UW CYCLE ANALYSIS

- 2009 Casualty results
- Analysis of Casualty trends and relationships
  - Premiums and price
  - AY and Cal Year results
  - Reserves and Cash Flow
- Lines of business
  - Workers Compensation
  - Other Liability – Occurrence

UW CYCLE - DRIVERS

Casualty Market

- Pricing Competition
  - Pricing responds to Calendar Year results
  - Accident Year results ultimately reflect pricing
  - Ultimate AY results affect Cal Yr results – cyclical
    - aka reserve development

- Loss Trends
  - Loss trends reflect economic, social, and legal issues – frequency/severity
  - Pricing response lags loss changes – cyclical
  - If losses static, UW cycle dominated by pricing

- Economic Environment
  - Capital, asset, interest, and inflation changes important, but secondary issues
  - Casualty pricing does not appear to be ROE based
  - However, watch UW cash flows – cyclical
UW CYCLE - PHASES
Casualty Market

<table>
<thead>
<tr>
<th>Unprofitable Hard</th>
<th>Unprofitable Soft</th>
<th>Profitable Hard</th>
<th>Profitable Soft</th>
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<tr>
<td>* Acc/Yr L/R</td>
<td>* Cal/Yr L/R</td>
<td>* AY Ult vs Orig</td>
<td>* Indicated Reserve Development</td>
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<td>* Pricing Level</td>
<td>* Cal/Ult/L/R</td>
<td>* AY L/R</td>
<td>* Reserves Development</td>
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<td>* UW Cash Flow</td>
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Position in Cycle 2009 year-end

UW CYCLE - ISSUES
Casualty Market

**Pricing Competition**
- Recent profitable Calendar Year results have driven significant price decreases
- Price level still declining
- Accident year results have "bottomed out", and appear to becoming inadequate
- Calendar years will soon turn unfavorable
  - Reserve position worsening
  - UW cash flows negative and deteriorating
  > Pricing near turning point?

**Loss Trends**
- Benign for over a decade
- Moderate severity trends
- Declining frequency
- Reform gains under pressure in various states
- Possible return of inflation
- Economic recovery
- Monetary policy
- Calendar year implications
- Pressure on AY results
- Reserves reflect implicit historical inflation rate

**Economic Environment**
- Industry emerged from recent turmoil relatively unscathed
- Watch treasury yields
- Pricing did not respond to increase in capital costs
- Need to bolster liquidity
- Will insurers compete to generate cash?
- Business cycle downturn reducing policies
- Will insurers compete to cover fixed costs?

WORKERS COMPENSATION
WORKERS COMPENSATION
Premium & Price

Price = WP / Payroll

- National exposure from Bureau of Labor Statistics
- 2009 slight payroll decline
- Historical cycles:
  - Prior peak in 1991
  - Soft cycle to 2000
  - Peak in 2005
  - Soften to 2009
  - Slightly lower price decrease in 2009

WORKERS COMPENSATION
Ceded Premium & Utilization

Ceded utilization also tied to UW cycle
- Increases in hard market
- Decreases in soft market
- Reinsurance may prove valuable going forward
- Pricing uncertain
- AY’s deteriorating
- Loss trends upick potential

WORKERS COMPENSATION
Acc Yr Gross, Ceded, Net Results

Ceded L/R’s follow same cycle as gross L/R
- More volatile
- During inadequate soft cycles, ceded business fares significantly worse
- During other parts of cycle, slightly better
- Excess ceded business generally has low expenses
**WORKERS COMPENSATION**

**Accident Year Loss Development**

- Original L/R’s stable over adjacent time periods
- Cyclical Ultimate L/R’s develop up to +/- 25pts
- Recent AY loss ratios appear under booked
- Actuarial models not fully reflecting price deterioration
- Indicated existing reserve deficiencies
- Est. $4.5B industry-wide as of 2008

**Calendar Year Development**

- Calendar Year results follow lagged Accident Year results
- Cal Year results recently less volatile than Acc Year results
- Timely pricing change in 2000
- 2009 deteriorating
- Priors yr adverse development
- Recent 10 AYs’ showing booked improvement

**Acc Yr Premium & Loss Trends**

- Acc Year results move inversely with pricing
- Pricing changes cause AY results not vice versa
- Losses trends driven from 1985-1995
- Since then, cycle driven by price competition
- Recent trends flat
- Investigate freq / severity trends
- Classes, states
- Potential threats
- Neg freq dissipates
- Reform roll-back
WORKERS COMPENSATION
Pricing vs. Calendar Year Results

- Pricing follows Calendar Year results
- One year lag in pricing response
- Loss and economic trends can obscure softening continued in 2009 but decelerated
- Uptick in loss ratio may imply coming end of soft market
- Forecasting pricing depends on Calendar Year projections
- Indicated reserve position is key

WORKERS COMPENSATION
Reserve Position & UW Cash Flow

Industry Schedule P data can be evaluated to estimate indicated reserve position
- Conning Research reports reserve deficiency as of 2008 (2009 indications mixed to flat)
- Past indications in line with subsequent development with lagged response to loss/price trend changes

UW Cash Flow appears to be an early indicator of future reserve development
- Price change are correlated with unrecognized reserve weakening
  - If pricing is weak, reserves generally inadequate
  - Paid losses rise relative to WP
- Reverse is true as well
- Cash flow deteriorating

OTHER LIABILITY
Occurrence Policies
OTHER LIABILITY (Occ.)
Premium & Price

Price = WP / GDP
- Industry measure of exposures
- Historical cycles
  - Soft cycle to 2000
  - Peak in 2003
  - Soffen continuing through 2009
- No current "hidden hard market"
  - Exposures down due to economy
  - Pricing still down

OTHER LIABILITY (Occ.)
Ceded Premium & Utilization

Ceded utilization also tied to UW cycle
- Increases in hard market
- Decreases in soft market
- Reinsurance may prove valuable going forward
- Pricing uncertain
- AY’s deteriorating
- Loss trends uptick potential

OTHER LIABILITY (Occ.)
Acc Yr Gross, Ceded, Net Results

Ceded L/R’s follow same cycle as gross L/R
- More volatile
- During inadequate soft cycles, ceded business fares significantly worse
- During other parts of cycle slightly better
- Excess ceded business generally has low expenses
OTHER LIABILITY (Occ.)
Accident Year Loss Development

Original L/R's stable over adjacent time periods
- 2001 WTC impact
- Cyclical Ultimate L/R's develop up to +/- 25pts

Recent AY loss ratios appear conservative
- Actuarial models not fully reflecting loss improvement
- Implied existing reserve redundancies
- Est. $4.9B industry-wide as of 2009

OTHER LIABILITY (Occ.)
Calendar Year Development

Calendar Year results follow lagged Accident Year results
- Cal Year results recently less volatile than Acc Year results
- Timely pricing change in 2000
- 2009 deteriorating favorable development booked in 2009 excl. 1999 and prior AYs
- Favorable development booked in 2009 excl. 1999 and prior AYs
- Recent AYs' showing booked improvement

OTHER LIABILITY (Occ.)
Acc Yr Premium & Loss Trends

Acc Year results move inversely with pricing
- Pricing changes cause AY results not vice versa
- Losses trends volatile through 2000, with spike in 1998
- Recent trends moderate
- Investigate freq / severity trends
- Classes, states
- Potential threats
- Neg freq dissipates
- Reform roll-back
Reserve Position & UW Cash Flow

Pricing vs. Calendar Year Results

- Softening continued in 2009 at same rate as 2008
- Uptick in loss ratio may imply bottom of soft market
- Forecasting pricing depends of Calendar Year projections
  - Indicated reserve position is key

OTHER LIABILITY (Occ.)

Reserve Position & UW Cash Flow

Industry Schedule P data can be evaluated to estimate indicated reserve position
- Conning reports reserve redundancy as of 2008 (2009 Willis estimate)
- Past indications in line with subsequent development with lagged response to loss/price trend changes

UW Cash Flow appears to be an early indicator of future reserve development
- Price change are correlated with unrecognized reserve weakening
  - If pricing is weak, reserves generally inadequate
  - Paid losses rise relative to WP
  - Reverse is true as well
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OTHER LIABILITY (Occ.)

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