CASUALTY-LOSS-RESERVE-SEMINAR

Jointly Sponsored by:



American Academy of Actuaries Objective. Independent. Effective.™



Dave Bellusci is the Executive Vice President and Chief Actuary of the Workers' Compensation Insurance Rating Bureau of California (WCIRB). He leads the WCIRB's teams that are responsible for actuarial, analytics and classification research functions. He is also responsible for the WCIRB's financial accounting team and regularly represents the WCIRB at legislative or administrative hearings.

Mark Priven has worked for as an actuary for insurance companies, brokerage firms, and for the past 20+ years as a consultant. He provides services to self-insurers, advises states regarding self-insurance regulation & oversight, and represents public members of the workers' compensation rating bureaus in California and New York on their respective actuarial committees.

Christian Lemay is a Managing Director within EY's Insurance and Actuarial Advisory Services Group. Christian is a Fellow of the Casualty Actuarial Society since 2001, with 25 years of experience in the industry. Christian is based in Los Angeles, and has been with EY since 2003; prior to EY, he has worked for a medical professional liability insurance company in Los Angeles, and for an actuarial consulting firm in Montreal.

Ethel Wang works as Executive Vice President of Finance with State Compensation Insurance Fund of California. She provides dedicated policy formulation and executive-level oversight to ensure the fiscal solvency and financial integrity of State Fund. She obtained her FCAS in 2005 and her FSA in 2016. California Workers' Compensation Update Dave Bellusci, FCAS, MAAA California Workers' Compensation Insurance Rating Bureau (WCIRB)

California Workers' Compensation Update

Key Drivers

- COVID-19 Pandemic Impa
- Premiums
- Rates
- Claim Frequency
- Pharmaceutical Costs
- Profitability

The "Watch List" **Economic Recovery Future Claim Frequency Medical Inflation Frictional Costs** "Long-Haulers"

Annual Change in California Unemployment Rate



California Employment Loss by Wage Quartile



Objective Trusted Integral

Reported COVID-19 Workers' Compensation Claims Filed





COVID-19 Claims as a Percent of All Indemnity Claims — Insured Employers Only



Projected COVID-19 Claims — Insured Employers Only (Excluding Denied Claims)





Sources: WCIRB January 1, 2021 Pure Premium Rate Filing, WCIRB indemnity transaction data reported through February 2021 (excluding denied claims), WCIRB aggregate financial calls.

Projected COVID-19 Claim Costs — Insured Employers Only



Objective, Trusted, Integral,

Sources: WCIRB January 1, 2021 Pure Premium Rate Filing, WCIRB indemnity transaction data reported through February 2021 (excluding denied claims), WCIRB aggregate financial calls.

Annual Percent Change in Non-COVID-19 Claims Filed



Percent of Open Indemnity Claims Closed in Next Year As of December 31, 2020



Calendar Year Ending December 31



Sources: WCIRB aggregate financial data calls. Figures represent the number of indemnity claims aged between 12 to 96 months closed during the year as a ratio of the number of estimated ultimate claims open or not yet reported as of December 31 of the prior year.

Written Premium - Gross of Deductible Credits



Objective, Trusted, Integral

Drivers of Written Premium Changes





Average Charged Rate per \$100 of Payroll

As of March 31, 2021

Rate per \$100 of Payroll \$8.00



WCIRBCalifornia[®]

r oncy r en

Indemnity Claims per 1,000 Employees

Pharmaceutical Costs per Claim Indexed to 2012

Objective, Trusted, Integral

Projected Accident Year Combined Ratios

As of March 31, 2021

California Industry Employment Forecasts - Indexed to 2019

Indemnity Claim Frequency – Indexed to 2008

Objective Trusted Integral

Medical Inflation: Policy Year 2022 – Estimated Medical Paid by Year

Source Source

Changes in Medical Claim Severity

As of March 31, 2021

Frictional Costs Cost to Deliver \$1 in Benefits

Sources: WCIRB aggregate financial data calls, NCCI Annual Statistical Bulletin, Medicare and a number of published studies on group health administrative costs.

COVID-19 "Long-Haulers"

Long Hauler Research

- 10% of healthcare workers with mild COVID have lasting symptoms (NIH)
- 33% of COVID-19 outpatients develop long-haul symptoms (Univ. of Washington)
- Long Haulers had a 59% increased risk of death after six months (*Nature*)
- Preliminary indications that vaccines may help long-haulers

SARS

- 40% of SARS infected in Hong Kong study had chronic fatigue 3 1/2 years later
- China study showed almost one-third of SARS infected health care workers had pulmonary issues after 15 years
- SARS Worldwide cases: 8,000
- COVID Worldwide cases: 190 mm
- COVID California Working Age cases: 3 mm.

Potential WC Implications

- Loss Development
- Permanent Disability Benefits
- Late Reported Claims
- WCIRB to Study later in 2021

Self-Insurance (and Insurance) Mark Priven, FCAS, MAAA Bickmore Actuarial

Workers' Compensation: Overview

- Self-Insurance
- Major Change in Cost of Workers' Compensation
- Collateral: California & New York

Self-Insurance

- Alternative to Insurance
- Regulated by Each State
- Different from Deductibles!
- Public vs. Private
- Individual vs. Group

Workers' Compensation % Benefit Payments by Payor (2018)

National Academy of Social Insurance: "Workers' Compensation Benefit, Coverage, and Costs, 2018 Data, Released November 2020

Workers' Compensation Self-Insurance Over Time

National Academy of Social Insurance: "Workers' Compensation Benefit, Coverage, and Costs, 2018 Data, Released November 2020

Major Change in Cost of Workers' Compensation

Workers' Compensation Benefits Over Time

National Academy of Social Insurance: "Workers' Compensation Benefit, Coverage, and Costs, 2018 Data, Released November 2020

Workers' Compensation Premium Rates Over Time: 8810 (Clerical)

Workers' Compensation Premium Rates Over Time: 8810 (Clerical)

Business Services (DCBS), Chris Day & Jay Dotter, 1996-2020. Manual premiums.

0.80

Self-Insured Liabilities State Collateral Requirements

Purpose

Backstop in Case of Default

Self-Insured Liabilities State Collateral Requirements

California & New York

Collateral determined by actuarial studies

- Applies to private companies
- Exemptions for those with minimal liabilities
- State reviews actuarial studies

Self-Insured Liabilities: California Self-Insurers' Security Fund (SISF) Assets

¹ 6/30/21 Projection Source: Audited SISF Financial Statements Jun 30. 2006-2020 Source: SISF 2021 Member Informational Meeting 5/12/21, page 6 Self-Insured Liabilities State Collateral Requirements

California

Old Method: Liabilities = 135% of Case Reserves

California Private Self-Insurance Net Liabilities Over Time

Case Reserves IBNR

Excludes studies not reviewed by Bickmore

California Private Self-Insurance Gross Liabilities / Prior Year Payments

Excludes studies not reviewed by Bickmore

Self-Insured Liabilities State Collateral Requirements

New York

Old Method: Liabilities based on proprietary software

Self-Insured Liabilities State Collateral Requirements New York Review Issues

Documentation

Legalese

Liabilities at two valuation dates: 12/31/xx, 12/31/xx+1

Nationwide Loss Development Factor

Self-Insured Liabilities New York State *Incurred* Loss Development Factors

NCCI Annual Statistical Bulletin 2021, 2 year averages

Self-Insured Liabilities New York State *Paid* Loss Development Factors

NCCI Annual Statistical Bulletin 2021, 2 year averages

Self-Insured Liabilities New York State *Case Reserve* Loss Development Factors

Derived from NCCI Annual Statistical Bulletin 2021, 2 year averages

Workers' Compensation: Recap

- Self-Insurance: Major part of WC market
- Major Rate Decreases in WC
- Tips on Self-Insurance Actuarial Studies: NY, CA

Auditor's view - Industry financial trends Christian Lemay, FCAS, MAAA

EY

Auditor's view - Industry financial trends

- Underwriting results
- Loss reserves development
 - Recent activity
 - Industry adequacy level
 - Medical inflation
- Other COVID-19 impact EBUB

Industry trends - Underwriting results

- Calendar year combined ratios for the industry have shown a steady decrease from 2011 to 2018, with a slight bounce back up in the last two years.
- Since 2013, AY combined ratio has been relatively stable, with larger gap between CY and AY ratios coming from favorable development on prior years.

Industry trends - Underwriting results

- Low combined ratios continue despite market becoming more competitive over the last 10 years, both in terms of market share and in terms of premium rates.
- The market share of Top 5 writers and Top 10 writers has decreased from 2011 to 2016, stable from 2016 onwards.
- Consistent with the decrease in average rate per \$100 of payroll in California, NCCI States have also seen an average decrease of almost 40% in premium rate levels between 2013 and 2021.

Source: NAIC Annual Statement – IEE market share

Industry trends - Reserve development

- 2020 was 8th consecutive year of favorable WC reserve development for the industry.
- Between 12/31/2016 and 12/31/2020, over \$27B of reserve releases.
- NCCI estimates that YE2020 reserves for private carriers are \$14B redundant, compared to \$10B redundant at YE2019, and \$5B *deficient* at YE2016.
- Monoline WC writers (private carriers and state funds) have been more consistent in the last 12 years in releasing loss reserves.

Industry trends - Reserve development

Industry trends - Current vs historical reserve levels

- Current level of reserves (Case+IBNR) recorded by industry consistent with levels noted at YE 2018 and 2019.
- After restating those ٠ averages with current ultimates on more mature years, significant trend would be needed to reach current average reserve levels held on recent years
- However, acceleration in closure rates can impact average unpaid per open.
- Sudden shift in medical inflation could bring increase in mature and more recent years.

2016

2017

Average unpaid loss & DCC (case + IBNR) per open claim by Accident Year

Source: NAIC Schedule P data – P&C industry

Industry trends - Low medical inflation, how much longer?

Source data: NCCI 2021 State of the Line Guide

- Medical claim severity has grown at historically low levels since 2010.
- Growth from AY 2010 to AY 2020 in line with Personal Healthcare price index, compared to almost twice the growth rate between AY 2000 and AY 2010
- Increase in medical inflation would impact new claims and existing outstanding claims, with leveraged impact on lifetime medical claims. Fast shift could largely offset current perceived industry reserve redundancy.
- Medical inflation for WC can result from price increases, changes in utilization, legislative changes, etc.

Industry trends - Medical inflation impact

	Payme	ent year							Payment year							
Accident year	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	 <u>Ult-2</u>	<u>Ult-1</u>	Ult	Accident year	<u>2021</u>	<u>2022</u>	<u>2023</u>	2024		<u>Ult-2</u>	<u>Ult-1</u>	<u>Ult</u>
Prior								Prior								
2011								2011								
2012								2012								
2013								2013								
2014								2014								
2015								2015								
2016								2016								
2017								2017								
2018								2018								
2019								2019								
2020								2020								
Total								Total	+X%-							\rightarrow

- If medical costs on unpaid claims start growing at an annual rate of x% above levels contemplated in loss reserves, impact on reserves could be significant given long payment tail.
- Sustained 1% increase in medical inflation could increase outstanding claim payments by 5-6%.

Industry trends - COVID-19 / EBUB

EBUB ("Earned but Unbilled")

- A financial statement estimate (generally an asset) to reflect that WC premiums are initially estimated based on payroll projections, but are adjusted at payroll audit, after expiration of the policy.
- During periods of economic growth, payroll forecasts used in the determination of written premium will often underestimate actual ultimate payroll. However, during periods of economic decline, initial estimates may overestimate actuals/ultimate levels, which may lead to premium reimbursement.
- Impact of a downturn typically varies by industry group (Great recession vs COVID)
- At the start of COVID, EBUB estimates decreased significantly in reaction to rise in unemployment and "lockdowns".
 - Most of the policies in-force were written during a period of sustained economic growth
 - New policies written in subsequent quarters factored in economic situation and may have been conservative due to unknown pace of vaccination / return to normal, etc
 - Will subsequent variants create additional impacts on expected payroll?

Impact on actuarial loss reserves estimates ?

- Reserving actuary needs to understand how payroll audit adjustments/premium refunds are processed by insurer. Not all companies are adjusting historical earned exposures retroactively.
- For example, if payroll/premium adjustments not reallocated to the original "earned" year, 2020 vs 2021 exposures may be inconsistent, with 2020 overestimated and 2021 getting hit by the exposure decrease related to 2020 policies.

