GUY CARPENTER

Cycles: Why and What to Do

CAGNY Spring 2012

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Agenda

- Nobody Plans to Fail – aka The Reserving Cycle IS the Underwriting Cycle
- Intellectual Property Franchise – aka Not That Fungible
- Sparks and Prairie Fires – aka We Know Darn Well What is Happening
- Behavioral Corporate Finance – aka Why We Cannot Make the Right Decision
- Three Operational Changes We Can Try
- Q & A

Underwriting Cycle Management

…is not complicated…

…it’s difficult

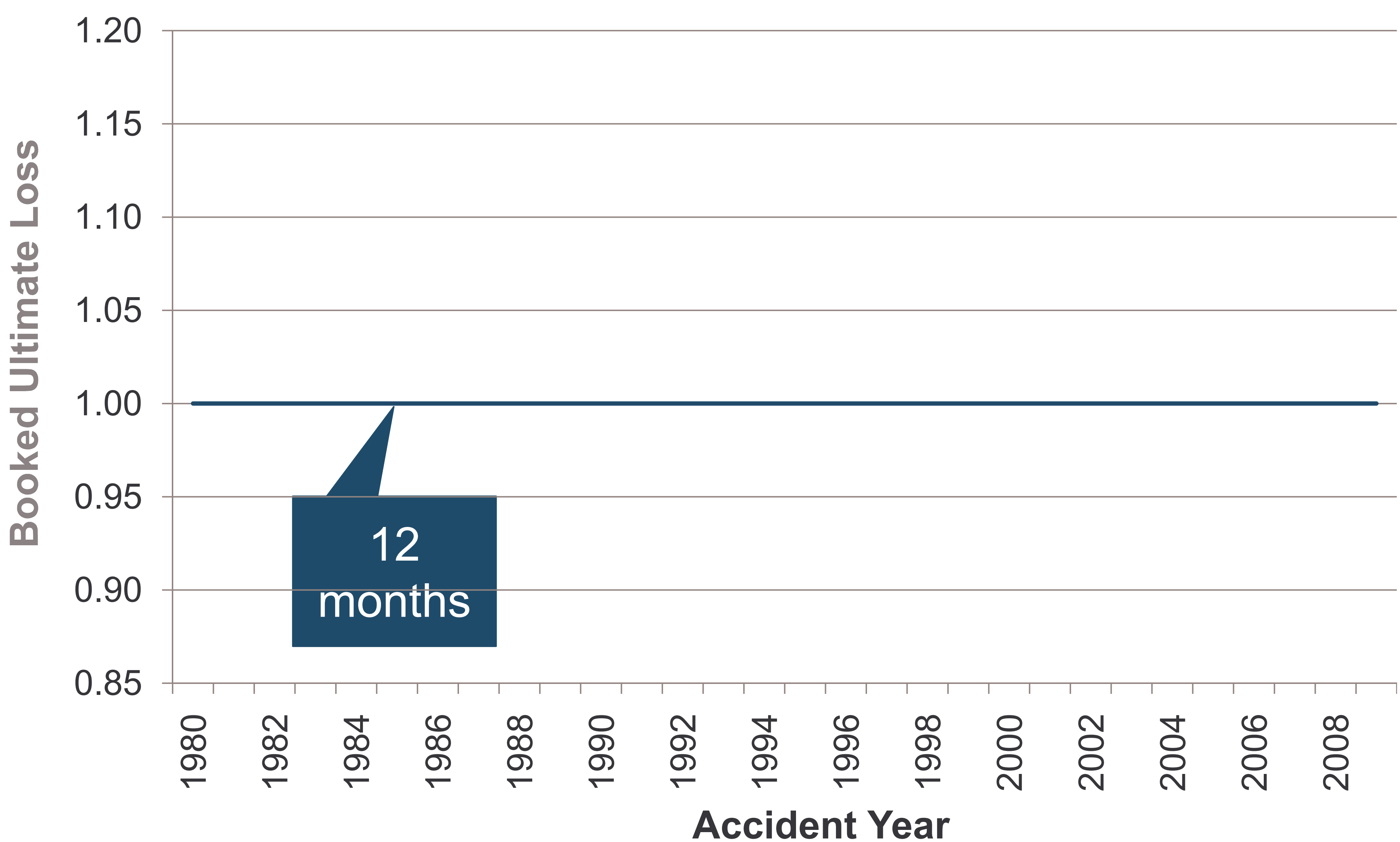
1) Nobody Plans to Fail

The Reserving Cycle IS The Underwriting Cycle

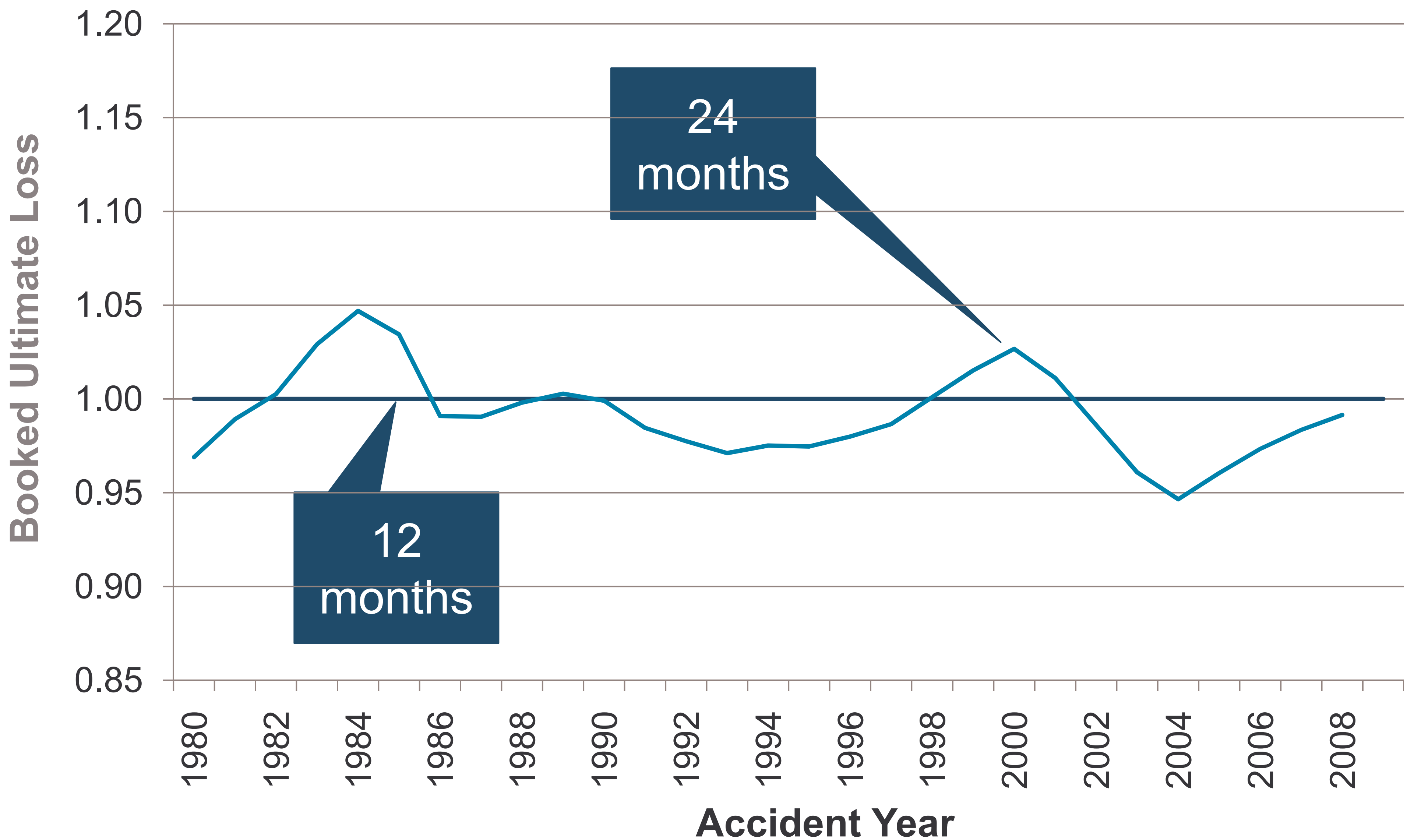
Face Facts

- Given:
  - Payment pattern
  - Investment yield
  - Expense loads
  - Any number of capital allocation formulas
- There is a SMALL RANGE of tolerable Initial Loss Ratios (ILR’s)
- Evidence:
  - 12-month reported LR CV for US Industry, all Lines = 3%

U.S. Reserve Cycle



U.S. Reserve Cycle



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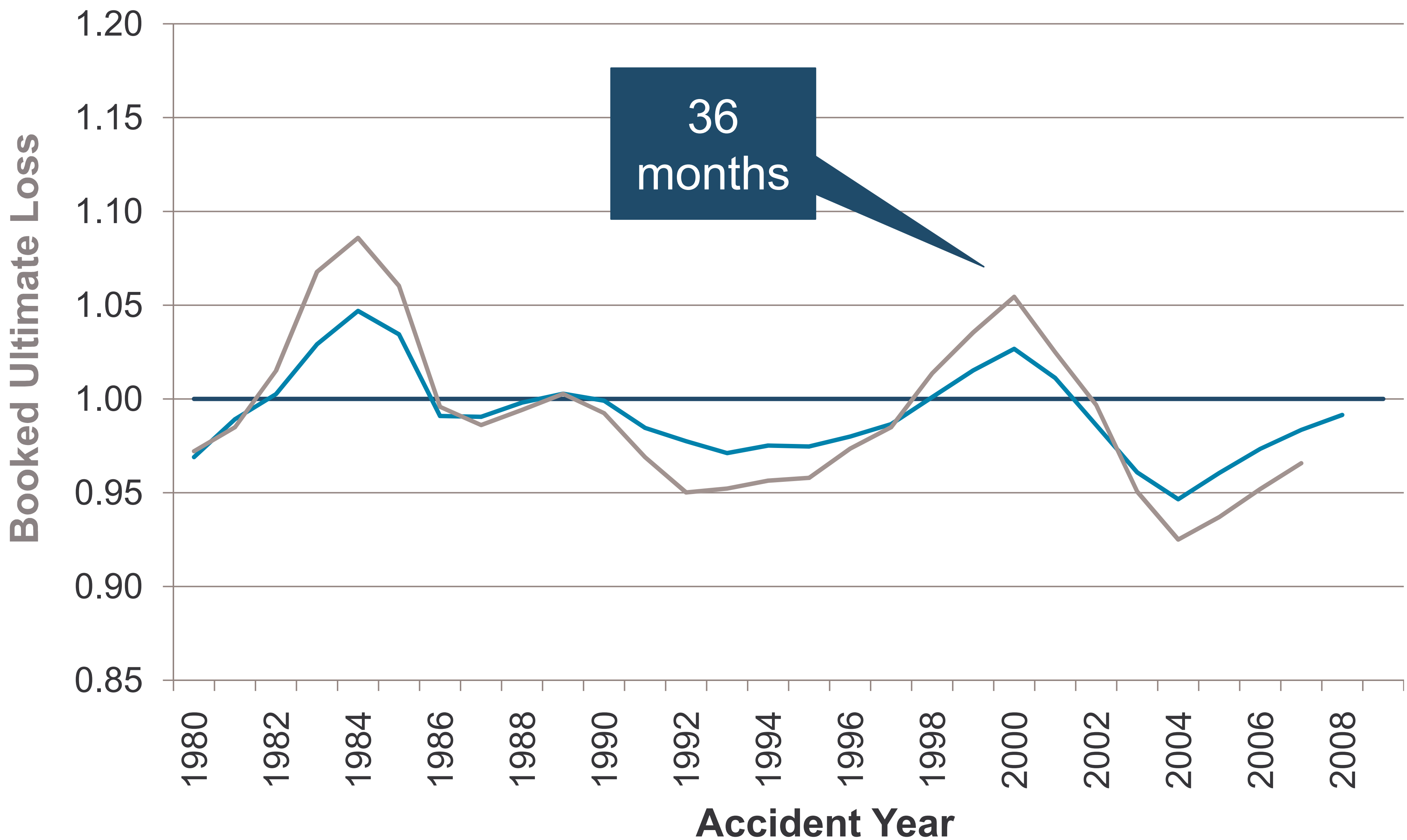

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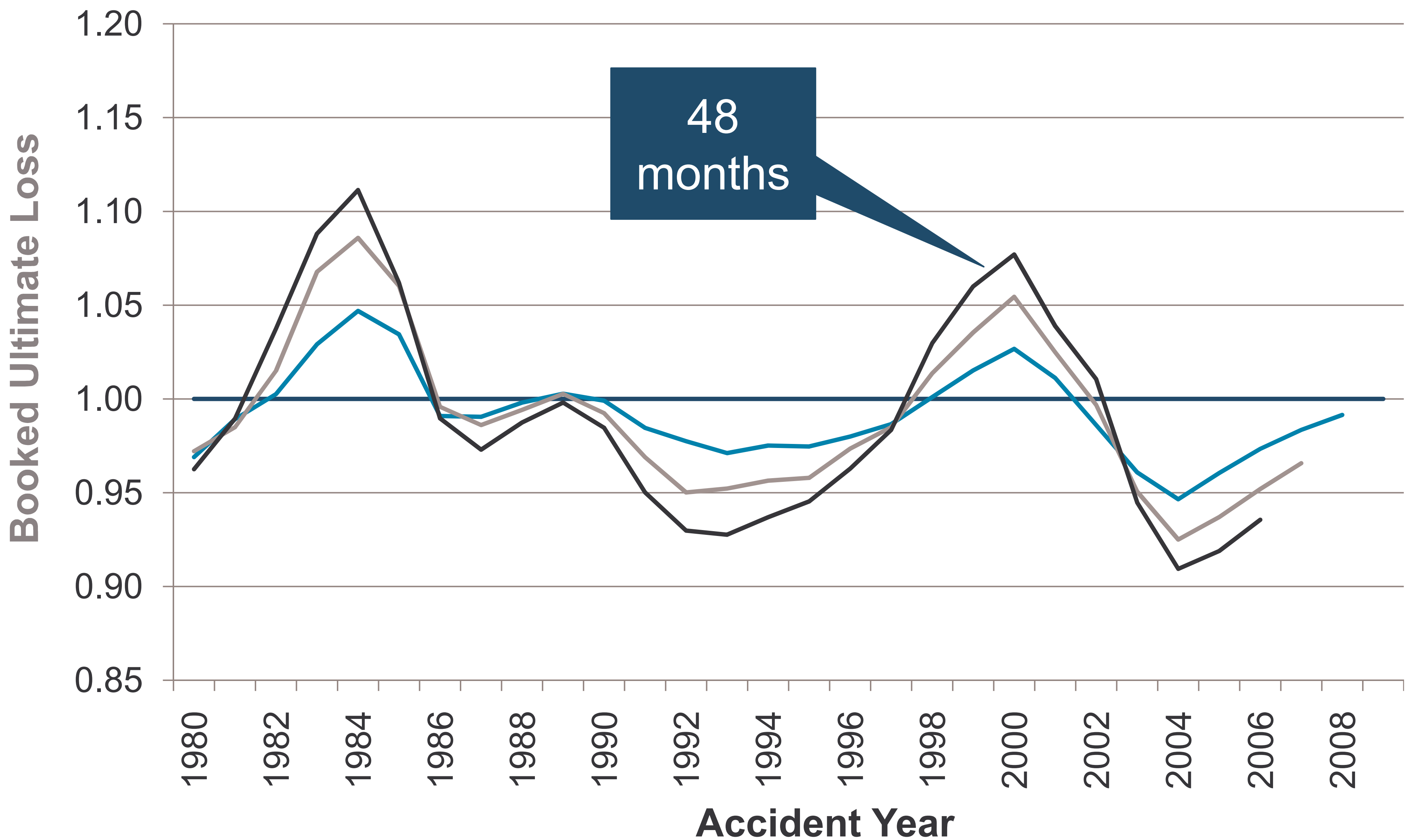

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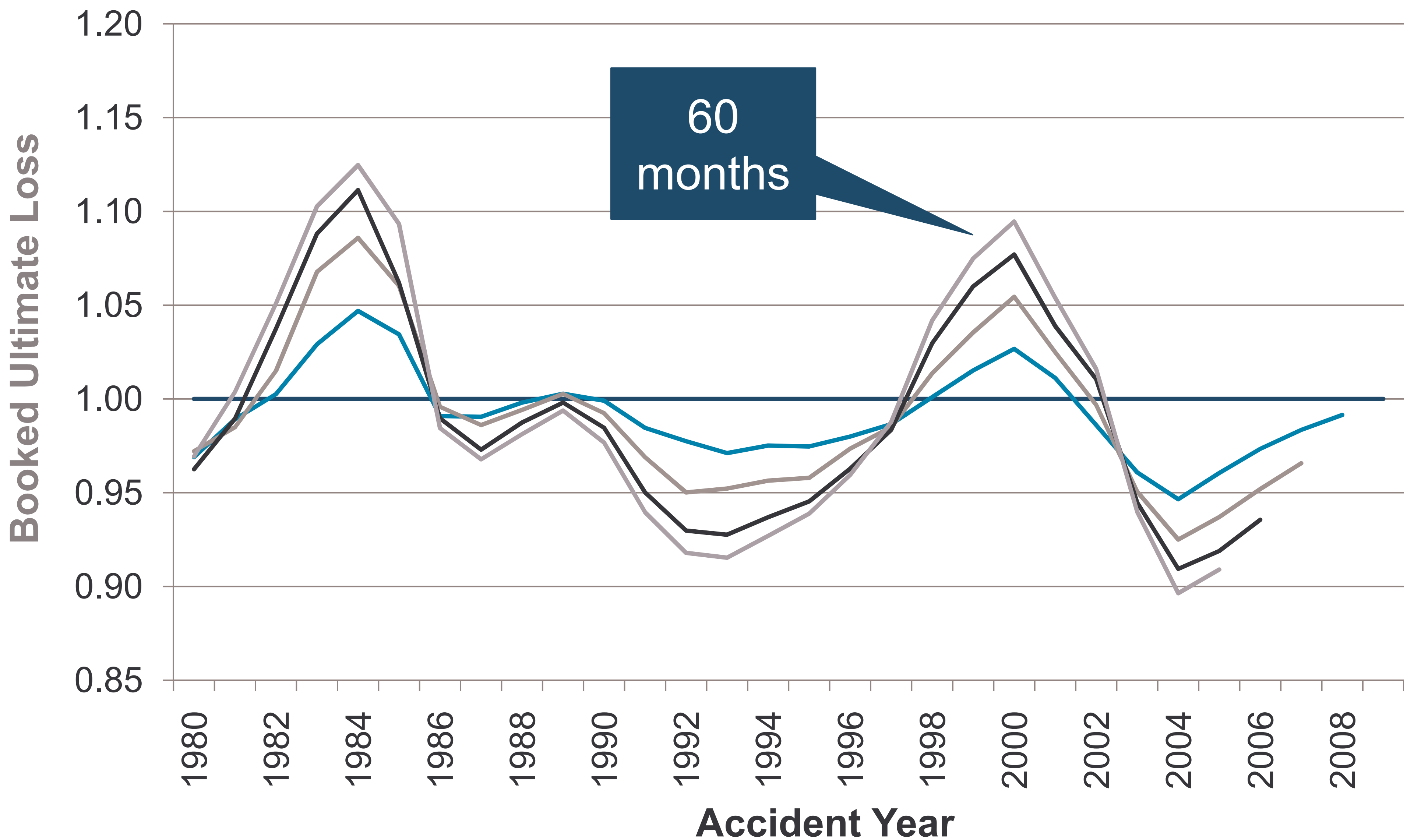

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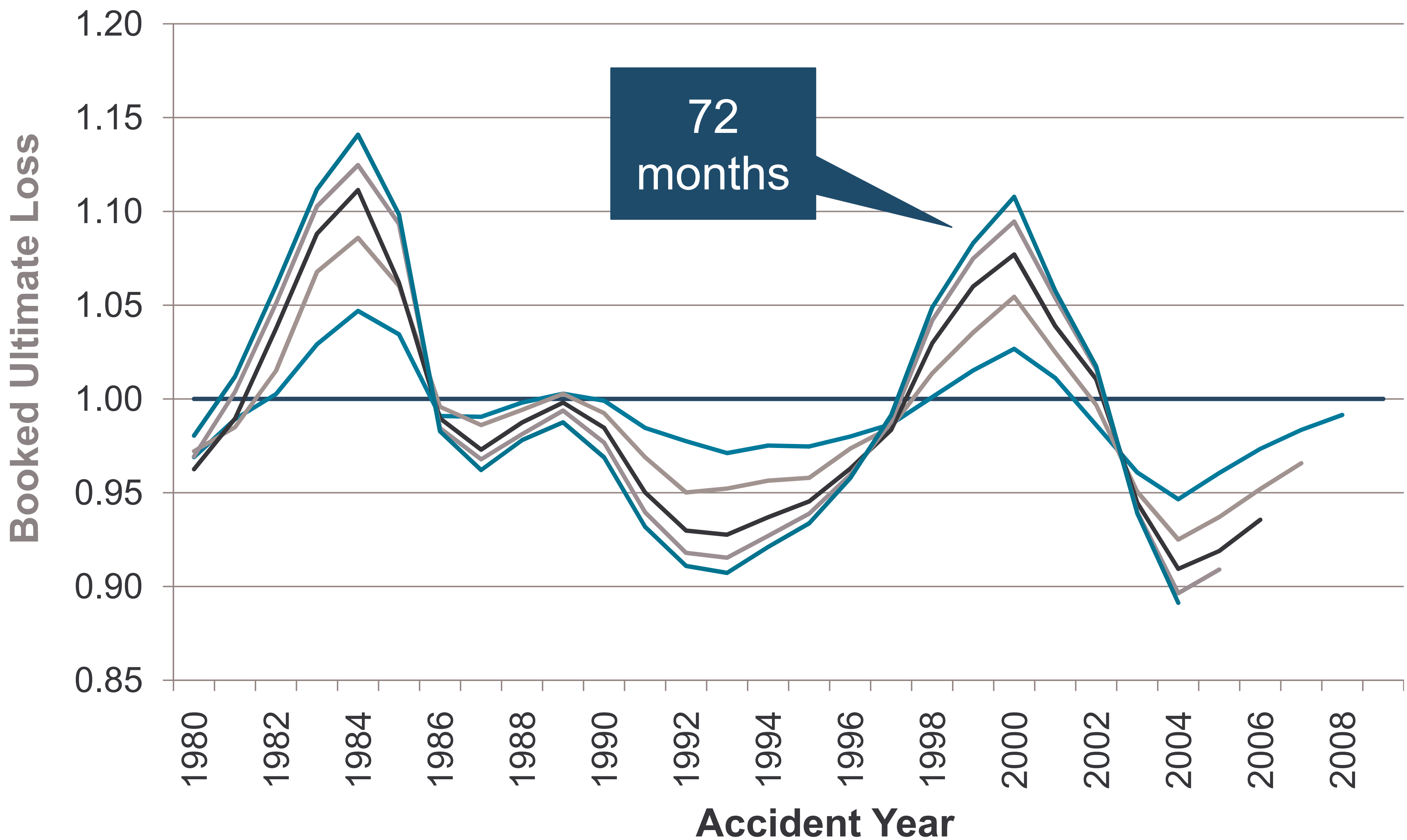

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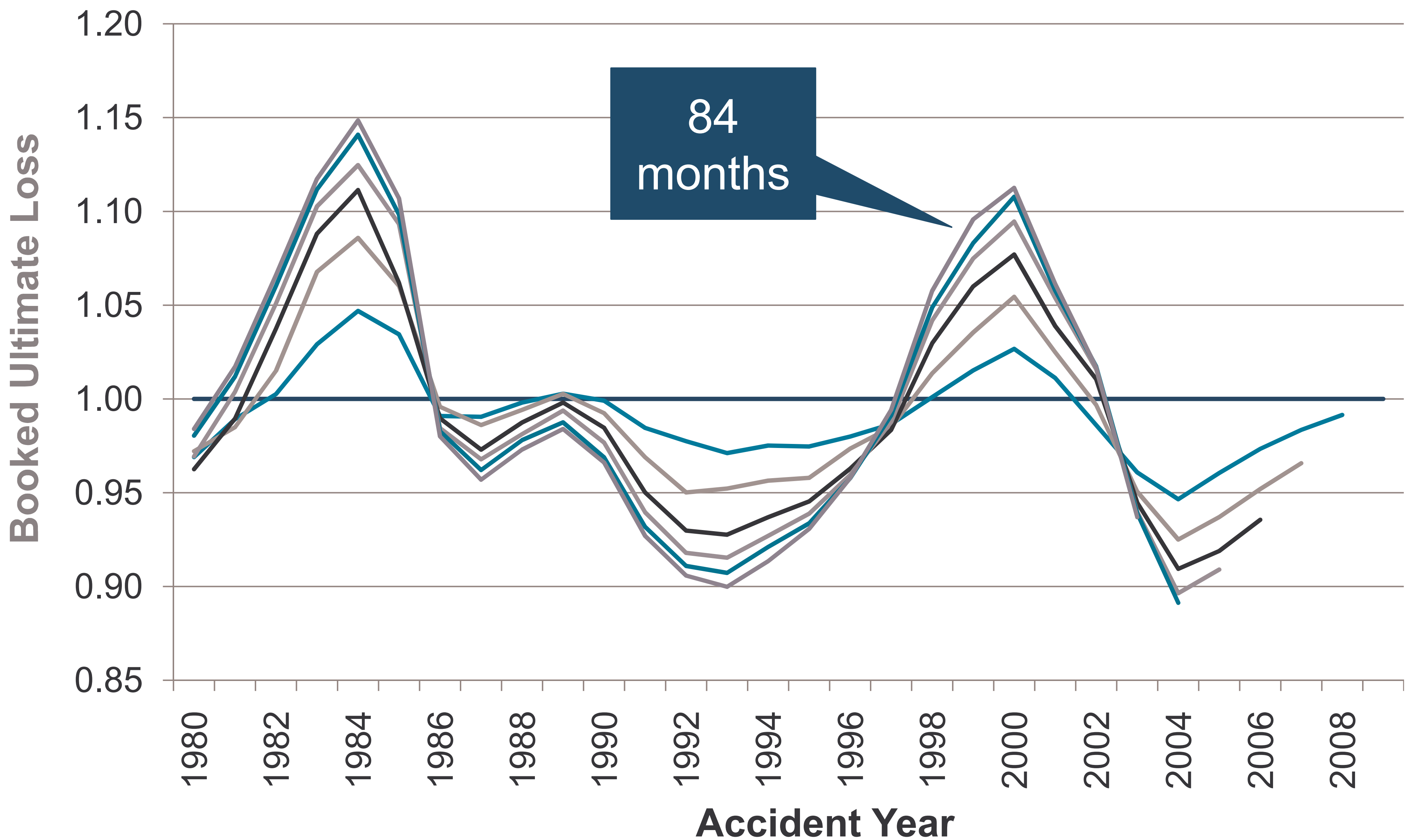

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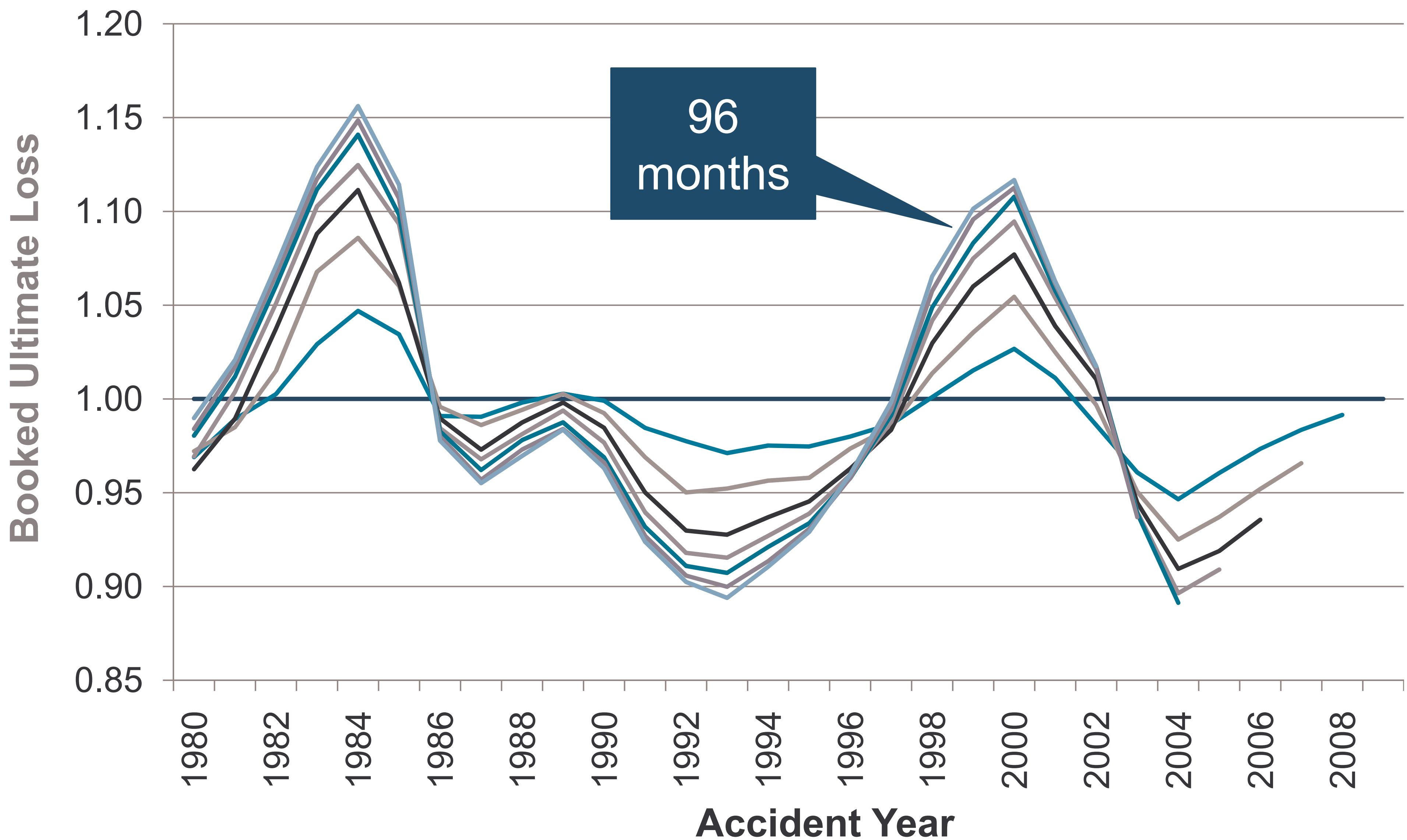

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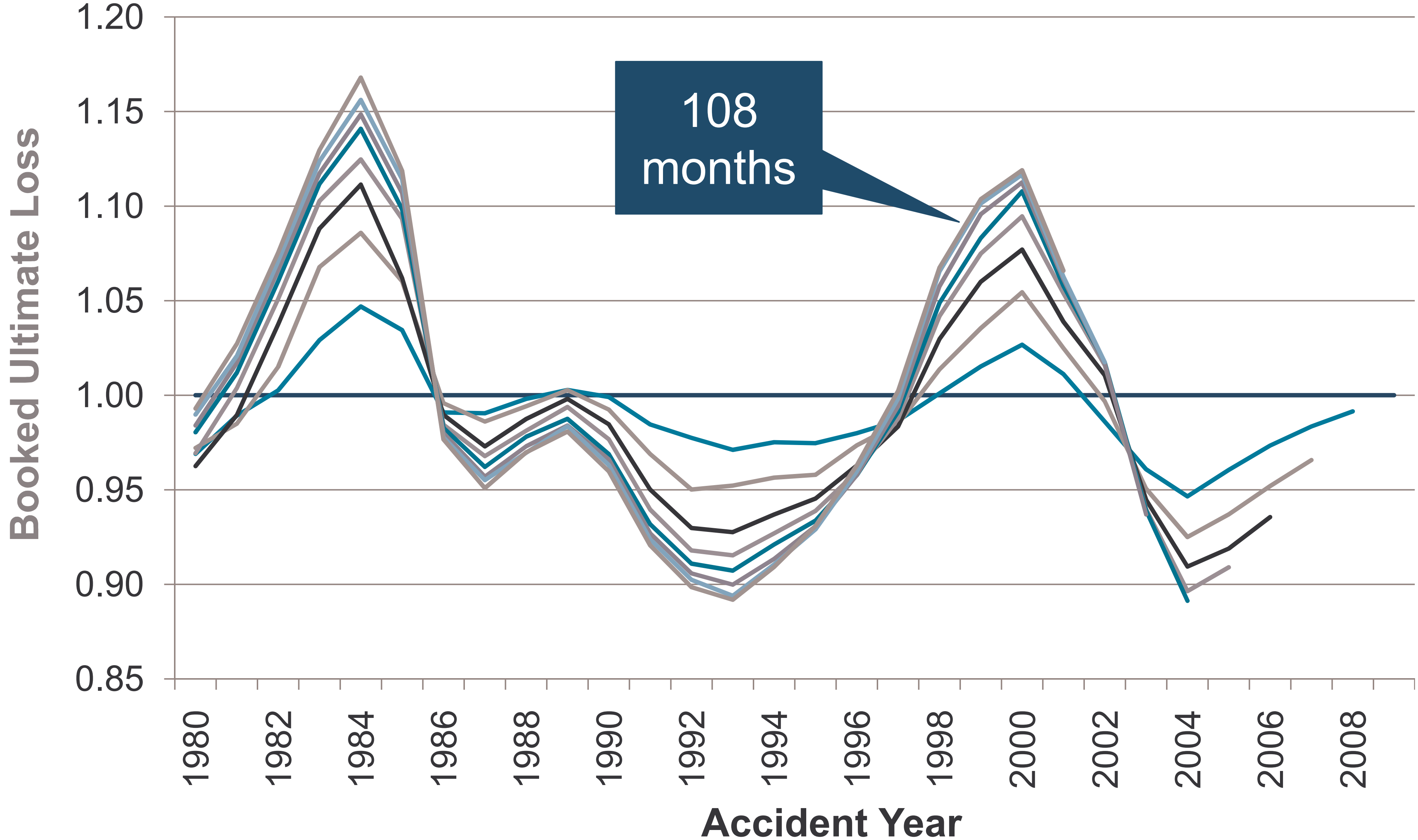

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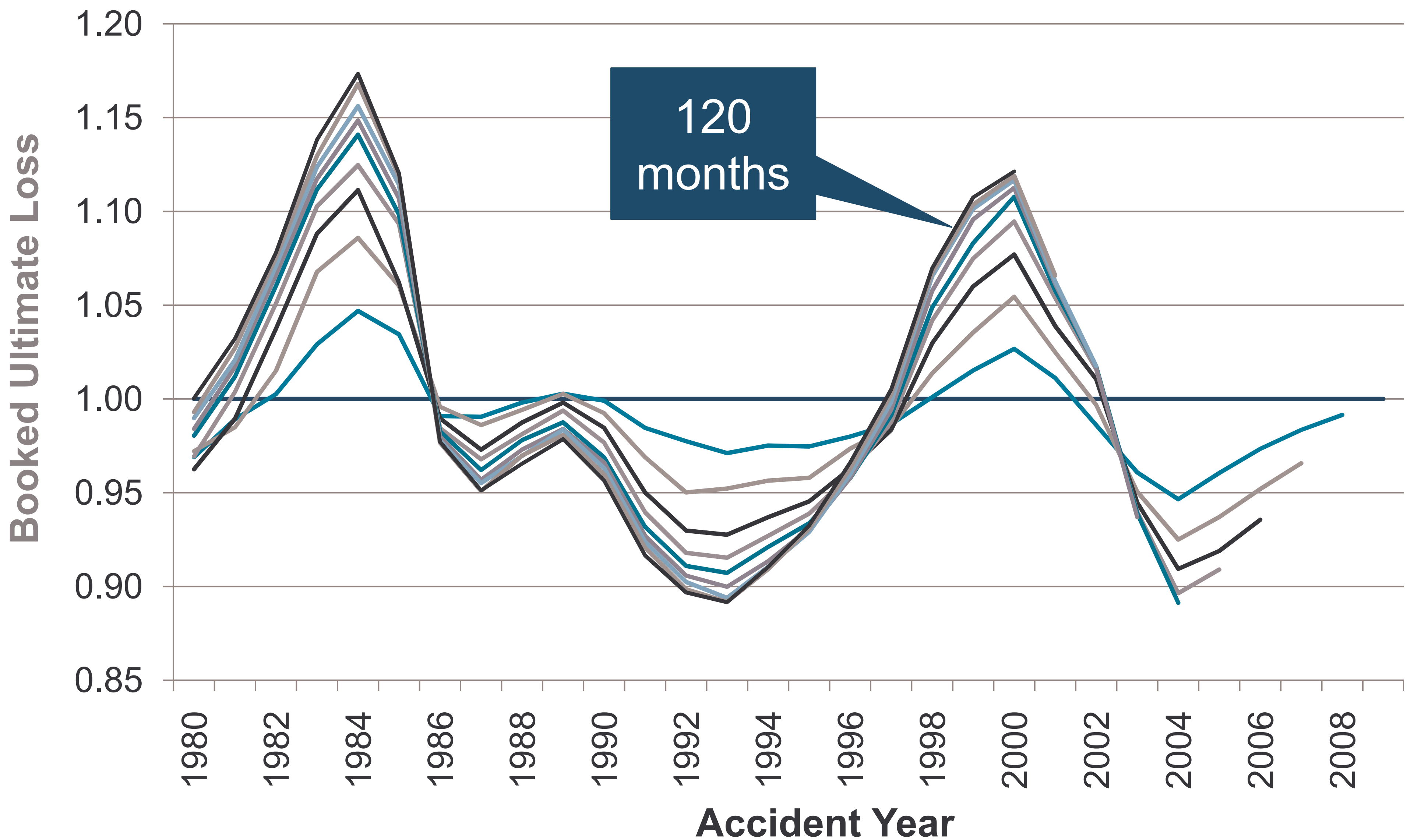

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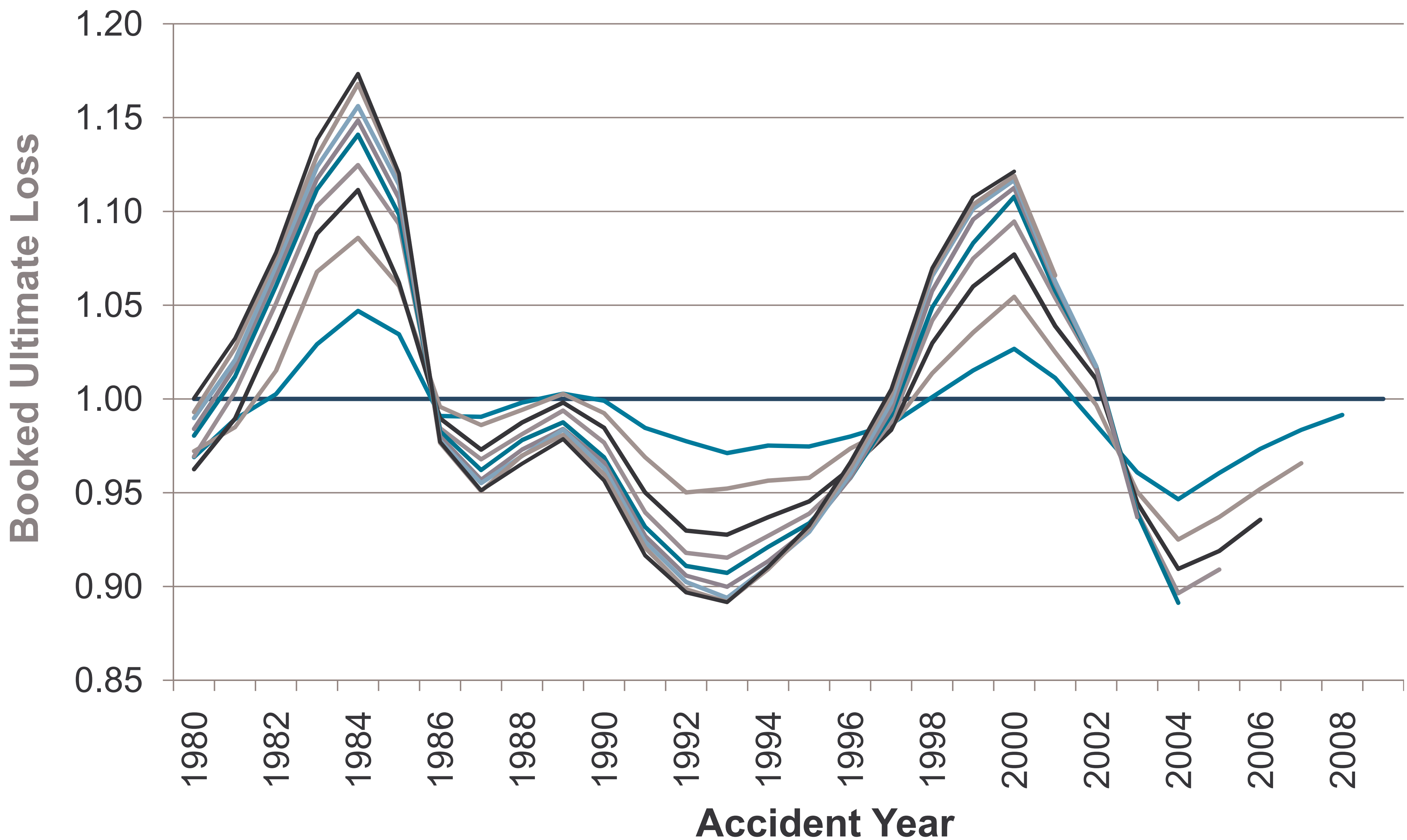
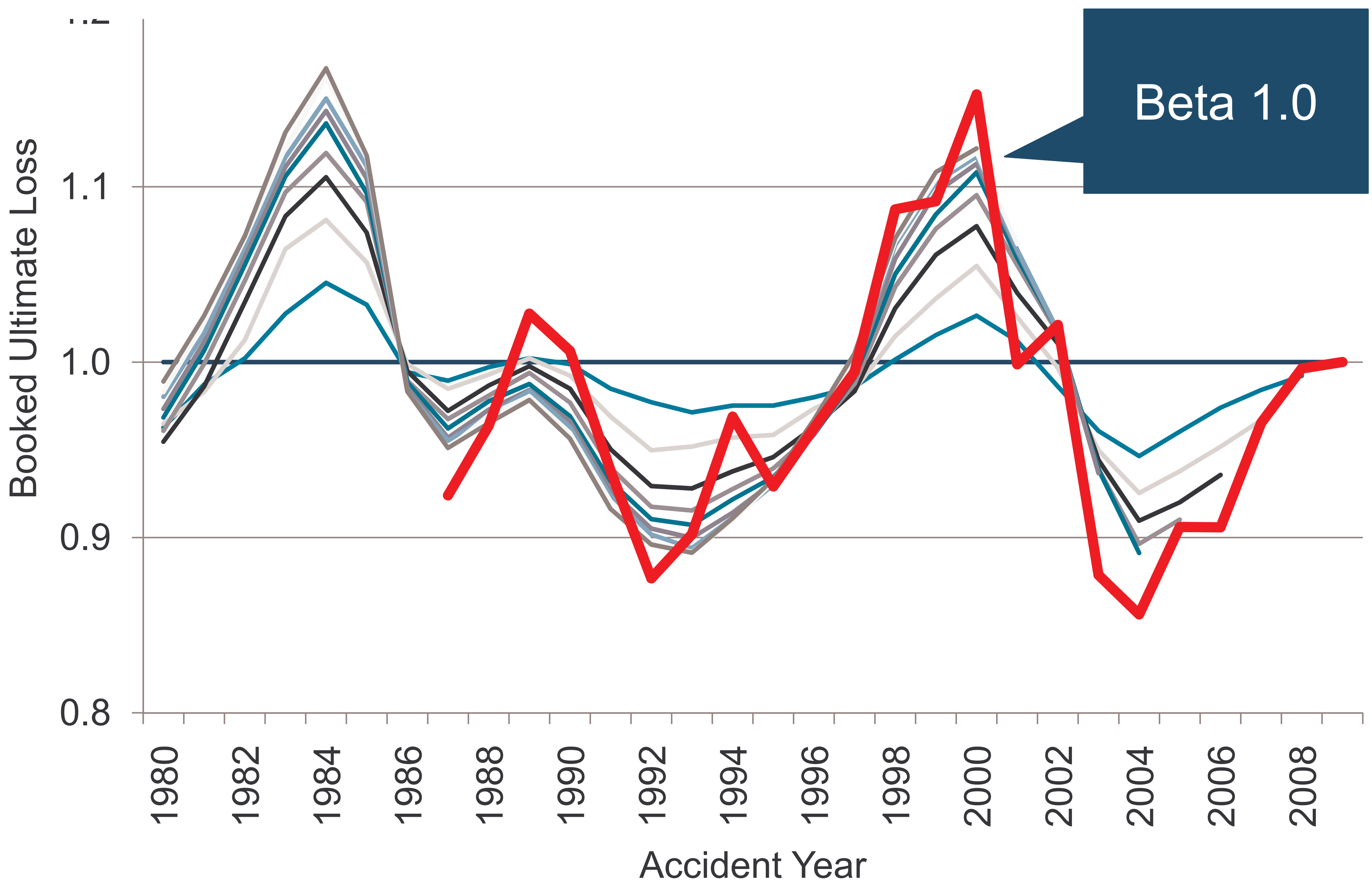
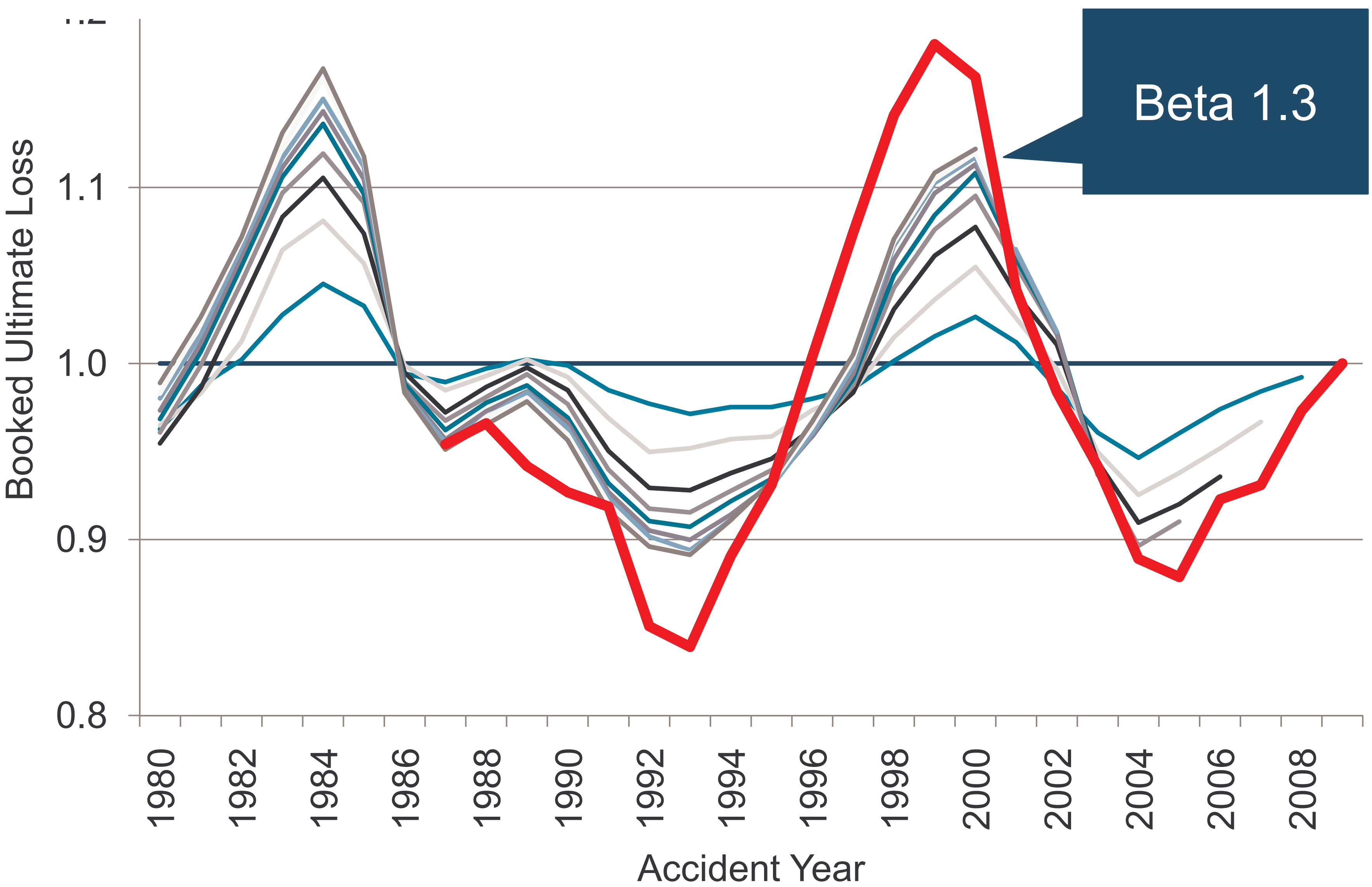


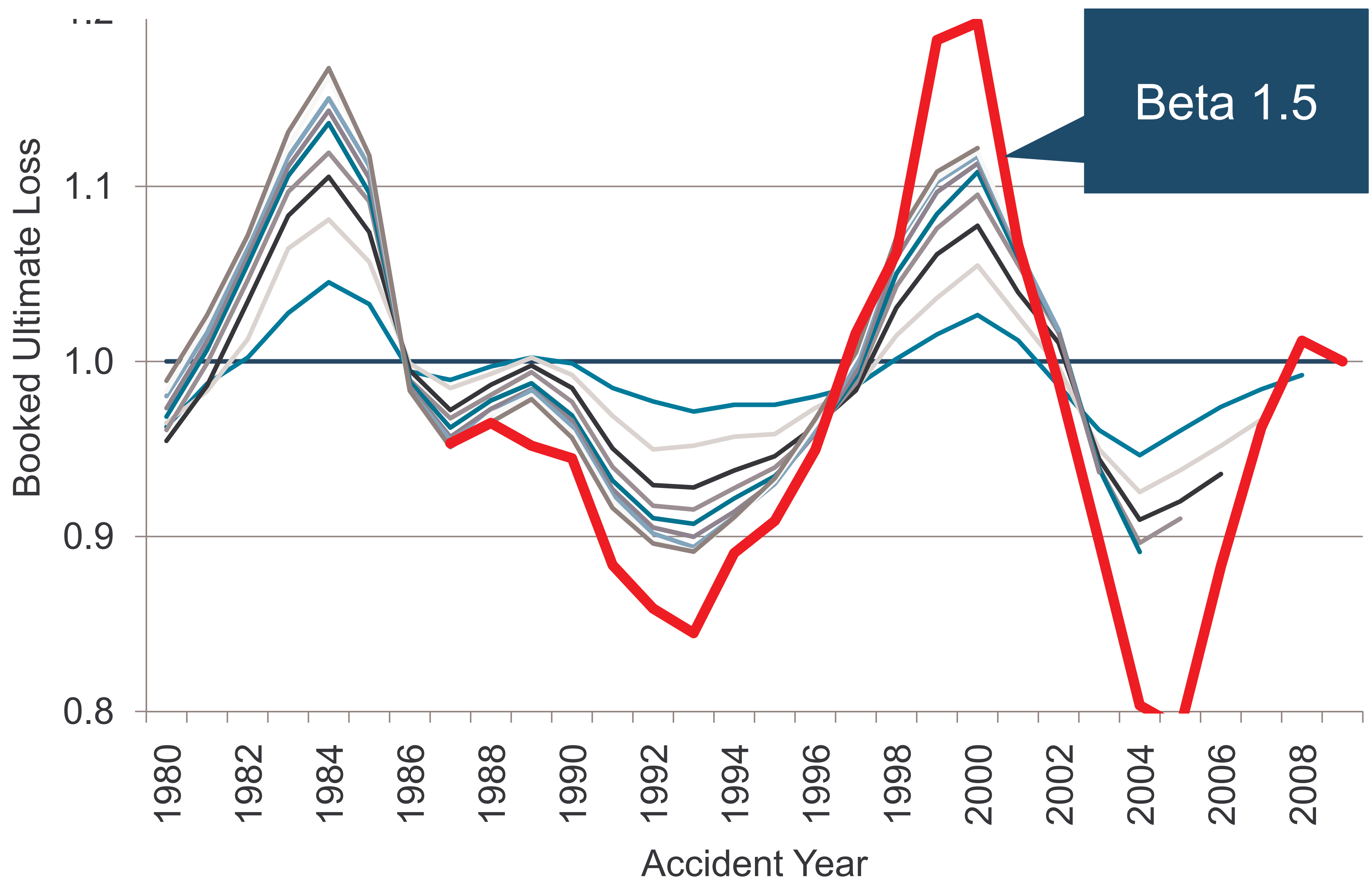
Reserve Cycle – Company A



Reserve Cycle – Company B



Reserve Cycle – Company C



Underwriting Cycle Management
Conclusion #1

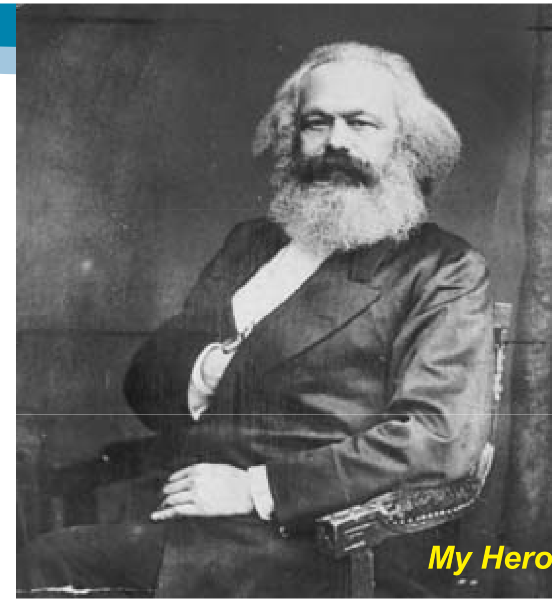
The Reserve Cycle is the Underwriting Cycle

2) Intellectual Property Franchise

Not That Fungible

Intellectual Capital (IC) Definition

In the Information Economy the “means of production” is in our heads



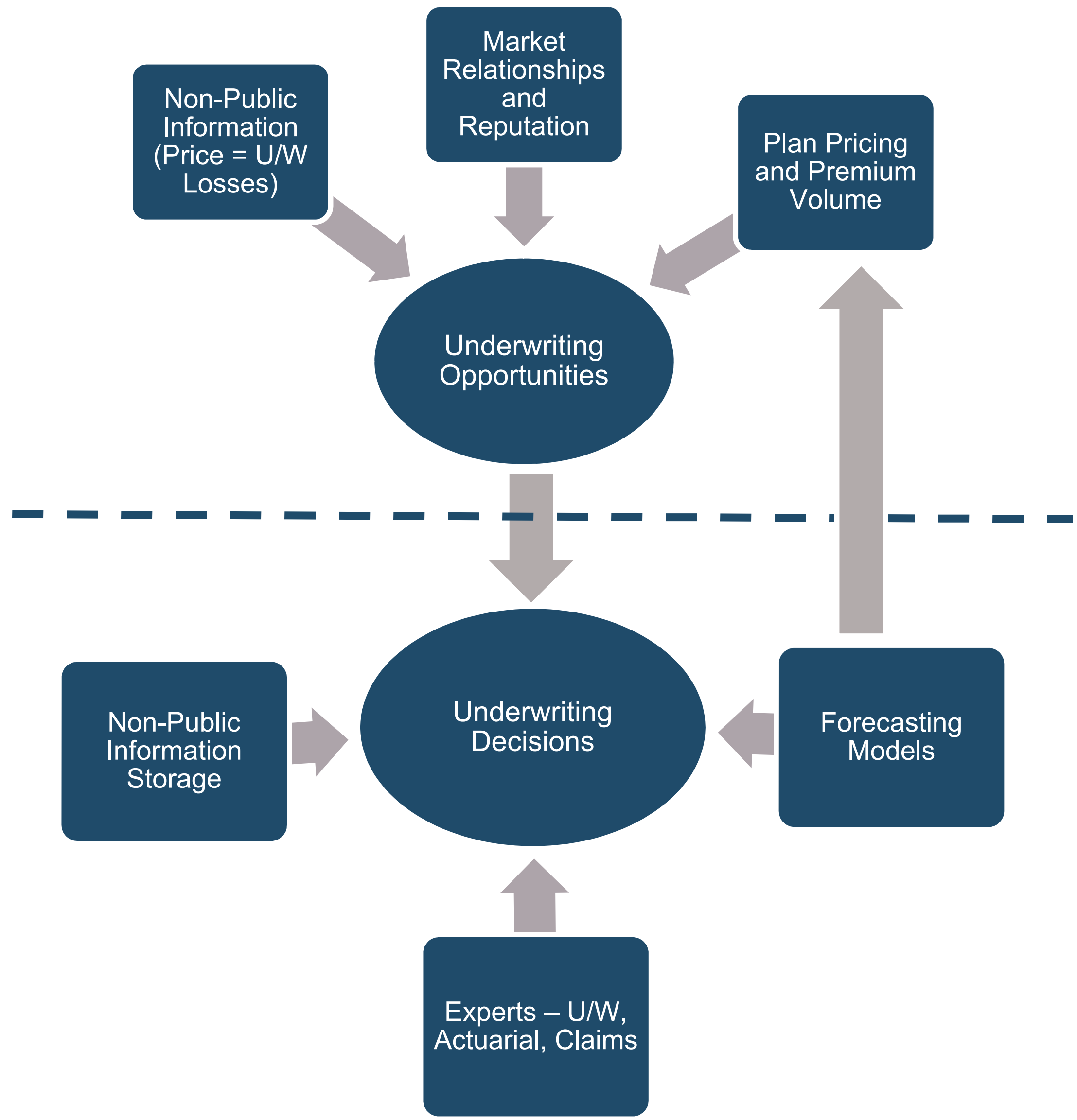
Microsoft

- IC is its intangible assets:
  - the knowledge and skill of its programmers
  - the software they write
  - the licenses through which the software is protected and made available to the marketplace
  - the share of the market held by that software

Insurer

- IC is its intangible assets:
  - the knowledge and skill of its underwriters, actuaries and claims staff
  - the policy information databases and systems
  - the renewal rights
  - the share of the market
  - the brand name recognition

An Insurer is an Intellectual Capital Franchise



Insurance Franchise

- A “sticky” investment
  - Slow to build, quick to destroy
  - Accretes value over time
- Its purpose is persistence
- Not as liquid as securities market, hedge funds, mutual funds
- One must evaluate current and future prospects by line, region, …
- There is value in maintaining some market position
  - Poised to capitalize on market turns
  - Learn, amass knowledge and information
  - Improve forecasting techniques

Underwriting Cycle Management
Conclusion #2

Companies must manage underwriting capacity deployment **<u>and</u>** franchise investments.

Completely exiting a line/region implies it will **never be profitable again**.

3) Sparks and Prairie Fires

We Know Darn Well What We Are Doing

Winston Churchill Caliber Quote

“When the music stops, in terms of liquidity, things will be complicated. But as long as the music is playing, you’ve got to get up and dance. We’re still dancing.”

Chuck Prince
then-CEO of Citigroup
July 10, 2007

Sparks and Prairie Fires
Timur Kuran, USC

- Social scientist writing about revolutions
  - Revolutions are difficult to predict
  - France 1789, Russia 1917, Iran 1978-79, **Tunisia, Egypt et al 2011**, all surprised the world, the country, and the revolutionary leaders
  - Historical explanations attribute great knowledge and coordination to revolutionaries after the fact
- Prof. Kuran proposes that people have
  - An inner belief about a situation

    and
  - An external belief expressed through actions
- …and the two are often inconsistent

http://www-rcf.usc.edu/~kuran/

Sparks and Prairie Fires
Timur Kuran, USC

- In an oppressive regime, people keep their opposition hidden
  - If by professing the "party line" there are either benefits to be gained, or punishment to be avoided…
  - …and the opposition movement appears weak in comparison to the existing regime
- Conditions for revolution arise when
  - the collective gradient between believed and professed grows too large, and…
  - …a shock is introduced…
  - …revolution spreads like wildfire
- Prof. Kuran:
  - "*A suitable shock would put in motion a bandwagon process that exposes a panoply of social conflicts, until then largely hidden.*"

Sparks and Prairie Fires
Financial Crisis

- Private belief
  - *A la Chuck Prince → we know what we are doing*
- Regime (music is playing)
  - *What choice do we have?*
  - *Act as if these tranches are AAA, I will keep trading if you will…*
- Spark
  - *Bear Stearns hedge funds declared valueless*
- Sweeping revolution = **Liquidity crisis**
  - *Dramatic, overnight change in public opinion…*
  - *…clearly stated by unwillingness to trade in anything credit related*

Sparks and Prairie Fires
Reinsurance

- Private belief
  - *Technical pricing, failure to act*
  - *How many defunct reinsurers had top actuarial staffs?*
- Regime (music is playing)
  - *Put that capital to work*
- Spark
  - *Industry "event," excuse, tide turning (example: credit crisis, AIG collapse, NZ, Tohoku EQ, …)*
- Sweeping revolution = **Market turn**
  - *Dramatic, overnight change in public opinion…*
  - *…clearly stated by unwillingness to trade without large price increases*

4) Behavioral Corporate Finance

Why We Cannot Make the Right Decision

Behavioral Corporate Finance (BCF)

- Hersh Shefrin
- Behavioral finance (BF) is the study of violations of the “rational investor” assumptions of classical finance theory, driven by known weaknesses in human decision making
- BCF is the study of how these weaknesses impact corporate decision making under uncertainty
- Extensive and growing evidence base that poor corporate decision making is heavily attributable to BCF principles
- Most recent case study: 2008 financial crisis
  - Considered UBS, S&P, town of Narvik, Norway, and the SEC
  - “How Psychological Pitfalls Generated the Global Financial Crisis” *Hersh Shefrin*

Behavioral Vulnerabilities Manifest in Organizations
Shefrin 2008

	UBS	S&P	SEC
Planning	▪ External consultant peer benchmarking ▪ Herd guidance	▪ Aggressive revenue growth targets with tough budget restrictions	▪ Completely inadequate oversight staffing
Standards	▪ “Sure loss” relative to peers (stock price) ▪ …position leads to risk-seeking	▪ Moody’s revised capital model in 2004 ▪ Competitive pressure	▪ Eased the Net Capital Rule in response to lobbying
Incentives	▪ Not factoring risk into compensation ▪ Undue emphasis on short term P&L	▪ *not a major factor*	▪ Disincentives to raise red flags ▪ Public criticism of SEC staff
Information Sharing	▪ Info presented @ silo ▪ Not internally challenging business leaders	▪ Groupthink ▪ “**Find the way**”	▪ Recognition of complexity of new ERM landscape and burden on regulators

BCF: Key Human Weaknesses/Biases

- Aversion to a SURE LOSS
  - When facing a sure loss, people become uncharacteristically **risk seeking**
- Extrapolation bias
  - "Hot hand fallacy"
  - Recent changes will continue into the future
- Overconfidence
  - Too sure of their opinions
  - Typically leads to underestimation of risk
- Confirmation bias
  - Over (under) weight evidence that confirms (refutes) prior beliefsw
- Conservatism
  - Overweight base rate information relative to singular (new) information
- Groupthink
  - Act as if they value conformity over quality when making decisions
- Affect heuristic
  - Making of judgments based on positive or negative feelings rather than underlying fundamentals
- Narrow framing
  - Context of presentation affects ultimate decision

Red Flags for Insurance

- GROUPTHINK:
- Groups mitigate the biases of their members when the tasks feature clear correct solutions, which everyone can confirm once the solution has been presented
  - HOWEVER –

  For judgmental tasks, where there is no clear, correct solution, groups actually exacerbate the biases of their members.
- Examples: Underwriting standards, Reserve evaluations, Plan loss ratio setting, Etc.

Red Flags for Insurance

- Aversion to a SURE LOSS
- The most serious of these weaknesses
- A key driver of pro-cyclical behavior
- “Sure Loss” is contextual
  - Perception that current course will “certainly” lead to a “loss” can drive risk seeking
- “Competitive disadvantage” relative to peers
  - Premium growth
  - Merger or acquisition
  - Expansion into other lines, states, etc.
  - Stock price performance

5) Three Operational Changes

Three Operational Changes

- How and when to grow
- Scenario planning
- Owner expectations

1. How and When to Grow
Not Smoothly

- Timed geometric growth
  - Massive expansion during over-priced phase (over-correction)
  - Slow decline in volume as prices soften (cull the renewals, manage capacity and franchise investment)
- Repeatedly communicate the strategy to underwriters (the franchise)
- Be prepared to redeploy or retrain underwriters (the franchise)
- Maintain key relationships with producers and clients (the franchise)
- Keep the information flow coming – feed and maintain the forecasting models (the franchise)
- Maintain some idle capacity for market turn

2. Scenario Planning (1/3)

- Large insurers often have one and only one plan
- Expectations are to deliver the target profit
- No consideration for:
  - Unforeseen market turns
  - Difficulty of predicting actual price levels and conditions
- Resulting portfolio may not be what owners would prefer ex post facto

2. Scenario Planning (2/3)

- Produce several, less detailed plans based on three or four scenarios
  - Example: Prices hold, prices drop, prices increase
- Each less detailed plan includes underwriting strategy and goals by line and region **for each scenario**
- Underwriting units are asked only to follow the scenario-specific strategy which may change during the year
- Staff monitors the state of the market and notifies the company of which scenario plan is in effect
- Gives operational freedom to underwriters to do what is best for the company
- Gives flexibility to respond to market conditions

2. Scenario Planning (3/3)
Nassim Taleb, Knowledge @ Wharton, April 13, 2011

Most people think that they can predict the black swan, that with quantitative sophistication they can get answers. They don't get the idea that because we can't predict black swans, then we need to restructure institutions and **rethink strategies to be more robust in the face of uncertainty**…

You have to avoid optimization…**In the black swan world, optimization isn't possible. The best you can achieve is a reduction in fragility and greater robustness.**

3. Owner Expectations

- Explain the franchise investment – a true “**Prospectus for Owning an Insurer**”
- Explain the management around both constraints – **underwriting capacity and franchise investments**
- Explain how the financials might look during each of the different phases of the cycle
- Explain the value of idle capacity
- Explain the franchise value benefits of a more durable franchise with smaller negative surprises

Portrait of a Disciplined Underwriter

National Indemnity Company

Year	Written Premium (In $ millions)	No. of Employees at Year-End	Ratio of Operating Expenses to Written Premium	Underwriting Profit (Loss) as a Percentage of Premiums (Calculated as of year end 2004)*
1980	$79.6	372	32.3%	8.2%
1981	59.9	353	36.1%	(.8%)
1982	52.5	323	36.7%	(15.3%)
1983	58.2	308	35.6%	(18.7%)
1984	62.2	342	35.5%	(17.0%)
1985	160.7	380	28.0%	1.9%
1986	366.2	403	25.9%	30.7%
1987	232.3	368	29.5%	27.3%
1988	139.9	347	31.7%	24.8%
1989	98.4	320	35.9%	14.8%
1990	87.8	289	37.4%	7.0%
1991	88.3	284	35.7%	13.0%
1992	82.7	277	37.9%	5.2%
1993	86.8	279	36.1%	11.3%
1994	85.9	263	34.6%	4.6%
1995	78.0	258	36.6%	9.2%
1996	74.0	243	36.5%	6.8%
1997	65.3	240	40.4%	6.2%
1998	56.8	231	40.4%	9.4%
1999	54.5	222	41.2%	4.5%
2000	68.1	230	38.4%	2.9%
2001	161.3	254	28.8%	(11.6%)
2002	343.5	313	24.0%	16.8%
2003	594.5	337	22.2%	18.1%
2004	605.6	340	22.5%	5.1%

www.berkshirehathaway.com/letters/2004ltr.pdf

Underwriting Cycle Management

…is not complicated…

…it’s difficult

Q & A

GUY CARPENTER