Overview

- This updates our prior study by adding five more years of experience

- Losses are case incurred indemnity + medical

- Large deductible claims are excluded, unless otherwise noted

- Loss adjustment expenses are excluded
Excess Loss and Claim Count Emergence
Large Loss and Catastrophe “Call 31”

• Initiated to facilitate procedure for treating large losses in aggregate ratemaking

• Includes Accident Years 1984 and forward, valued at year-end 1998 and subsequent

• At each year-end valuation, all claims with total case incurred losses over $500K are reported

• Because claims may exceed $500K for only some year-end valuations, we don’t have a complete claims history and, therefore, can’t derive ground-up loss development
Trending Individual Claims

• Over time, trends in claim costs shift the relative size of a fixed attachment point compared to average claim size
  • $500K in 1984 dollars is much higher than $500K in 2014 dollars

• For example, if costs double over ten years, then development patterns today excess of $2M will be comparable to those excess of $1M ten years ago

• We compensate for this by trending individual claim amounts to Accident Year 2014 with a 5% annual inflationary trend
Initially Claims Above $5M Emerge Faster
Large Claim Counts Emergence
Percent of Large Claim Counts at 31 Years

Source: Call 31 data, Accident Years 1984–2013, Calendar Years 2000–2014
Individual claims trended to Accident Year 2014 using 5% trend
Based on data for the states where NCCI provides ratemaking services, excluding TX and WV
Loss Emergence Is Similar by Layer
Excess Case Incurred Loss Emergence
Percent of Excess Losses at 31 Years

Source: Call 31 data, Accident Years 1984–2013, Calendar Years 2000–2014
Individual claims trended to Accident Year 2014 using 5% trend
Based on data for the states where NCCI provides ratemaking services, excluding TX and WV
Individual Claim Development

Accident Years 2006 to 2009
Case Incurred Loss Development
Accident Years 2006–2009, Calendar Year 2010

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 2006–2009, Calendar Years 2010–2014

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 2006–2009, Calendar Years 2010–2014

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 2006–2009, Calendar Years 2010–2014

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 2006–2009, Calendar Years 2010–2014

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV

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Case Incurred Loss Development
Accident Years 2006–2009, Calendar Years 2010–2014

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
### Case Incurred Loss Development

**Accident Years 2006–2009, Reports 2–6**

<table>
<thead>
<tr>
<th>Loss Cohort</th>
<th>Avg. Dev't</th>
<th>Claim Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1M to $2M</td>
<td>8%</td>
<td>Open 90%</td>
</tr>
<tr>
<td>$2M to $3M</td>
<td>1%</td>
<td>Closed 10%</td>
</tr>
<tr>
<td>$3M to $5M</td>
<td>-1%</td>
<td></td>
</tr>
<tr>
<td>Above $5M</td>
<td>-6%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV

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Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6

Loss Cohort   Avg. Dev't   Claim Status
$1M to $2M    12%         Open 80%
$2M to $3M    2%          Closed 20%
$3M to $5M    -1%         
Above $5M     -13%        

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6

Loss Cohort | Avg. Dev't | Claim Status
-------------|------------|--------------
$1M to $2M  | 13%        | Open 71%     
$2M to $3M  | 2%         | Closed 29%   
$3M to $5M  | -3%        |              
Above $5M   | -19%       |              

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development

Accident Years 2006–2009, Reports 2–6
Sample of Five Claims Above $500K at Report 2

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Percentages shown are the cumulative changes in the ground-up dollar value of claims from the initial report
Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6
Claims Above $500K at Report 2

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Percentages shown are the cumulative changes in the ground-up dollar value of claims from the initial report
Based on 2,749 claims valued at $500K or more at each report shown

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Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6
Claims Above $500K at Report 2

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Percentages shown are the cumulative changes in the ground-up dollar value of claims from the initial report
Based on 2,749 claims valued at $500K or more at each report shown

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Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6
Claims Between $500K and $1M at Report 2

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Percentages shown are the cumulative changes in the ground-up dollar value of claims from the initial report
Based on 1,717 claims valued at $500K or more at each report shown
Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6
Claims Between $1M and $2M at Report 2

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Percentages shown are the cumulative changes in the ground-up dollar value of claims from the initial report
Based on 612 claims valued at $500K or more at each report shown

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Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6
Claims Between $2M and $3M at Report 2

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Percentages shown are the cumulative changes in the ground-up dollar value of claims from the initial report
Based on 188 claims valued at $500K or more at each report shown

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Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6
Claims Between $3M and $5M at Report 2

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Percentages shown are the cumulative changes in the ground-up dollar value of claims from the initial report
Based on 141 claims valued at $500K or more at each report shown

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Case Incurred Loss Development
Accident Years 2006–2009, Reports 2–6
Claims Above $5M at Report 2

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Percentages shown are the cumulative changes in the ground-up dollar value of claims from the initial report
Based on 91 claims valued at $500K or more at each report shown

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Individual Claim Development
Accident Years 1990 to 1995
Case Incurred Loss Development
Accident Years 1990–1995, Reports 11–20

Loss Cohort | Avg. Dev't | Claim Status
---|---|---
-$1$M to $2$M | 0% | Open 82%
-$2$M to $3$M | 0% | Closed 18%
-$3$M to $5$M | 0% |
Above $5$M | 0% |

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1990–1995, Reports 11–20

Loss Cohort

- $1M to $2M: 0%
- $2M to $3M: 1%
- $3M to $5M: 0%
- Above $5M: -3%

Avg. Dev't

- Open: 77%
- Closed: 23%

Initial Report Case Incurred Loss (Sorted by Rank)

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1990–1995, Reports 11–20

Loss Cohort | Avg. Dev’t | Claim Status
--- | --- | ---
$1M to $2M | 4% | Open 73%
$2M to $3M | 3% | Closed 27%
$3M to $5M | 2% |
Above $5M | -4% |

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1990–1995, Reports 11–20

Loss Cohort | Avg. Dev't |
---|---|
$1M to $2M | 5% |
$2M to $3M | 4% |
$3M to $5M | 6% |
Above $5M | -7% |

Claim Status
- Open 71%
- Closed 29%

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1990–1995, Reports 11–20

Loss Cohort Avg. Dev't Claim Status
$1M to $2M 8% Open 69%
$2M to $3M 3% Closed 31%
$3M to $5M 7%  
Above $5M -9%  

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1990–1995, Reports 11–20

Loss Cohort | Avg. Dev't | Claim Status
-------------|------------|--------------
$1M to $2M  | 8%         | Open 66%     
$2M to $3M  | 3%         | Closed 34%   
$3M to $5M  | 9%         |              
Above $5M   | -12%       |              

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1990–1995, Reports 11–20

Loss Cohort | Avg. Dev’t | Claim Status
-------------|------------|--------------
$1M to $2M  | 9%         | Open 62%     
$2M to $3M  | 4%         | Closed 38%   
$3M to $5M  | 11%        |              
Above $5M   | -15%       |              

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1990–1995, Reports 11–20

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1990–1995, Reports 11–20

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1990–1995, Reports 11–20

Loss Cohort       Avg. Dev't
$1M to $2M       11%
$2M to $3M       5%
$3M to $5M       15%
Above $5M        -13%

Claim Status
Open             55%
Closed           45%

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Individual Claim Development

Accident Years 1984 to 1989
Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26

Loss Cohort       Avg. Dev't
$1M to $2M      5%
$2M to $3M      1%
$3M to $5M      3%
Above $5M       -5%

Claim Status
Open        68%
Closed      32%

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV

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Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV

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Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26

Loss Cohort       Avg. Dev't  Claim Status
$1M to $2M        6%          Open 59%
$2M to $3M        -2%         Closed 41%
$3M to $5M        7%          
Above $5M         -9%          

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV

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Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26

Loss Cohort  | Avg. Dev't | Claim Status
-------------|------------|--------------
$1M to $2M  | 5%         | Open 56%     
$2M to $3M  | -1%        | Closed 44%   
$3M to $5M  | 10%        |              
Above $5M   | -7%        |              

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26

Loss Cohort | Avg. Dev’t | Claim Status
-------------|------------|--------------
$1M to $2M | 5%         | Open 52%     
$2M to $3M | 0%         | Closed       
$3M to $5M | 12%        |              
Above $5M  | -7%        |              

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26

Loss Cohort | Avg. Dev't | Claim Status
--- | --- | ---
$1M to $2M | 5% | Open 46%
$2M to $3M | 3% | Closed 54%
$3M to $5M | 14% |
Above $5M | -5% |

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26
Claims Between $3M and $5M at Report 17

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV
Percentages shown are the cumulative changes in the ground-up dollar value of claims from the initial report
Based on 83 claims valued at $500K or more at each report shown

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Case Incurred Loss Development
Accident Years 1984–1989, Reports 17–26
Claims Above $5M at Report 17

Source: Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV.
Percentages shown are the cumulative changes in the ground-up dollar value of claims from the initial report.
Based on 48 claims valued at $500K or more at each report shown.
### Average Development and Claim Counts

**Grouped by Size of Loss at Initial Report**

<table>
<thead>
<tr>
<th>Accident Years</th>
<th>Statistic</th>
<th>&lt; $1M</th>
<th>$1M to $2M</th>
<th>$2M to $3M</th>
<th>$3M to $5M</th>
<th>$5M +</th>
<th>All Claims</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006 to 2009</td>
<td>Avg Dev't</td>
<td>22%</td>
<td>14%</td>
<td>4%</td>
<td>-8%</td>
<td>-21%</td>
<td>6%</td>
</tr>
<tr>
<td>2nd to 6th</td>
<td># of Claims</td>
<td>1,717</td>
<td>612</td>
<td>188</td>
<td>141</td>
<td>91</td>
<td>2,749</td>
</tr>
<tr>
<td>2001 to 2005</td>
<td>Avg Dev't</td>
<td>37%</td>
<td>16%</td>
<td>7%</td>
<td>-9%</td>
<td>-21%</td>
<td>8%</td>
</tr>
<tr>
<td>2nd to 10th</td>
<td># of Claims</td>
<td>1,012</td>
<td>494</td>
<td>164</td>
<td>122</td>
<td>77</td>
<td>1,869</td>
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<tr>
<td>1996 to 2000</td>
<td>Avg Dev't</td>
<td>30%</td>
<td>7%</td>
<td>1%</td>
<td>-3%</td>
<td>-23%</td>
<td>9%</td>
</tr>
<tr>
<td>5th to 15th</td>
<td># of Claims</td>
<td>1,201</td>
<td>398</td>
<td>104</td>
<td>81</td>
<td>44</td>
<td>1,828</td>
</tr>
<tr>
<td>1990 to 1995</td>
<td>Avg Dev't</td>
<td>20%</td>
<td>11%</td>
<td>5%</td>
<td>15%</td>
<td>-13%</td>
<td>12%</td>
</tr>
<tr>
<td>11th to 20th</td>
<td># of Claims</td>
<td>2,105</td>
<td>537</td>
<td>146</td>
<td>93</td>
<td>51</td>
<td>2,932</td>
</tr>
<tr>
<td>1984 to 1989</td>
<td>Avg Dev't</td>
<td>15%</td>
<td>5%</td>
<td>3%</td>
<td>14%</td>
<td>-5%</td>
<td>9%</td>
</tr>
<tr>
<td>17th to 26th</td>
<td># of Claims</td>
<td>2,493</td>
<td>682</td>
<td>141</td>
<td>83</td>
<td>48</td>
<td>3,447</td>
</tr>
</tbody>
</table>

**Source:** Call 31 data for the states where NCCI provides ratemaking services, excluding TX and WV

Average development is the percentage change in the ground-up dollar value of the cohort of claims from the initial report to the final report.

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Comparisons of Excess Loss Development Factors
Impact of Large Deductible Policies in Florida
5% Trend Rate

Source: Call 31 data for Florida, Accident Years 2000–2013, Calendar Years 2000–2014
### Sensitivity of Excess Development to Trend Selection
#### Comparison of 3% and 5% Trend Rate

<table>
<thead>
<tr>
<th>Layers</th>
<th>Trend Rate</th>
<th>Trend Rate</th>
<th>Trend Rate</th>
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<tbody>
<tr>
<td></td>
<td>3%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>1st to 31st</td>
<td>1st to 16th</td>
<td>16th to 31st</td>
</tr>
<tr>
<td>XS of $2M</td>
<td>4.18</td>
<td>4.56</td>
<td>2.95</td>
</tr>
<tr>
<td>XS of $3M</td>
<td>4.10</td>
<td>4.40</td>
<td>2.86</td>
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<tr>
<td>XS of $4M</td>
<td>4.14</td>
<td>4.32</td>
<td>2.87</td>
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<tr>
<td>XS of $5M</td>
<td>4.22</td>
<td>4.30</td>
<td>2.90</td>
</tr>
<tr>
<td>XS of $7.5M</td>
<td>4.62</td>
<td>4.46</td>
<td>2.97</td>
</tr>
<tr>
<td>XS of $10M</td>
<td>4.89</td>
<td>4.56</td>
<td>2.83</td>
</tr>
</tbody>
</table>

Source: Call 31 data, Accident Years 1984–2013, Calendar Years 2000–2014
Individual claims trended to Accident Year 2014 using 3% and 5% trend
Based on data for the states where NCCI provides ratemaking services, excluding TX and WV
## Excess Development Changes Over Time
### Comparison of Research Update 2011 vs. 2016

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st to 26th</td>
<td>11th to 26th</td>
<td>26th to 31st</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XS of $2M</td>
<td>4.71</td>
<td>4.39</td>
<td>1.85</td>
<td>1.73</td>
<td>1.04</td>
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<td>XS of $3M</td>
<td>4.45</td>
<td>4.26</td>
<td>1.83</td>
<td>1.73</td>
<td>1.03</td>
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<td>XS of $4M</td>
<td>4.33</td>
<td>4.21</td>
<td>1.81</td>
<td>1.72</td>
<td>1.03</td>
</tr>
<tr>
<td>XS of $5M</td>
<td>4.30</td>
<td>4.19</td>
<td>1.82</td>
<td>1.72</td>
<td>1.03</td>
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<tr>
<td>XS of $7.5M</td>
<td>4.38</td>
<td>4.37</td>
<td>1.89</td>
<td>1.74</td>
<td>1.02</td>
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<tr>
<td>XS of $10M</td>
<td>4.36</td>
<td>4.50</td>
<td>1.99</td>
<td>1.80</td>
<td>1.01</td>
</tr>
</tbody>
</table>

Source: Call 31 data, Based on data for the states where NCCI provides ratemaking services, excluding TX and WV
2016 Research: Accident Years 1984–2013, Calendar Years 2000–2014, 5% trend, losses trended from AY to 2014
Conclusion
Summary

• Claims less than $3M generally develop upward, while claims over $5M generally develop downward

• Claims between $3M and $5M generally develop:
  • Downward during the early report periods
  • Upward during the late report periods

• The most recent calendar years suggest excess loss development continues beyond 26 reports
Appendix