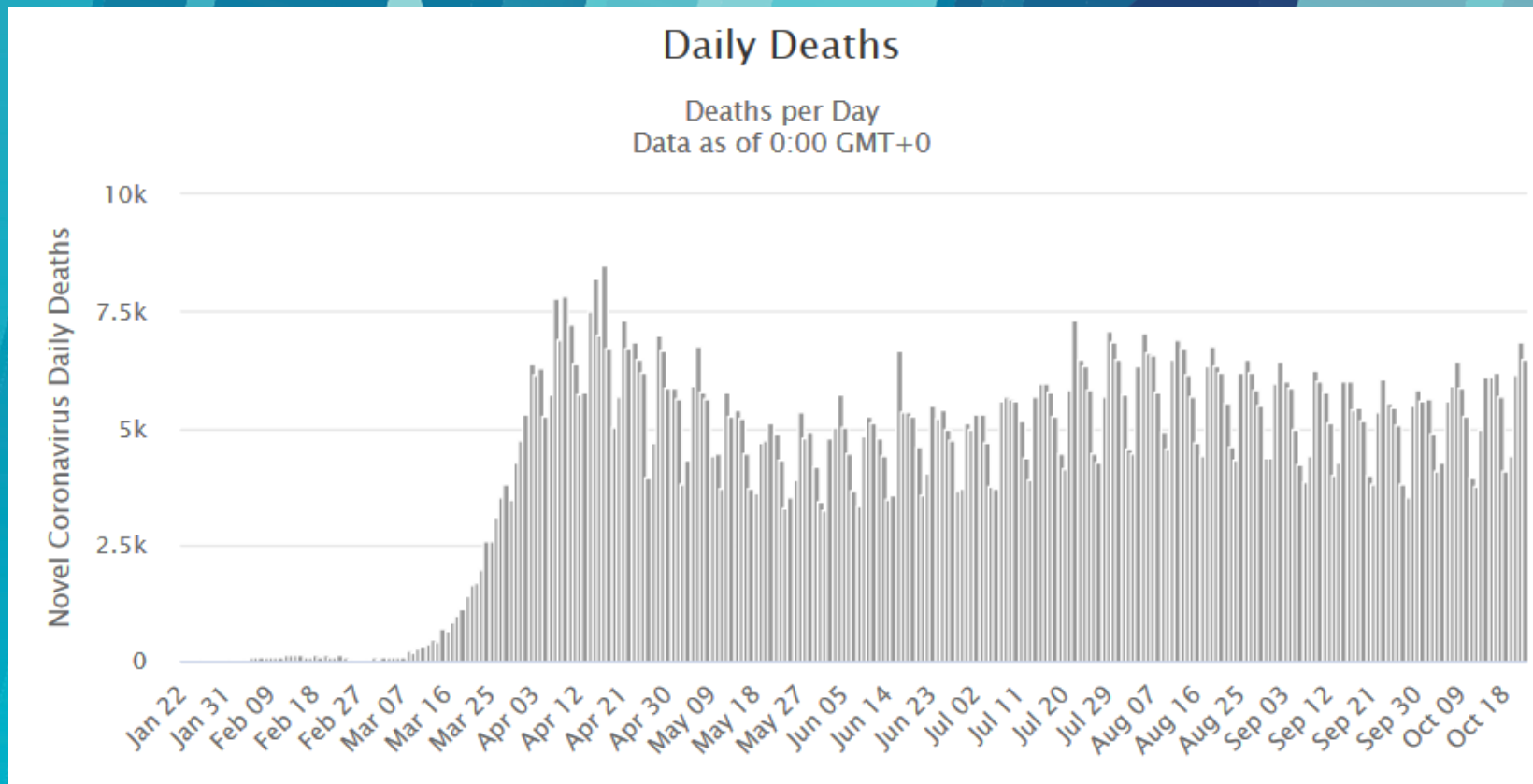


Source: <https://www.worldometers.info/coronavirus/worldwide-graphs/>



COVID-19 - Deaths per Day

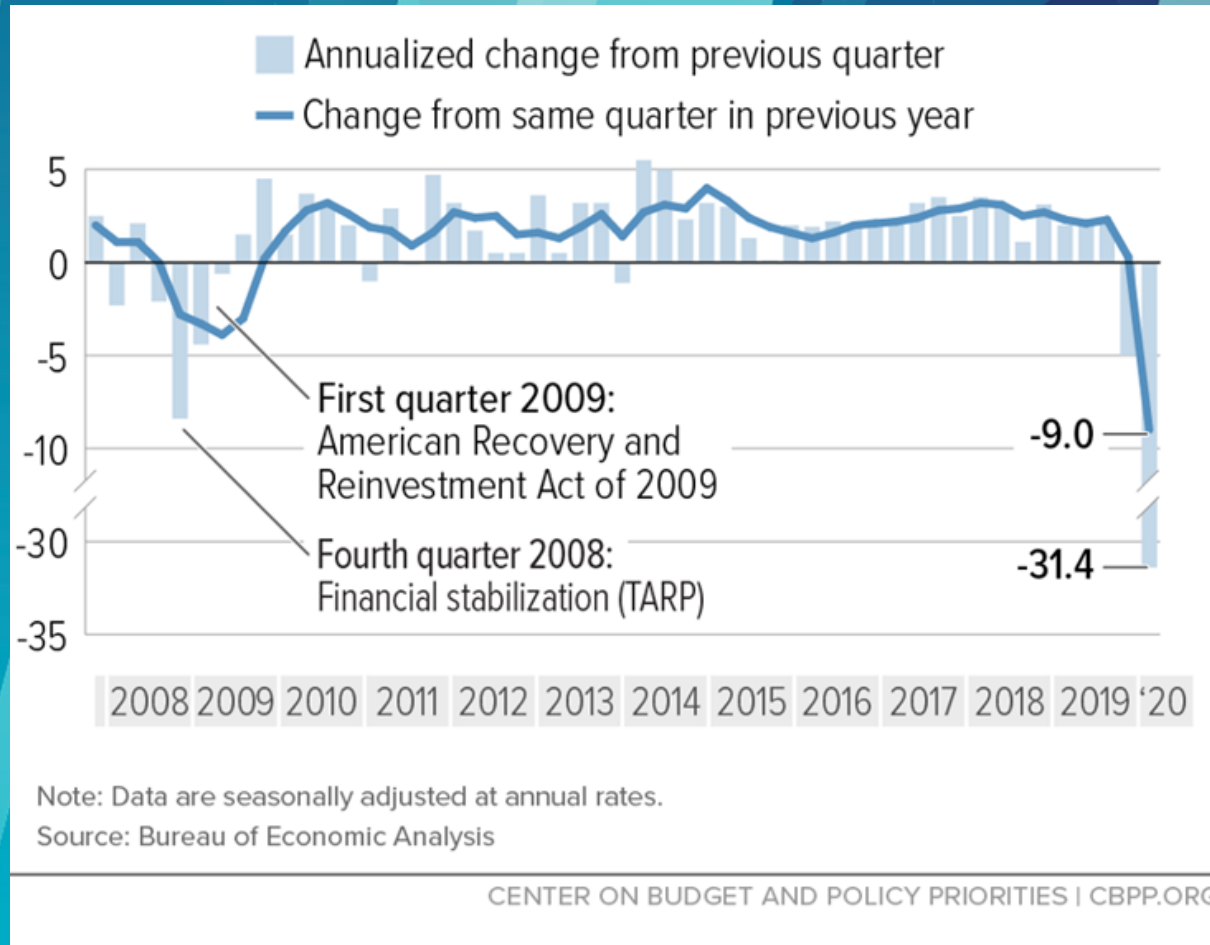
1.1 million global cases as of October 22, 2020



Source: <https://www.worldometers.info/coronavirus/worldwide-graphs/>



Percent Change in Real GDP



Industry Estimates of COVID-19 Exposures for Property / Casualty Industry

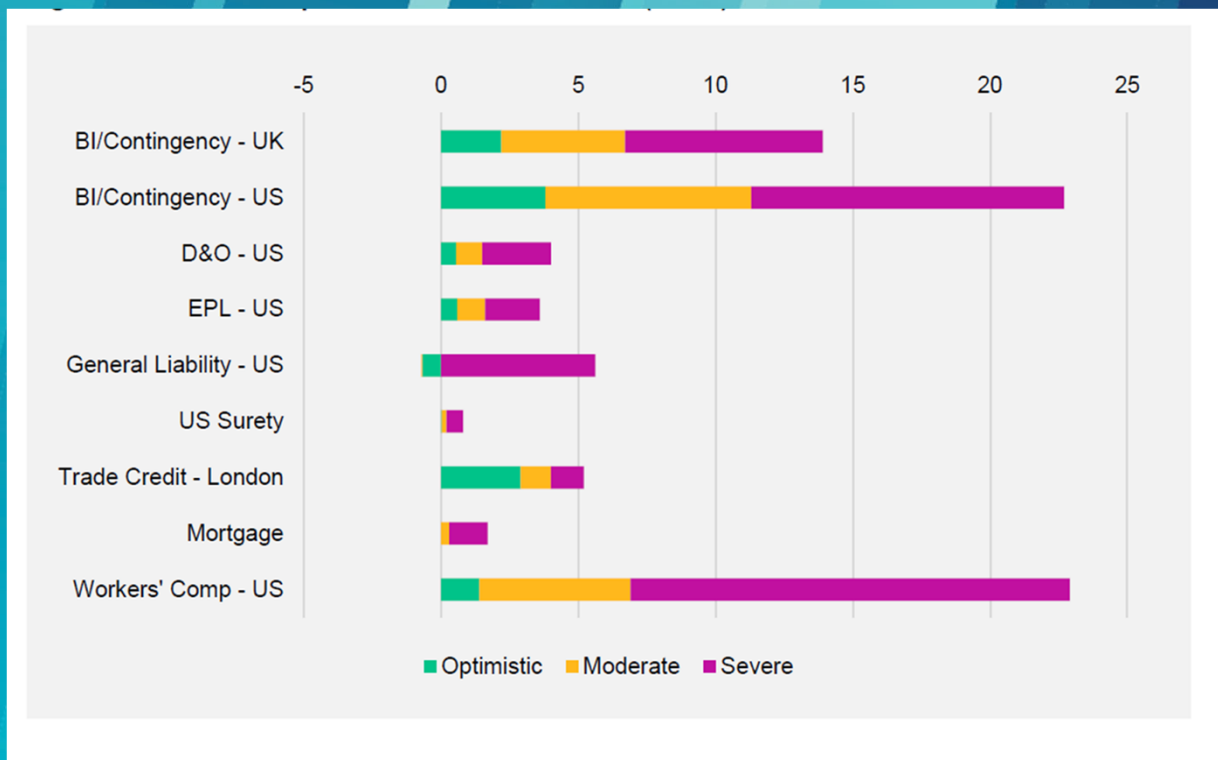
- Dowling & Partners initially estimated \$40 - \$80 billion of global property / casualty losses (per Artemis, April 22, 2020)
 - Amounts to 5-10% of non-life statutory surplus as of year-end 2019 (of \$848 billion) ¹
- NCCI model estimated WC related costs for all workers from \$3 - \$82 billion depending on infection rates, compensability rates and fatality rates (April 2020) ²
- WillisTowersWatson report estimates - Aggregate potential losses from \$10 - \$80 billion, depending on severity of pandemic (social distancing provisions, infection/mortality rates) as of May 1, 2020 ³

¹ From Article – Themes Emerging From Q1 2020 Earnings Releases For Non-Life Insurance Companies Relating to Impact of Claims Related to COVID-19 by Joy Schwartzman

² NCCI COVID-19 and Workers Compensation: Modeling Potential Impacts. Estimates for 38 NCCI member states.

³ Scenario Analysis of the COVID-19 Pandemic – Analysis of key classes in the US and UK (including London Markets) P&C Insurance Industries

WillisTowersWatson Report Estimates By Line of Business



Note: Graphic from Willis Towers Watson report Scenario Analysis of the COVID-19 Pandemic – Analysis of key classes in the US and UK (including London Markets) P&C Insurance Industries, dated May 1, 2020

COVID-19 Property / Casualty Loss Estimates* By Large Insurance Companies

Company	Q1 & Q2 COVID LOSSES (\$ Millions)	% of Net Earned Premium
Munich (through 3 rd quarter)	€2,300	N/A
Swiss Re	\$1,500	16%
Chubb	1,170	7
AIG	730	6
QBE	335	6
Markel	325	12
Hartford	301	3
Axis	235	11
Travelers	200	1

*Based on Publicly Available Information

*My interpretation of the disclosures, which may not have been clear



Company Announcements

- AIG takes COVID-19 related \$458 million in losses in Q2
- Travelers COVID-19 and related economic fallout led to \$114 million in direct losses in Q2 - WC coverage taking largest blow
- WR Berkley incurred \$85 million of net COVID-19 losses during Q2; an additional 5.1 loss ratio points for COVID-19 related losses
- The Hartford on WC: “COVID-19 incurred losses of \$213 million, before tax, included a net \$35 million, before tax, for workers’ compensation. Direct COVID-19 workers’ compensation losses of \$75 million...”

Company Announcements

Not All Bad News

- Progressive: “During June, we continued to see a significant decrease in auto accident frequency due to restrictions put in place to help slow and/or stop the spread of the novel coronavirus, or COVID-19, which contributed to our companywide loss/LAE ratio for the month being 8.2 points lower than the ratio reported in June last year.”



Impact of COVID-19

- Impact of COVID-19
 - Varies by company
 - Varies by line of business
 - Varies by jurisdiction
- Industry Responses
 - Adjusting policy wording and terms and conditions
 - Returning premium / premium discounts
 - Reconsideration of risks
 - Exit markets or types of coverages
 - Broader risk coverage (opportunity for new products)

Auto Liability and Physical Damage - Favorable Impact

- Driving behavior has been affected by COVID-19
- Decline in reported claims (fewer accidents)
 - Due to social distancing and stay-at-home orders, working from home , and fewer miles being driven
 - Fewer vehicles on the road especially during rush-hour
- Commercial Auto may have more accidents due to increased mileage and longer hours driving
- Potential higher severity as higher speeds associated with less traffic may increase severity of claims
- Return premium
 - Some insureds offering % credits
 - Others fixed \$ refund per vehicle
 - California mandated premium refunds

Medical Malpractice - Uncertain Impact

- Delays in non-essential, preventative services
- More use of telemedicine
- Potential claims from COVID-19
- Delays in litigation
 - Court conferences / depositions
- Reported claims experience in 2020 is equal to or better than expectations

Nursing Home and Related Liability

- Nursing Homes and related facilities (Nursing Homes) account for 42% of all deaths from COVID-19 in the United States ¹
- Based on 221,000 deaths in the U.S. as of October 21, 2020, this implies 93,000 nursing home deaths
- Approximately 1.3 million people reside in nursing homes with over 8 million people served in the long-term care sector ²
- Aggressive plaintiff attorneys in this market
- Many of the larger systems self-insure
- Settlements will be nursing home and case specific
 - Was the nursing home negligent in providing care?
- Historical average cost for negligent nursing home death in the range of \$300,000
- Few claims filed to date
- If a significant number of cases are filed and negligence is found, a very large exposure is indicated
- Potential for future deaths later in 2020 and into 2021

¹ Nursing Homes & Assisted Living Facilities Account for 42% of COVID-19 Deaths by Gregg Girvan and Avik Roy – updated on August 31, 2020

² Based on 2016 data from CDC. From Quantifying COVID-19 liability for long-term care providers by Carl Ashenbrenner and Darren Sveom, dated May 5, 2020



Workers Compensation - Unfavorable Impact - New Types of Claims

- Are diseases covered by workers compensation?
 - In some states, specific diseases are listed in the workers compensation statutes as being “occupational diseases” (pneumoconiosis, asbestosis, and berylliosis)
 - The illness must arise out of and in the course of employment
- Presumption Work Related
 - First responders / healthcare professionals (varies by state)
 - Assumed WC related unless insurer can prove not work related
 - Timeframe varies by state
- Other employment - varies by state
 - Not work related and not compensable
 - Compensable if you can demonstrate it was contracted at work
- Significant reported claim activity in California with 2020 costs from workers subject to the 3/19/20 presumption order estimated at \$1.2 billion by the WCIRB (mid-range estimate)¹. More than 40,000 COVID-19 WC claims filed in California through mid-September². However, many of these may settle without a payment.
- Outside of California - trends indicate much lower COVID-19 covered losses
- Much Uncertainty
 - Longer reporting pattern of COVID-19 claims due to subrogation, PTSD for healthcare workers etc.
 - Long term effects of COVID-19

¹ WCIRB Research Brief: Evaluation of Cost Impact of Governor Newsom’s Executive Order on Rebuttable Presumption for California COVID-19 Workers’ Compensation Claims, by the WCIRB Actuarial and Research Teams, May 2020

² Calif. governor signs presumptive COVID-19 workers' comp bill by Melody Gutierrez, dated 9/18/20



Workers Compensation - Unfavorable Impact - Increased Costs

- Delays in medical treatment will increase WC losses
- Causes of delay / postponement of surgery due to
 - Doctors' offices temporarily closing or not seeing patients (safer at home / shelter in place home orders)
 - Hospitals not allowing non-emergency surgeries
 - Limited exposure of staff and patients to COVID-19
 - Keeping hospital beds (and staff) available to COVID-19 patients

Workers Compensation - Unfavorable Impact - Increased Costs

- Delay in treatment
 - Increases indemnity costs (out of work longer)
 - Potential increase in medical costs (more doctors visits, greater use of prescription drugs, etc.)
 - Increased likelihood of complications or permanency adding to the cost
 - Potential limited return-to-work / light duty or no work due to temporary closures
- Short term effect of additional indemnity costs
- Reduced medical costs (more use of telemedicine)
- Once the impact of COVID-19 on the medical system is over (no longer delays in treatment), increase in indemnity costs should be diminished

Workers Compensation - Uncertain Impact - Changes of Exposures

- Decrease in exposure (lower payroll during economic slowdown)
 - Results in return audit premium for many businesses
 - Furloughed workers
- Decrease in workers compensation claims
 - Is the decrease reflective of decrease in exposure?
- Exposures changing
 - Some workers working longer hours / potential fatigue
 - New types of services offered
 - More working from home
- Non-COVID-19 experience in 2020 looks favorable compared to prior years in many states, but difficult to quantify as audit premium will be lower than usual

D&O

Additional Risks

- Adequacy and accuracy of disclosures in financial statements
- Adequacy and accuracy of disclosures of COVID-19 exposures
- Actions companies took or did not take
- Additional regulatory and compliance issues
- Workforce and operational adjustments
- Reputation risk regarding how management handled their response
- Bankruptcies / Insolvencies
- We were already seeing an increase in class actions and deteriorating D&O results (and significant rate increase). The drop in GDP and resulting bankruptcies will likely result in additional claims.

Surety Unfavorable Impact

- Unexpected construction delays and cost overruns
 - Shutdown orders
 - Backlog of supplies
 - Drop in GDP will result in more financial strain resulting in additional claims

Event Cancellation Unfavorable Impact

- Event Cancellation policies are complex and may include exclusions
 - Some policies exclude pandemic or government ordered quarantines
 - Large deductibles are also on many policies
- Standard event cancellation insurance policies may not cover COVID-19
 - Infectious / Communicable disease coverage is often an add-on available for additional premium
- Some policies include “all causes” or “epidemic coverage” which cover event losses depending on policy language
- Events such as the Olympics and Wimbledon had event cancellation policies that cover COVID-19
- Premium rates have gone up and will likely continue to increase for this line of business

Mortgage Insurance Impact of the Pandemic

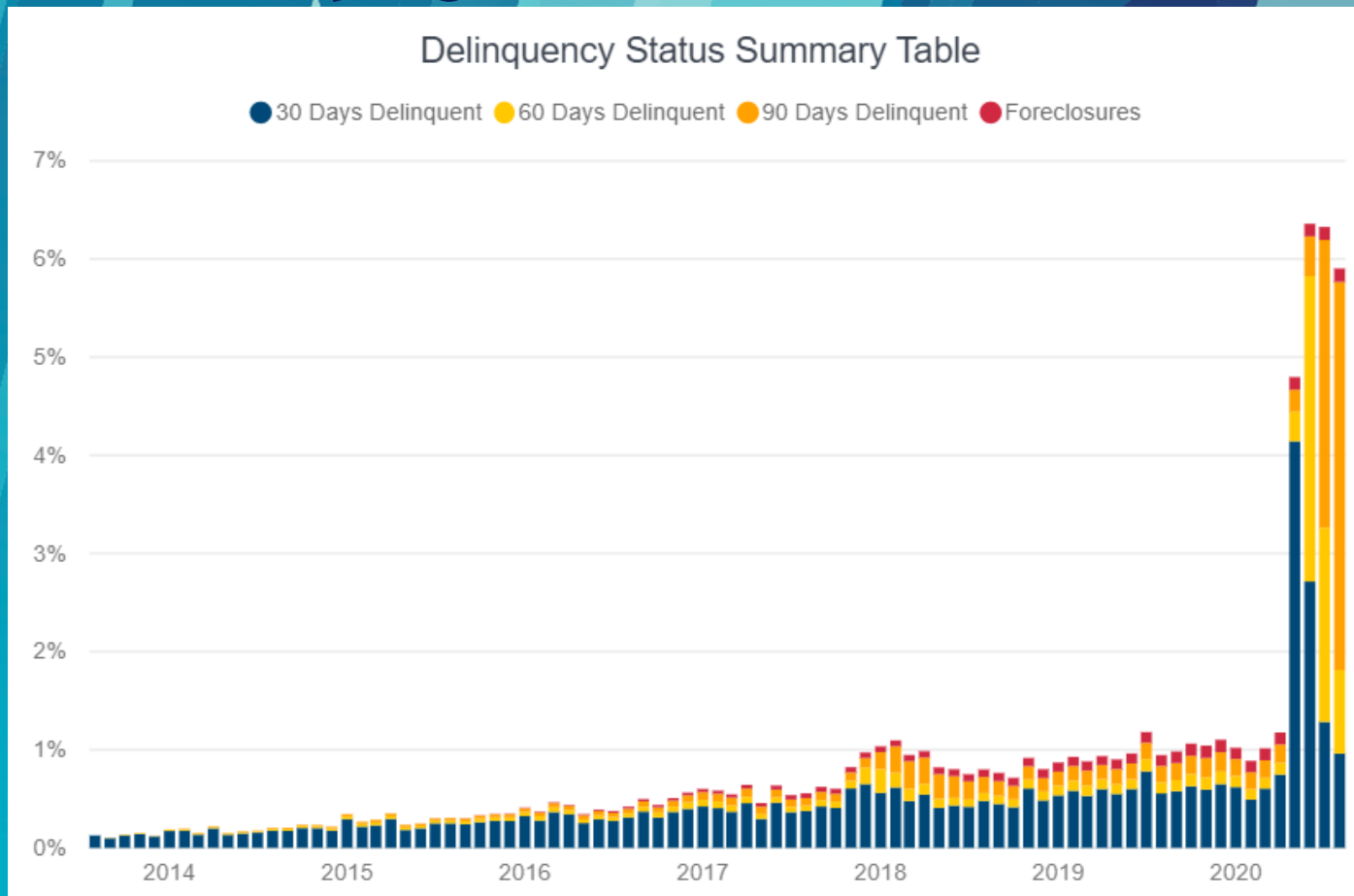
Increase Risk

- Spike in unemployment rates
- Spike in mortgage delinquencies
- General economic uncertainty

Risk Offset

- CARES Act Forbearance and stimulus
- Decline in interest rates resulting in an increase in prepayment speeds
- Haircut to PMIERS capital requirements
- Strong housing market

Mortgage Delinquencies Loans underlying ACIS/STACR CRT Transactions



Source: Milliman review of U.S. mortgage data.



Trade Credit Unfavorable Impact

- Trade credit insurance covers the risk that a customer cannot pay for goods or services bought on credit
- With the slowdown in the economy, trade credit losses likely to increase
- Significant trade credit losses are anticipated
- UK Government created a 10 billion pound trade credit reinsurance backstop for trade credit insurers (insurers will take 10% of claims and premium and government will take 90%) so that international trade from the UK doesn't plummet

Business Interruption Depends on Location / Policy Language

- On September 15, 2020 high court in the UK found in favor of insureds on several facts in a landmark business interruption test case
 - Court said most of the disease clauses under examination provided coverage for policyholders
 - Prevention of access/public authority wording - more favorable to insurers
 - Business trends - court's final argument favored insureds - this is a source of appeal
 - Several insurance companies are appealing the decision to the Supreme Court in the UK. Largely at issue is the Trends Clause.
 - Decision could have been worse for the industry
- Most insurers are denying coverage for U.S. exposure
 - Specific pandemic/communicable disease/virus exclusion
 - Other insurance agreement requires property loss
 - Does a pandemic qualify as a direct physical loss or damage?
 - Western District of Missouri denied motion to dismiss a claim stating coverage trigger is physical loss or damage and must give meaning to both terms
 - Southern District of New York - "The virus damages lungs. It does not damage printing presses."
 - Recently publications indicate vast majority of companies have strict policy wording, it appears a few companies used alternative language that may not be as safe
- Potential additional lawsuits in United Kingdom/Europe/United States

Disclaimer – I am not an attorney and am not commenting on the policy language or the courts interpretation of the language



Business Interruption

- COVID-19 related BI claims expected to have material impact on UK commercial property insurers' 2020 earnings - but aggregate non-life insurance sector solvency should remain robust - only 10% commercial property premiums relate to BI extensions
- Hiscox said it is responsible for less than 1/3 of its 34,000 UK BI policies, estimating an additional E100 million net of reinsurance (or less) from COVID-19 BI claims
- RSA estimated impact about E85 million - expected to decrease through further reinsurance
- Zurich said the decision affirms its policy interpretations
- QBE's catastrophe reinsurance will limit their net cost of BI claims to \$70M

Source: Insurance Journal

Disclaimer – I am not an attorney and am not commenting on the policy language or the courts interpretation of the language

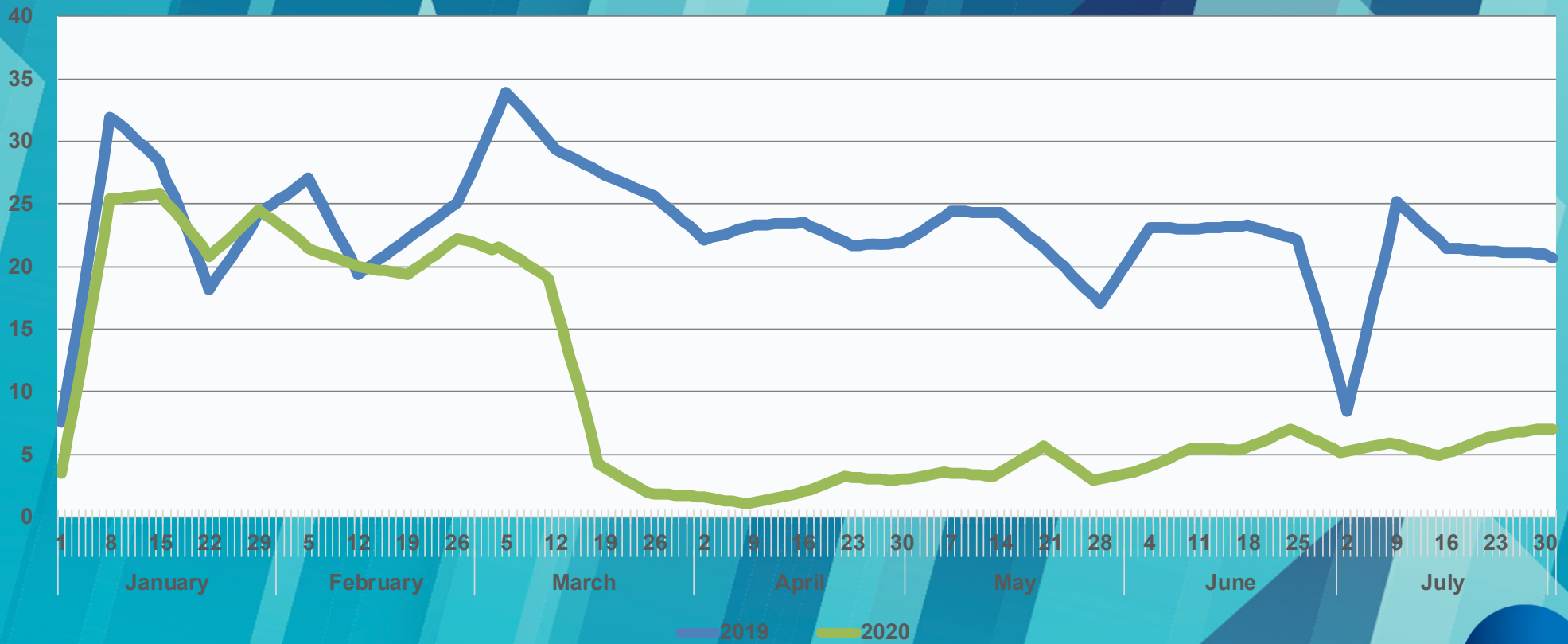


Impact of COVID-19 on Reserving - Delays

- Trial and deposition activity in the U.S. dramatically decreased in mid-late March
 - Some cases are now being handled in person or via Zoom
 - Not necessarily delays in attorney fees
- Delays in medical treatment
- Delays in claims handling?
- Increased claims handling activity?

- Are the paid development factors on the last diagonal biased low?
- Are the incurred loss development factors biased?

Court Conferences per 1,000 Open Lawsuits

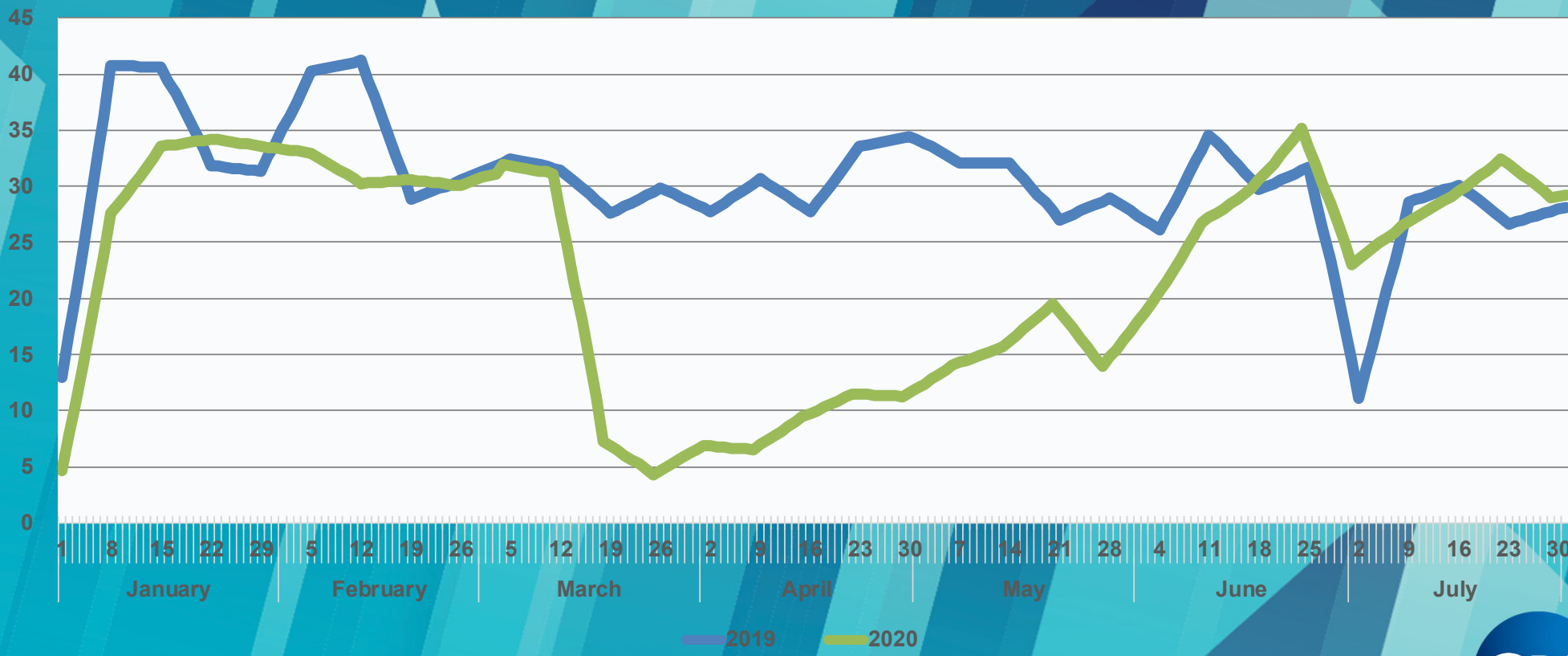


Source: Milliman analysis of Datalytics client data - Predictive Analytics software product that analyzes legal costs, legal activities and indemnity costs to optimize claim practices



Depositions

per 1,000 Open Lawsuits



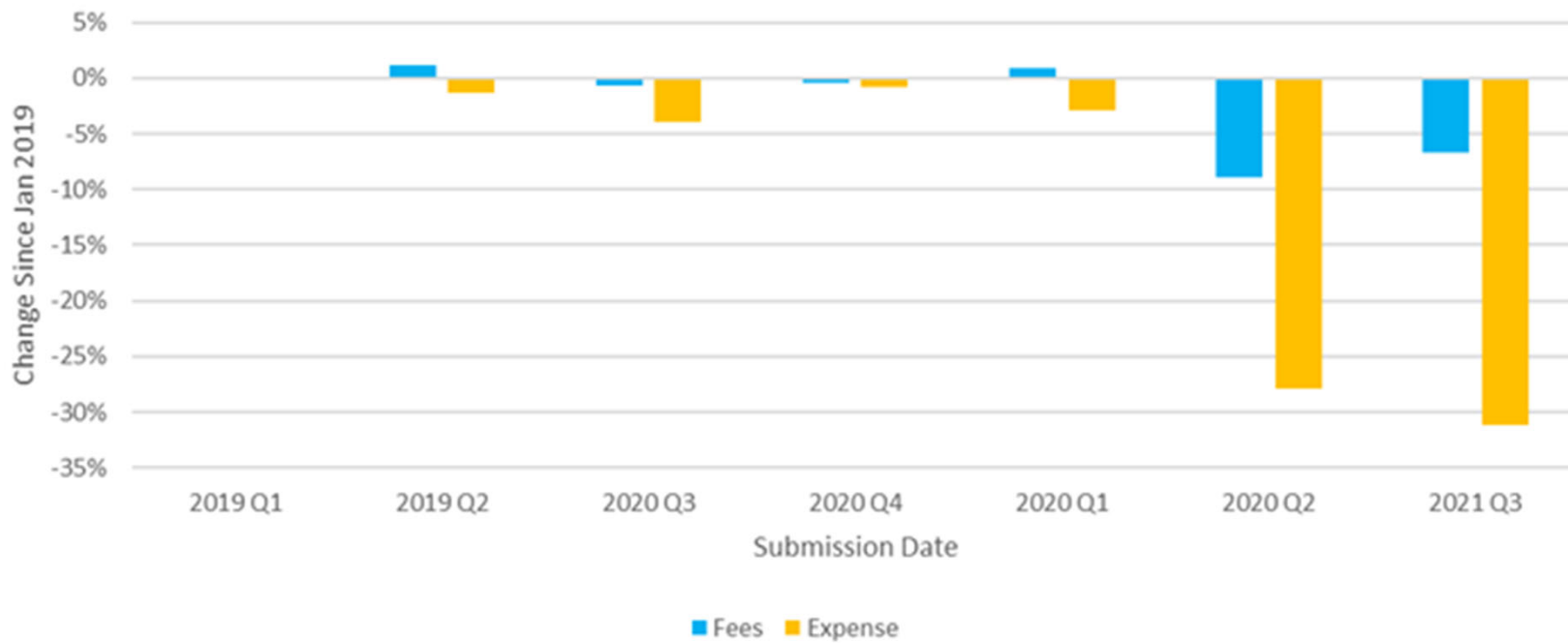
Source: Milliman analysis of Datalytics client data



Change in Fees and Expenses

For California

Change in Fees and Expenses California

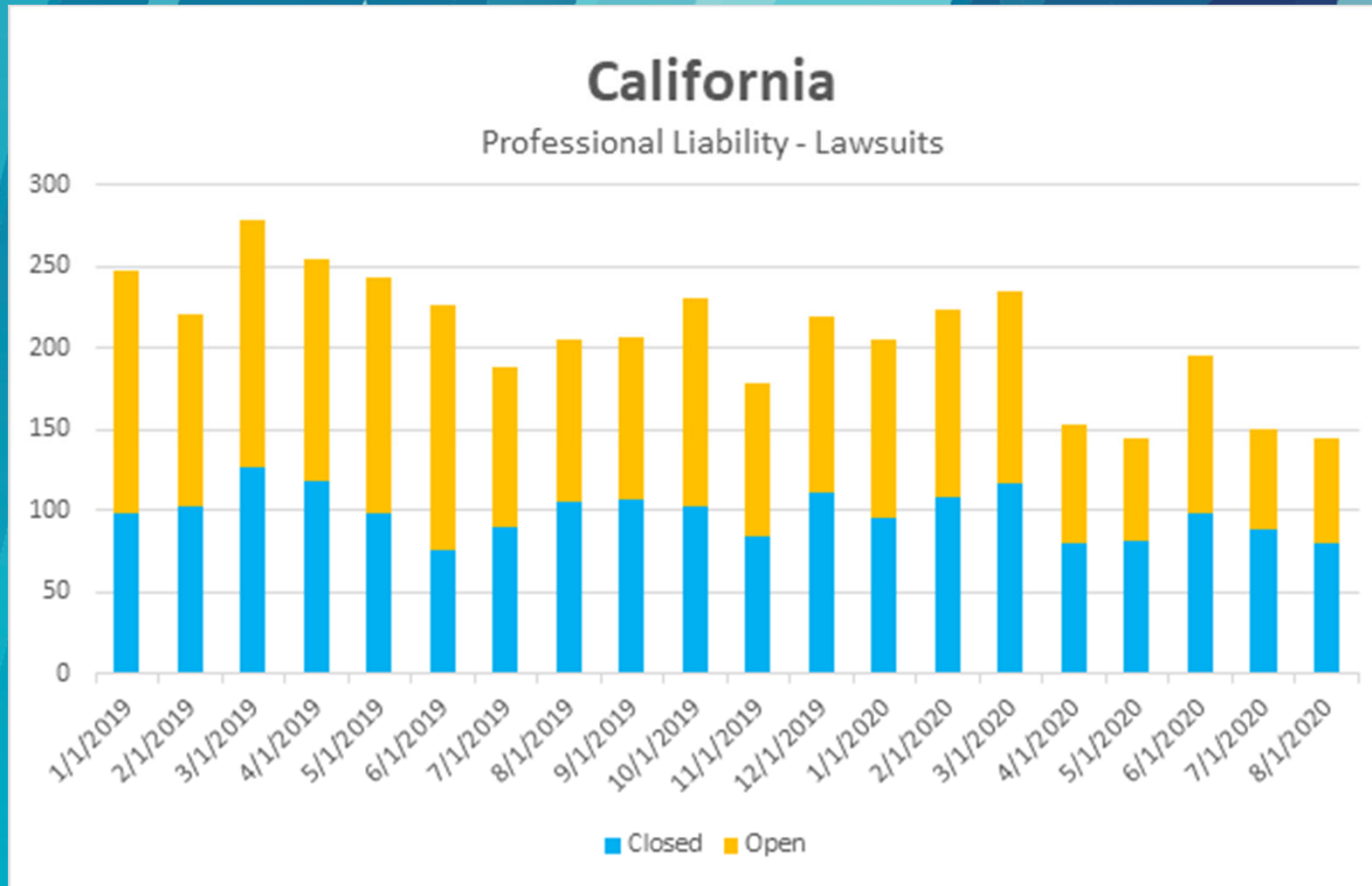


Source: Milliman analysis of Datalytics client data



California – Professional Liability Lawsuits

Open and Closed by Month



Source: Milliman analysis of Datalytics client data



Legal Cost Issues

- Legal costs are not decreasing as much as depositions and court costs are decreasing
 - Will this lead to higher legal costs?
- Some claim trial dates will be delayed
 - Once the courts open backlog of criminal cases will likely take precedence
 - Usually the longer a case is open the higher the legal and indemnity costs
 - Will that be true with these cases?
- Will virtual depositions lead to lower long-term costs?

Impact of COVID-19 on Reserving - Methods / Ultimate Losses

- Impact on ultimate losses for accident year 2020?
- How is March to September different
 - Delay in legal activity - case reserves may not be updated as frequently for current and older cases - potentially less adequate
 - Difficult to use a-priori loss ratios - WC COVID-19 losses are lower but so will be audited premium (by how much?)
 - Will reporting lag be extended for some coverages (e.g., D&O, Nursing Home Liability, Medical Malpractice)
 - The length of the pandemic will affect all coverages
- Assuming uniformity for the whole year may not be appropriate

Thank you



COVID-19'S Impact on the P&C Re(Insurance) Industry A Company Perspective

NOVEMBER 10 2020

POLLING QUESTION

How involved have you been in estimating or reserving for COVID losses?

1. Very involved
2. Somewhat involved
3. Not involved



POLLING QUESTION



For those of you that have been involved in estimating or reserving for COVID losses, which is the most difficult aspect?

1. Lack of data
2. Uncertainty of coverage
3. Uncertainty of health impact of pandemic
4. Uncertainty of the economic impact of the pandemic
5. Other (write in)

AGENDA

Why is reserving (or pricing) for COVID so difficult?

What is the right basis for COVID estimates?

Overview of the COVID reserving process

Specific line of business commentary

Lessons learned (for next time!?)



WHY IS COVID RESERVING (OR PRICING) SO DIFFICULT?

COVID is an unprecedented event for the insurance industry

The reserving for COVID is unique from traditional reinsurance “cat” events

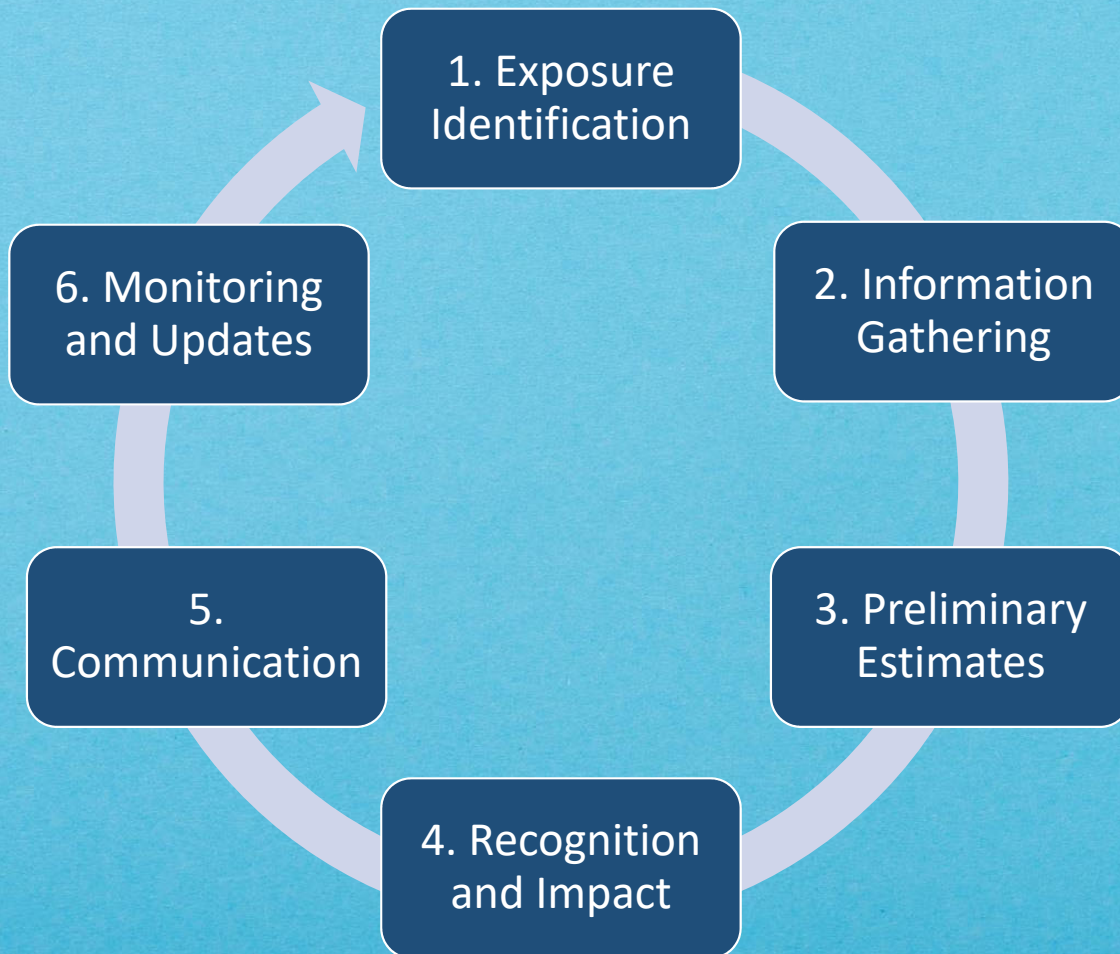
- The event is still occurring
- Duration and severity unknown
- Impact is not limited to one insurance segment
- No established model, method, or precedent
- Potential impact from:
 - Government decisions on business closures
 - Government relief interventions
 - Government and judicial interpretations of coverage
 - Medical developments



WHAT IS THE CORRECT BASIS FOR COVID ESTIMATES?

Basis	Pros	Cons
Up-front (one Occurrence)	<ul style="list-style-type: none">• Full recognition of impact/losses at inception of pandemic• More prudent, which may be desirable given uncertainty• Eliminates (in theory) future further bad news	<ul style="list-style-type: none">• Increases the importance of “getting it right” initially• Requires an estimate of the duration of pandemic• May be challenged by auditors, if underlying events have not occurred
Over time (based on underlying occurrences)	<ul style="list-style-type: none">• Could be more in-line with how actual claims or occurring• Only requires recording estimates for one period at a time• Duration of impact is less of an issue	<ul style="list-style-type: none">• Affects results for a longer period• Likely want to produce an estimate on ultimate anyways for management• Increased chance of premium deficiency reserve

OVERVIEW OF COVID-19 RESERVING PROCESS



OVERVIEW OF COVID-19 RESERVING PROCESS



Exposure identification

- Identify potential contracts with direct or indirect exposure to COVID-19
- This will require more judgment than a typical large loss event reserving exercise

OVERVIEW OF COVID-19 RESERVING PROCESS

Information gathering

- Gathering input and additional data from all sources (insureds/claims/brokers/field agents/etc.)
- Also consider industry estimates, market analyses, and other companies' announced losses

OVERVIEW OF COVID-19 RESERVING PROCESS

Preliminary estimates

- Prepare “base case” and “stress case” estimates
- Define the key assumptions as a part of the estimates



OVERVIEW OF COVID-19 RESERVING PROCESS

Determine recognition and impact of losses

- When should future losses be recognized?
- Evaluate need for premium deficiency reserve

OVERVIEW OF COVID-19 RESERVING PROCESS

Communication

- Consider disclosing a range or stress case estimate
- Describe key assumptions
- Be clear that estimate will change, but stand up for your estimates

OVERVIEW OF COVID-19 RESERVING PROCESS



Ongoing updates and monitoring

- Consider updates on a continuous basis
- Monitoring of COVID is uniquely difficult due to categorization and tracking of losses

LINE OF BUSINESS COMMENTARY

1. Lines with direct and clear exposure to COVID

- Contingency / Event cancellation
- A&H, Pandemic, or Life Cat Covers
- Travel Insurance

2. Lines with direct, yet ambiguous, exposure to COVID

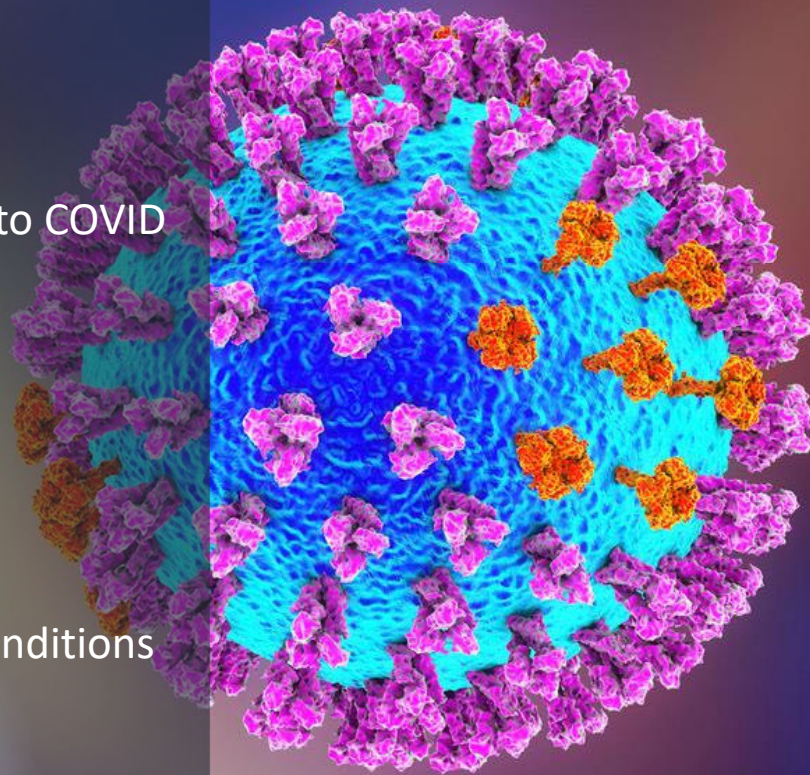
- Workers compensation
- Property (business interruption)

3. Lines with indirect exposure to COVID

- General and professional liability

4. Lines with exposure to broader economic conditions

- Mortgage, trade credit, surety



LINE OF BUSINESS COMMENTARY

Lines with direct and clear exposure: Contingency and Event Cancellation

- Exposure is based on the list of events, dates, and limits
- Conservative approach is to quantify the total limits exposed on all events through various dates (i.e. limit exposed on events scheduled through Dec 31, 2020)
- Can be refined by looking at partial limit losses, based on the definition of coverage (full cancellation only?), how early the event is cancelled, whether it will be rescheduled, and whether limit losses are actually likely (required underwriter knowledge of exposure by contract)
- That approach also allows for a relatively simple explanation if/when cancellations persist for longer than originally anticipated

LINE OF BUSINESS COMMENTARY



Lines with direct and clear exposure: A&H, Pandemic or Life Cat Covers

- Understand the group covered and quantifying frequency, severity and duration of impact
- When you don't have data, look for proxies by geography or demographic

LINE OF BUSINESS COMMENTARY



Lines with direct and clear exposure: Travel Insurance

- Similar to categories above, look to understand frequency and severity
- This is complicated by the inconsistency in refunds and cancellation fees
- Losses on travel insurance are unlikely to be a primary driver for your company unless you work for one of the big travel insurance writers

LINE OF BUSINESS COMMENTARY

Lines with direct yet ambiguous exposure: Workers Compensation

Each book will be affected differently.
Some factors to consider include:

- States with presumption laws
- Size of business
- Essential of frontline worker exposure
- Working from home exposures
- Impact of changes in auto frequency
- Potential for employer's liability claims

LINE OF BUSINESS COMMENTARY

Lines with direct yet ambiguous exposure: Property (Business Interruption)

- Understanding contract wording and exposures and the current and evolving legal landscape
- Scale and scope of exposure and work will vary significantly by company
- Not much traditional “actuarial work” to be done
- Start with a discussion with underwriters and claims

A blue wooden sign with yellow text that reads "Sorry WE'RE CLOSED". The sign is hanging from chains and has a distressed, weathered appearance. The word "Sorry" is in a cursive font, "WE'RE" is in a simple sans-serif font, and "CLOSED" is in a large, bold, blocky sans-serif font.

Sorry
WE'RE
CLOSED

LINE OF BUSINESS COMMENTARY

Lines with indirect exposure: General and Professional Liability

- These liability lines are subject to second-order effects from COVID
- **General Liability**
 - For example, how many businesses will be sued for negligent safety practices?
 - How easily will positive COVID cases/deaths be traced back to individual sources, and will courts agree with that?
 - Could secondary COVID cases (e.g. family members) also be attributed to the same source?
 - Will businesses have any immunity, and will it be effective?
 - Will there be any decrease in ultimate non-COVID general liability claims, due to shutdowns and changed practices?
- **Professional Liability**
 - How many companies will face shareholder lawsuits as their financial results deteriorate due to COVID?
 - How will courts assess the fiduciary duty of those companies before and during a black swan pandemic/shutdown?
 - If a whole sector of the market is similarly affected (e.g. cruise ships), does a shareholder have a valid claim against one company in that sector?
- These may be too subjective to perform any detailed analysis

LINE OF BUSINESS COMMENTARY

Lines with exposure to economic conditions

- Mortgage
- Trade Credit
- Surety

Making assumptions on changes in economic activity is notoriously difficult – even for economists!

Mortgage

- That data and analytics allow for in-depth simulation and scenario modeling
- Thus far, the housing market has been remarkably robust through COVID
- However, we should be watching other dynamics closely, which could have regional affects that impact mortgage portfolios

Trade Credit and Surety

- Similar to mortgage in some ways, but with less data, so inherently more judgmental
- How long will the pandemic last, and how will it affect businesses/contractors and their ability to pay/perform?
- Start with a discussion with underwriting and claims, and work from there
- 2008 may be a helpful benchmark or scenario

OVERARCHING COMMENTS ACROSS ALL SEGMENTS



- There are likely to be short- and long-termed impacts on claim patterns and loss trends from COVID, that will affect the industry's loss costs and reserve more generally (aside from specific COVID losses)
- While the early non-COVID loss experience on some lines of business may appear better than expected (e.g. workers comp and professional liability), this may be illusory once reductions in exposure/premium are considered and the longer-term impacts play out
 - More generally, some of this apparent better than expected experience could be due to a slow-down in the reporting, legal, adjudication, and adjustment processes
 - There could also be a "bounce back" of pent up non-COVID claims activity after the economy reopens, either from latent injuries, lack of care, facilities re-open, or general festering
- COVID also seems to be helping to driving pricing trends in the right direction, which may have a beneficial impact on go-forward expected loss ratios
- Will social inflation and COVID ultimately exacerbate each other?

LESSONS LEARNED - FOR NEXT TIME?!

- ✓ Think beyond the point estimate
- ✓ Step up
- ✓ Be adaptable
- ✓ Have a learning mindset
- ✓ Collaborate
- ✓ Communicate, communicate, communicate