

Your Actuarial Report – Risk Management Financing for Today and Beyond



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This document was designed for discussion purposes only and is not intended to present detailed information on our analysis and findings. It is incomplete, and not intended to be used, without the accompanying oral presentation and discussion.



A little bit about us...



Bickmore
Actuarial

NINA
"THE MATH-MAGICIAN"
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GAMES: Cards Against Humanity & Quelf



Raised in Moscow with no TV and little parental supervision, Nina trained as a gymnast until growth spurts forced her to swap leotards for math books. She went on to earn a degree in applied mathematics. Nina's actuarial career began when she moved to the US 20 years ago. She's been helping clients analyze and quantify risk ever since.

Bickmore Actuarial's **PROPERTY & CASUALTY ACTUARIAL SERVICES** practice evaluates and measures financial risks of self-insured programs. Actuaries quantify claim liabilities, recommend funding levels, cost allocations and much more!

QUIZ

WHAT SUBJECT WAS NINA'S WORST NIGHTMARE IN SCHOOL?

CAJPA 2019

ANSWER: ENGLISH



A little bit about us...



Heather Thomson CPA

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Born and raised in Iowa, Heather was in line to take over the family farm until one fateful day, a huge tornado came through and destroyed it. So, she joined the Navy to see the world and wound up becoming a CPA. Her finance career began over two decades ago, and she's been helping entities report, budget, and project their numbers ever since!

HT CPA Service's Risk Management Finance Consulting practice provides services that supplement existing staff's knowledge needs. CPAs interpret actuarial data for budgeting/projections, cost allocations, GASB accounting, and more!

QUIZ

HOW MANY BOOKS ARE IN HEATHER'S COLLECTION?

ANSWER: OVER 3,300!



About 2,500 of them.....



Learning Objectives and Takeaways

List of primary objectives:

- Actuary vs. CFO – Differences in opinions and points of view.
- Actuarial 101 – a quick overview of lingo and methodologies.
- Actuarial report profile and key metrics.
- Budgeting – what info does your actuary needs?
- Risk financing for today and beyond.

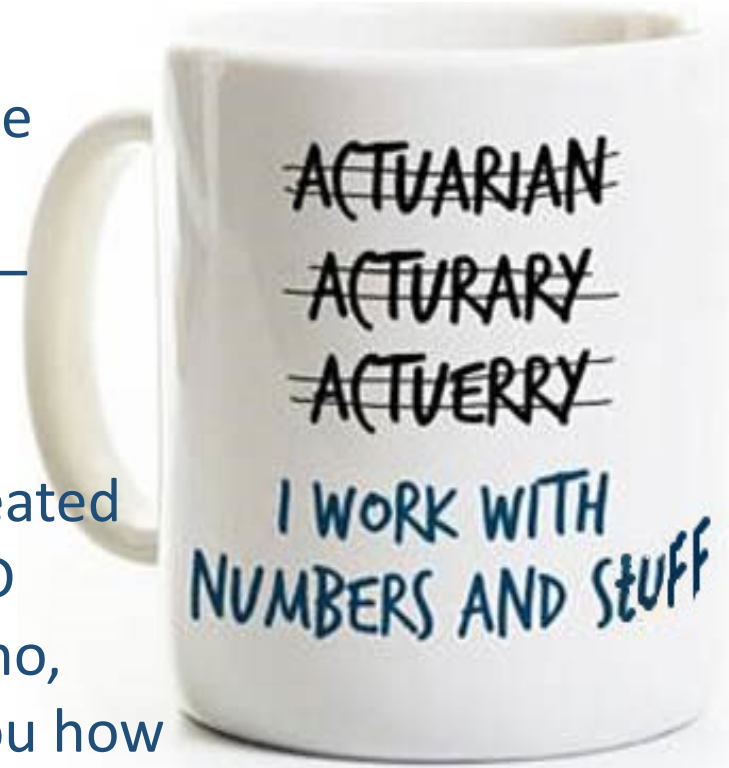
Presentation format:

- Presented in line with best practices
- Prepare your calculators and scratch paper – there will be math!
- Feel free to ask questions – we will only make fun of stupid ones.
- Have fun with us!



Actuaries – the strange breed...

- Historic rivals of accountants
 - Accountants: “Actuaries are accountants that can’t stand the excitement”
 - Actuaries: “Definition of a CPA – Can’t Pass Actuarial exams” 😊
- People that excel at exam-taking
- The ultimate introverts – we’ve created social distancing long before COVID
- A consulting actuary is a person who, when asked what time it is, tells you how to build a watch.



CFOs – the other numbers people...

- Historic rivals of Actuaries
 - Accountants: “Actuaries are accountants that can’t stand the excitement”
 - Actuaries: “Definition of a CPA – Can’t Pass Actuarial exams” 😊
- People that excel at puzzles
- The surprise extroverts – we only LOOK like introverts, but really enjoy getting out of the office and being with people
- A consulting CFO is a person who, when asked what time it is, shows you how to read a watch.





Why do you need an actuary?

You need an actuary to analyze insurance risks. A standard actuarial report usually contains 3 important pieces of information:

- ∞ Estimated **outstanding liabilities** (used in the annual statement on balance sheet);
- ∞ **Projected funding** for the next policy year (used in budgeting and on the income statements);
- ∞ Projected **cash flows** for the next fiscal year (used in budgeting).

The average report contains 70 to 90 pages of exhillirating reading materials.





Why do you need a CFO?

You need a CFO to translate actuarial calculations into amounts within your financials to aid in risk management financing decisions. 3 pieces of the standard actuarial report CFOs use are:

- ∞ Estimated **outstanding liabilities** (used to set the targeted ending fund balance as of a certain point in time);
- ∞ **Projected funding** for the next policy year (used to determine the amount to collect from entity segments to fund expenditures);
- ∞ Projected **cash flows** for the next fiscal year (used to assist in projecting end cash balances).

No-we do NOT read all 70 to 90 pages of the report.....



Actuarial reports and Budget – incorrect uses



Actuarial report – What the CFO wants out of it!

Outstanding liabilities: How much money is needed to close all claims that have been incurred, but not yet paid (approximate translation is “credit card bill”).

Projected funding: Ultimate cost of claims that will occur next policy year a.k.a. estimate of future spending (not payments!) on your virtual “credit card”.

Cash flows: Cost of claims to be paid during the next fiscal year.



Actuaries love data...

Data needed for an actuarial study:

- Losses (Paid, Incurred, Blue, Red,...)
- Exposures (Payroll, Vehicles, SIRs,...)
- Asset Info (Balance Sheet item)
- Budget Info (Income Statement, projected expenses)
- Shoe Sizes, Favorite Ice Cream
- Anything else that may be relevant to making loss estimates



Actuarial lingo – some fun terms

- Loss – Settlements/Judgments for Liability, Medical/Indemnity for WC
- ALAE – Allocated Loss Adjustment Expenses, consist primarily of legal fees (generally analyzed combined with Loss)
- ULAE – Unallocated Loss Adjustment Expenses, which consist primarily of claims administration expenses (generally analyzed separately)
- IBNR – Incurred, but not Reported (or Reserved)
- 4850 – Supplemental WC payments made for peace officers
- 5150 – Person is being held by peace officer because their mental state creates a danger to themselves or others, common among actuaries...



A Loss is a Loss is a Loss...

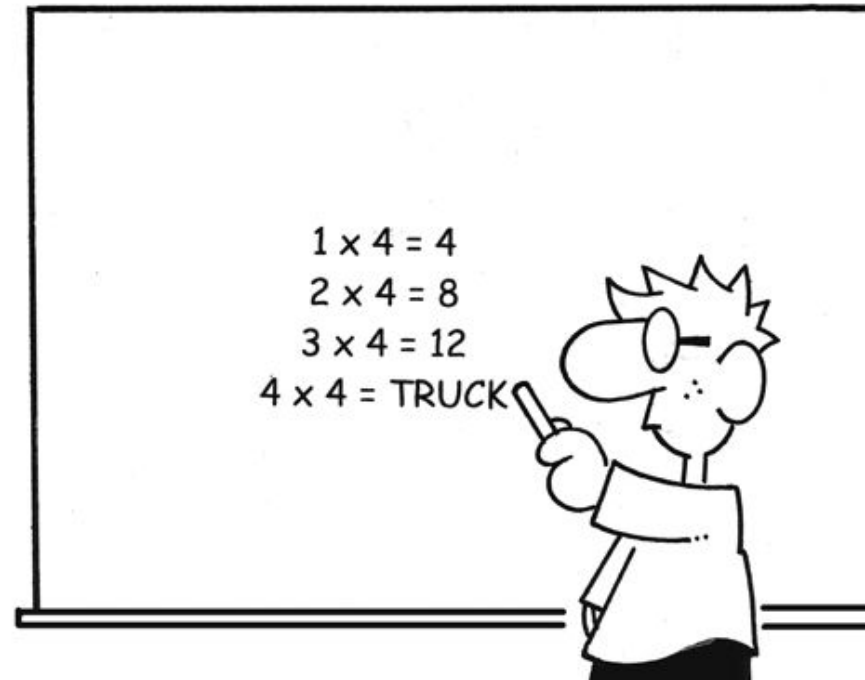
- **Paid Losses** – Amount no longer in your bank account
- **Case Reserves** – Amount unpaid on individual claims, set by claim adjusters
- **IBNR Reserves** – Amount made-up... I mean, calculated with the utmost precision, by the actuary
- **Incurred, or Reported = Paid + Case**
- **Ultimate = Paid + Case + IBNR = Incurred + IBNR**
- **Outstanding Liability = Ultimate – Paid = Case + IBNR**



QUIZ TIME!!!

What is IBNR?

- A. *Incurred But Not Real*
- B. *Insufferably Big Number*
- C. *Incurred But Not Reported*



Case vs. IBNR Reserves

- Case reserves are determined for individual claims based upon characteristics of the claim
- IBNR reserves are determined in total for all claims occurring in a single year based upon development of paid losses and case reserves over time
- Case reserves are a very important ingredient in determining the final IBNR reserves
- Consistently developed case reserves result in a more accurate estimate of IBNR reserves.





A little bit more lingo...

Confidence Levels

- Describe the degree to which funding supporting outstanding liabilities is likely to exceed the actual value of losses after all claims have been settled.
- Recognize the risk associated with a programs' largest liability – loss reserves
- Provide ability to tie current funding to surplus target
- Some states have confidence level minimums for pools (*for example, WC pools in Montana must have enough assets to cover outstanding liabilities at undiscounted 85% confidence level*).



Outstanding Liabilities

Net Claim Liabilities

The following tables present our conclusions regarding the XXX net claim liabilities.

Loss & LAE Claim Liabilities
As of 6/30/2020, Net of Reinsurance

| Dollars (\$000s) | Expected ¹ | ← Confidence Level → | | | | |
|-----------------------------------|-----------------------|----------------------|--------------|--------------|--------------|--------------|
| | | 70% | 75% | 80% | 85% | 90% |
| Loss & ALAE | 4,089 | 4,535 | 4,727 | 4,952 | 5,226 | 5,594 |
| <u>Claims Admin. (ULAE)</u> | <u>164</u> | <u>182</u> | <u>190</u> | <u>199</u> | <u>210</u> | <u>224</u> |
| Total Loss & LAE | 4,253 | 4,717 | 4,917 | 5,151 | 5,436 | 5,818 |
| <u>NPV Adjustment²</u> | <u>(319)</u> | <u>(354)</u> | <u>(369)</u> | <u>(386)</u> | <u>(408)</u> | <u>(436)</u> |
| Discounted Loss & LAE | 3,934 | 4,363 | 4,548 | 4,764 | 5,028 | 5,382 |
| Short Term ³ | 1,109 | 1,229 | 1,281 | 1,342 | 1,417 | 1,516 |
| Long Term ³ | 2,826 | 3,134 | 3,266 | 3,422 | 3,611 | 3,865 |

Loss & LAE Claim Liabilities
As of 6/30/2021, Net of Reinsurance

| Dollars (\$000s) | Expected ¹ | ← Confidence Level → | | | | |
|-----------------------------------|-----------------------|----------------------|--------------|--------------|--------------|--------------|
| | | 70% | 75% | 80% | 85% | 90% |
| Loss & ALAE | 4,036 | 4,475 | 4,665 | 4,887 | 5,157 | 5,521 |
| <u>Claims Admin. (ULAE)</u> | <u>173</u> | <u>192</u> | <u>200</u> | <u>210</u> | <u>222</u> | <u>237</u> |
| Total Loss & LAE | 4,209 | 4,668 | 4,866 | 5,097 | 5,379 | 5,758 |
| <u>NPV Adjustment²</u> | <u>(316)</u> | <u>(351)</u> | <u>(366)</u> | <u>(383)</u> | <u>(404)</u> | <u>(433)</u> |
| Discounted Loss & LAE | 3,893 | 4,317 | 4,500 | 4,714 | 4,975 | 5,325 |
| Short Term ³ | 1,097 | 1,217 | 1,268 | 1,329 | 1,402 | 1,501 |
| Long Term ³ | 2,795 | 3,100 | 3,231 | 3,385 | 3,573 | 3,824 |

¹ Expected values represent the “best actuarial” or “central” estimate.

² Net present value is based on an annual discount rate of 1.85%.

³ Short term liabilities are projected to be paid within 12 months of the accounting date. Long term liabilities are projected to be paid after 12 months.



Outstanding Liabilities

Funding Guidelines for Outstanding Liabilities at
June 30, 2021

| | |
|-----------------------------------------------------------------------------------------------------|--------------------|
| (A) Estimated Ultimate Losses Incurred through 6/30/21: (From Appendix G) | \$29,147,000 |
| (B) Estimated Paid Losses through 6/30/21: (From Appendix G) | 25,112,000 |
| (C) Estimated Liability for Claims Outstanding at 6/30/21: (From Appendix G) | <u>\$4,036,000</u> |
| (D) Estimated Liability for Outstanding Claims Administration Fees at 6/30/21: (From Appendix F) | 173,000 |
| (E) Total Outstanding Liability for Claims at 6/30/21: ((C) + (D)) | <u>\$4,209,000</u> |
| (F) Reserve Discount Factor (Based on a Discount Rate of 1.85%.): (Appendix I, Page 1, (H)) | 0.925 |
| (G) Discounted Outstanding Liability for Claims at 6/30/21: ((E) x (F)) | <u>\$3,893,000</u> |

| Confidence Level of Adequacy: | Marginally Acceptable 70% | 75% | Recommended 80% | 85% | Conservative 90% |
|---------------------------------------------------------|---------------------------------|--------------------|--------------------|--------------------|---------------------|
| (H) Confidence Level Factor: (From Appendix J) | 1.109 | 1.156 | 1.211 | 1.278 | 1.368 |
| (I) Margin for Adverse Experience: ((G) x [(H) - 1]) | 424,000 | 607,000 | 821,000 | 1,082,000 | 1,432,000 |
| (J) Total Required Assets at 6/30/21: ((G) + (I)) | <u>\$4,317,000</u> | <u>\$4,500,000</u> | <u>\$4,714,000</u> | <u>\$4,975,000</u> | <u>\$5,325,000</u> |



Methods of Ultimate Loss Estimation

- Loss Development Methods
- Exposure-Based Methods (a.k.a. Bornhuetter-Ferguson)
- Frequency-Severity Methods
- Actual vs. Expected Methods
- Just make-up a number, nobody reads actuarial reports anyway!





Loss Development

What is loss development?

- Loss development is the change in the paid in incurred values of loss over time as it “matures” and closes for its ultimate value.

Why do losses develop?

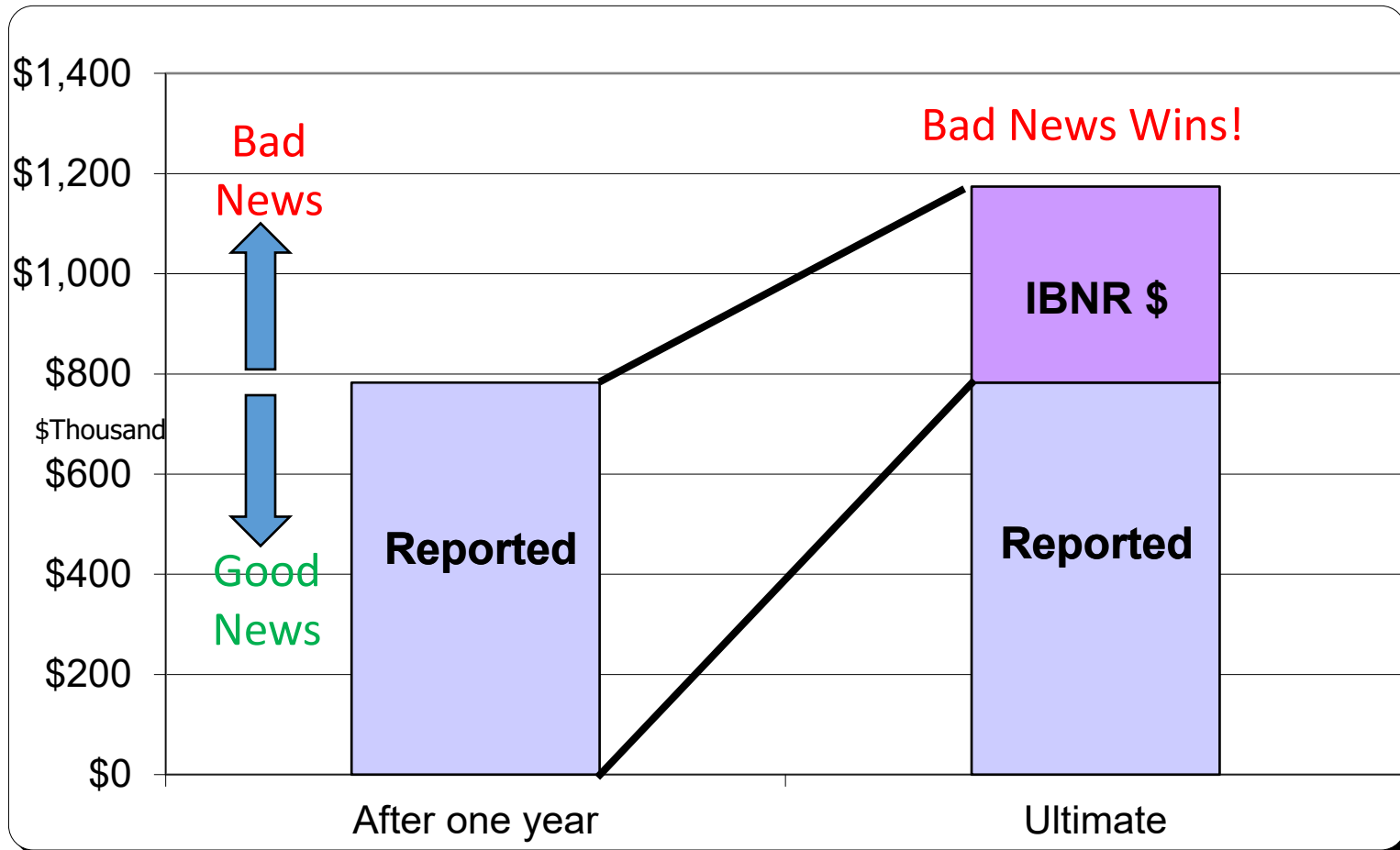
- Claims that have occurred but have not been reported.
- Claims that have been reported but increase or decrease in cost over time.
- These two are components of IBNR – Incurred but not Reported.

What loss development methods do actuaries employ?

- Actuaries review development of paid losses, incurred losses, case reserves, as well as ratios of paid to incurred losses and ALAE to loss.
- There are number of methods of estimation of loss development patterns starting with simple chain-ladder and ending with statistical curve fitting.



Loss Development



Projected Funding

Funding Projections

The following tables present our estimates of ultimate costs for the upcoming program years.

Projected Ultimate Costs
Fiscal Year 2020-21, SIR of \$500,000

| Dollars (\$000s) | Expected ¹ | Confidence Level | | | | |
|-----------------------------------|-----------------------|------------------|-------------|-------------|--------------|--------------|
| | | ← 70% | 75% | 80% | 85% | → 90% |
| Loss & ALAE | 1,475 | 1,733 | 1,854 | 1,997 | 2,176 | 2,418 |
| <u>Claims Admin. (ULAE)</u> | <u>93</u> | <u>109</u> | <u>117</u> | <u>126</u> | <u>137</u> | <u>152</u> |
| Total Loss & LAE | 1,568 | 1,843 | 1,971 | 2,123 | 2,313 | 2,570 |
| <u>NPV Adjustment²</u> | <u>(72)</u> | <u>(84)</u> | <u>(90)</u> | <u>(97)</u> | <u>(106)</u> | <u>(118)</u> |
| Discounted Loss & LAE | 1,496 | 1,758 | 1,881 | 2,026 | 2,207 | 2,453 |
| Total Funding Rate ³ | 1.387 | 1.629 | 1.743 | 1.878 | 2.045 | 2.273 |

Projected Ultimate Costs
Fiscal Year 2021-22, SIR of \$500,000

| Dollars (\$000s) | Expected ¹ | Confidence Level | | | | |
|-----------------------------------|-----------------------|------------------|-------------|-------------|--------------|--------------|
| | | ← 70% | 75% | 80% | 85% | → 90% |
| Loss & ALAE | 1,490 | 1,751 | 1,873 | 2,017 | 2,198 | 2,442 |
| <u>Claims Admin. (ULAE)</u> | <u>96</u> | <u>113</u> | <u>121</u> | <u>130</u> | <u>142</u> | <u>157</u> |
| Total Loss & LAE | 1,586 | 1,864 | 1,994 | 2,147 | 2,339 | 2,599 |
| <u>NPV Adjustment²</u> | <u>(73)</u> | <u>(85)</u> | <u>(91)</u> | <u>(98)</u> | <u>(107)</u> | <u>(119)</u> |
| Discounted Loss & LAE | 1,513 | 1,778 | 1,902 | 2,049 | 2,232 | 2,480 |
| Total Funding Rate ³ | 1.368 | 1.608 | 1.720 | 1.853 | 2.018 | 2.243 |

¹ Expected values represent the “best actuarial” or “central” estimate.

² Net present value is based on an annual discount rate of 1.85%.

³ Rate is per \$100 of payroll.



Projected Funding

Funding Options for Program Year 2020-2021 (SIR = \$500,000)

| | Dollar Amount | Payroll Rate | | | |
|----------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------|--------------------|--------------------|---------------------|
| (A) Estimated Ultimate Losses Incurred in Accident Year 2020-2021: (From Appendix G) | \$1,475,000 | \$1.367 | | | |
| (B) Estimated Claims Administration Fees Incurred in Accident Year 2020-2021: (From Exhibit 5, Page 1, (L)) | 93,000 | 0.086 | | | |
| (C) Total Claims Costs Incurred in Accident Year 2020-2021: ((A) + (B)) | <u>\$1,568,000</u> | <u>\$1.453</u> | | | |
| (D) Loss Discount Factor (Based on a Discount Rate of 1.85%.): (Appendix I, Page 2, (G)) | 0.954 | | | | |
| (E) Discounted Total Claims Costs Incurred in Accident Year 2020-2021: ((C) x (D)) | <u>\$1,496,000</u> | <u>\$1.387</u> | | | |
| | Marginally Acceptable 70% | 75% | Recommended 80% | 85% | Conservative 90% |
| (F) Confidence Level Factor: (From Appendix J) | 1.175 | 1.257 | 1.354 | 1.475 | 1.639 |
| (G) Margin for Adverse Experience: ((E) x [(F) - 1]) | 262,000 | 385,000 | 530,000 | 711,000 | 956,000 |
| (H) Recommended Funding in 2020-2021 for Claims Costs and Other Expenses: ((E) + (G)) | <u>\$1,758,000</u> | <u>\$1,881,000</u> | <u>\$2,026,000</u> | <u>\$2,207,000</u> | <u>\$2,453,000</u> |
| (I) Rate per \$100 of Payroll: ((H) / \$1,079,097) | \$1.629 | \$1.743 | \$1.878 | \$2.045 | \$2.273 |



Projected Funding

How the Actuary calculated/created the Projected Funding?

- Look at the historical ultimate losses and exposures adjusted and trended to the projection year.
- In general, actuaries perform majority of the loss analysis on losses limited to a “base” level (for example only first \$100,000).
- Calculate loss rates for the historical experience and calculate bunch of averages to determine projected base rate.
- Apply increased limit factors and trend to the base rate to calculate projected rate for claims limited to the retention.
- Multiply projected exposures by the projected rate to arrive at projected ultimate losses for the future year.



Projected Funding

Selection of Projected Limited Loss Rate and Projection of Program Losses and ULAE

| Accident Year | Ultimate Limited Losses (A) | Trend Factor (B) | Trended Limited Losses (C) | Trended Payroll (\$00) (D) | Trended Limited Loss Rate (E) |
|-------------------------------|-----------------------------|------------------|----------------------------|----------------------------|-------------------------------|
| Prior | \$0 | 0.838 | \$0 | \$0 | 0.000 |
| 2000-2001 | 784,000 | 0.824 | 646,000 | 839,000 | 0.770 |
| 2001-2002 | 855,000 | 0.795 | 680,000 | 862,000 | 0.788 |
| 2002-2003 | 528,000 | 0.782 | 413,000 | 866,000 | 0.477 |
| 2003-2004 | 827,000 | 0.797 | 659,000 | 903,000 | 0.730 |
| 2004-2005 | 1,238,000 | 0.813 | 1,007,000 | 898,000 | 1.121 |
| 2005-2006 | 818,000 | 0.826 | 676,000 | 946,000 | 0.714 |
| 2006-2007 | 1,242,000 | 0.843 | 1,047,000 | 934,000 | 1.121 |
| 2007-2008 | 968,000 | 0.854 | 826,000 | 1,002,000 | 0.825 |
| 2008-2009 | 933,000 | 0.867 | 809,000 | 967,000 | 0.837 |
| 2009-2010 | 628,000 | 0.883 | 555,000 | 936,000 | 0.592 |
| 2010-2011 | 1,317,000 | 0.897 | 1,182,000 | 941,000 | 1.256 |
| 2011-2012 | 1,265,000 | 0.911 | 1,152,000 | 904,000 | 1.274 |
| 2012-2013 | 1,141,000 | 0.929 | 1,060,000 | 866,000 | 1.224 |
| 2013-2014 | 570,000 | 0.943 | 537,000 | 857,000 | 0.627 |
| 2014-2015 | 945,000 | 0.957 | 905,000 | 845,000 | 1.071 |
| 2015-2016 | 376,000 | 0.970 | 365,000 | 840,000 | 0.435 |
| 2016-2017 | 835,000 | 0.978 | 816,000 | 938,000 | 0.870 |
| 2017-2018 | 788,000 | 0.999 | 787,000 | 964,000 | 0.817 |
| 2018-2019 | 1,095,000 | 1.011 | 1,107,000 | 993,000 | 1.115 |
| 2019-2020 | 1,138,000 | 1.027 | 1,168,000 | 990,000 | 1.180 |
| Totals | \$18,291,000 | | \$16,397,000 | \$18,290,000 | \$0.896 |
| 14/15-18/19 | 4,039,000 | | 3,980,000 | 4,579,000 | 0.869 |
| 17/18-19/20 | 3,020,000 | | 3,062,000 | 2,947,000 | 1.039 |
| | | | (F) Selected Limited Rate: | | \$1.065 |
| | | | Prior: | | \$1.100 |
| Program Year: | | 2020-2021 | 2021-2022 | 2022-2023 | |
| (G) Factor to SIR: | | 1.284 | 1.291 | 1.298 | |
| (H) Trend Factor: | | 1.000 | 0.980 | 0.960 | |
| (I) Program Rate: | | \$1.367 | \$1.347 | \$1.327 | |
| (J) Trended Payroll (\$00): | | 1,079,000 | 1,106,000 | 1,134,000 | |
| (K) Projected Program Losses: | | 1,475,000 | 1,490,000 | 1,504,000 | |
| (L) Projected ULAE: | | 93,000 | 96,000 | 101,000 | |
| (M) Projected Loss and ULAE: | | \$1,568,000 | \$1,586,000 | \$1,605,000 | |



Cash Flows

Payment and Reserve Forecast

| <u>Accident Year</u> | <u>As of</u> <u>6/30/2020</u> | <u>7/1/2020</u> <u>to</u> <u>6/30/2021</u> | <u>Calendar Period</u> | |
|------------------------------------|----------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| | | | <u>7/1/2021</u> <u>to</u> <u>6/30/2022</u> | <u>7/1/2022</u> <u>to</u> <u>6/30/2023</u> |
| 2019-2020 | | | | |
| Ultimate Loss | \$1,390,687 | \$1,390,687 | \$1,390,687 | \$1,390,687 |
| Paid in Calendar Period | - | 444,992 | 146,938 | 73,040 |
| Paid to Date | 445,905 | 890,897 | 1,037,835 | 1,110,875 |
| Outstanding Liability | 944,782 | 499,790 | 352,852 | 279,812 |
| 2020-2021 | | | | |
| Ultimate Loss | - | \$1,475,126 | \$1,475,126 | \$1,475,126 |
| Paid in Calendar Period | - | 452,864 | 481,485 | 158,988 |
| Paid to Date | - | 452,864 | 934,349 | 1,093,337 |
| Outstanding Liability | - | 1,022,262 | 540,777 | 381,789 |
| 2021-2022 | | | | |
| Ultimate Loss | - | - | \$1,489,876 | \$1,489,876 |
| Paid in Calendar Period | - | - | 457,392 | 486,300 |
| Paid to Date | - | - | 457,392 | 943,692 |
| Outstanding Liability | - | - | 1,032,484 | 546,184 |
| 2022-2023 | | | | |
| Ultimate Loss | - | - | - | \$1,504,446 |
| Paid in Calendar Period | - | - | - | 461,865 |
| Paid to Date | - | - | - | 461,865 |
| Outstanding Liability | - | - | - | 1,042,581 |
| Totals | | | | |
| Ultimate Loss | \$27,672,122 | \$29,147,248 | \$30,637,124 | \$32,141,570 |
| Paid in Calendar Period | - | 1,528,672 | 1,521,186 | 1,494,343 |
| Paid to Date | 23,582,980 | 25,111,652 | 26,632,838 | 28,127,181 |
| Outstanding Liability | 4,089,142 | 4,035,596 | 4,004,286 | 4,014,389 |
| Total Outstanding ULAE | 164,017 | 173,318 | 183,594 | 194,580 |
| Outstanding Liability plus ULAE | 4,253,159 | 4,208,914 | 4,187,880 | 4,208,969 |

Notes appear on the next page.



Cash Flows

How the Actuary calculated/created the cash flows?

- We apply loss development factors to calculate proportion of outstanding losses to be paid out during the next year.
- The factors are applied to each accident year separately, based on maturity of loss data.
- Once we calculate estimated payments are calculated, we aggregate these payments by fiscal year.



Risk Financing for Today and Beyond



Risk Financing for Today and Beyond

- Determine financial targets:
 - Target funding levels for outstanding liabilities
 - Estimate projected cash flows for the appropriate forecast period
 - Forecast future fixed costs (expenses, payroll, reinsurance costs)
 - Determine appropriate levels of self-insured retentions
- Determine Risk factors that could impact financial stability
 - Adverse loss emergence
 - Variability of investment income
 - Variability of budgeted expenses and other budget constraints
- Calculate Pro-Forma for the forecast period
 - Pro-forma usually mimics financial statements, such as balance sheet and income statement for future three to five years
 - Calculations should be done for the expected and adverse scenarios.



Illustration of 3 year projection

Actuary to provide forecasted schedules. Factors they should consider:

- 1) Projected funding for future years-Appendix L
 - 2) Insurance/Reinsurance historical trending
 - 3) Upcoming legislation for trending costs-SAM claims, WC presumptions, etc.
-
- Will recommend Pro Forma be presented in 3 ways: Favorable, Adverse and Expected



Illustration of 3-year projection

County Workers' Compensation Fund
 Five-Year Pro Forma Financial Information
 Expected Scenario as of 6/30/2020 Valuations

| | 2020 | 2021 | 2022 | 2023 | 2024 |
|--------------------------------------------------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Assets | | | | | |
| Investments (at fair market value) | 5,000,000 | 6,200,000 | 6,300,000 | 6,500,000 | 5,900,000 |
| Cash and Cash Equivalents | 3,600,000 | 3,100,000 | 3,400,000 | 3,750,000 | 3,100,000 |
| Total Assets: | <u>8,600,000</u> | <u>9,300,000</u> | <u>9,700,000</u> | <u>10,250,000</u> | <u>9,000,000</u> |
| Liabilities | | | | | |
| Provision for Loss & ALAE: Expected, NPV (at 1.85%) | 4,565,000 | 4,504,000 | 4,577,000 | 4,615,000 | 4,674,000 |
| Unallocated Loss Adjustment Expenses (ULAE): Expected, NPV (at 1.85%) | 199,000 | 210,000 | 223,000 | 235,000 | 246,000 |
| Other | | | | | |
| Accrued Expenses | 1,500,000 | 1,550,000 | 156,000 | 1,400,000 | 130,000 |
| Total Liabilities: | <u>6,264,000</u> | <u>6,264,000</u> | <u>4,956,000</u> | <u>6,250,000</u> | <u>5,050,000</u> |
| Net Position | | | | | |
| Net investment in capital assets | 2,336,000 | 3,036,000 | 4,744,000 | 4,000,000 | 3,950,000 |
| Total net position: | <u>\$ 2,336,000</u> | <u>\$ 3,036,000</u> | <u>\$ 4,744,000</u> | <u>\$ 4,000,000</u> | <u>\$ 3,950,000</u> |
| Net Claim Liabilities | 4,764,000 | 4,714,000 | 4,800,000 | 4,850,000 | 4,920,000 |
| Confidence Level | 80% | 80% | 80% | 80% | 80% |



Illustration of 3-year projection

County Workers' Compensation Fund
 Five-Year Pro Forma Financial Information
 Expected Scenario as of 6/30/2020 Valuations

| | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Revenues | | | | | |
| Contributions | 2,500,000 | 2,672,500 | 3,740,230 | 1,583,531 | 2,632,663 |
| Investment earnings | 566,000 | 560,000 | 570,000 | 580,000 | 590,000 |
| Total revenues | <u>3,066,000</u> | <u>3,232,500</u> | <u>4,310,230</u> | <u>2,163,531</u> | <u>3,222,663</u> |
| Expenses | | | | | |
| Allocated costs | 250,000 | 270,000 | 310,000 | 350,000 | 410,000 |
| Claim costs | 2,000,000 | 2,026,000 | 2,049,000 | 2,253,900 | 2,479,290 |
| Insurance | 460,000 | 506,500 | 553,230 | 653,631 | 793,373 |
| Total expenses | <u>2,460,000</u> | <u>2,532,500</u> | <u>2,602,230</u> | <u>2,907,531</u> | <u>3,272,663</u> |
| Change in net position | 606,000 | 700,000 | 1,708,000 | (744,000) | (50,000) |
| Net Position, Beginning of Year | 1,730,000 | 2,336,000 | 3,036,000 | 4,744,000 | 4,000,000 |
| Net Position, End of Year | <u>\$ 2,336,000</u> | <u>\$ 3,036,000</u> | <u>\$ 4,744,000</u> | <u>\$ 4,000,000</u> | <u>\$ 3,950,000</u> |
| Contribution % change | | 7% | 40% | -58% | 66% |



Discussion on Projections presented

- What is missing?
- Adjustments needed for?
- What direction is funding heading?



Discussion on Projections presented

Appendix L

City of Sample - Workers' Compensation

Estimated Total Assets as of 6/30/23

| | |
|------------------------------------------------------|--------------------|
| (A) <u>Total Assets as of 6/30/22:</u> | \$6,801,000 |
| (B) <u>Total Income to Fund during 2022-2023</u> | |
| Contributions: | \$5,835,000 |
| Interest: | 0 |
| Other: | 0 |
| Total Income: | <u>\$5,835,000</u> |
| (C) <u>Total Payments from Fund during 2022-2023</u> | |
| Loss and ALAE: | \$4,152,000 |
| Additional Allocated Loss Adjustment Expense: | 0 |
| In-House Unallocated Loss Adjustment Expense: | 0 |
| Fees to Outside Administrator (TPA): | 706,000 |
| Excess Insurance: | 977,000 |
| Other: | 0 |
| Total Payments: | <u>\$5,835,000</u> |
| (D) <u>Estimated Total Assets as of 6/30/23:</u> | \$6,801,000 |

Notes:

- (A) Provided by the City.
- (B) Provided by the City.
- (C) Provided by the City.
- (D) (A) + (B) - (C).



Recap-What questions were answered??

- What are the differences between an Actuary and a CFO?
- Actuarial 101 – Provided some glossary terms and information on various methodologies
- What does my Actuary need to prepare the actuarial report?
- What does the CFO need out of the actuarial report for budgets?
- What are some key metrics to understand about claims?
- How do I start the process of financing risk not just for next year but into the future as well?



More Questions?? How to reach us!

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