



WORKERS COMPENSATION INDUSTRY RESERVE ANALYSIS

**Presented by
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Overview of NCCI Analysis

- Computations based on NAIC Annual Statement Schedule P Part 1D Accident Year data evaluated 12/31/2008
- Data used is private carrier* workers compensation net combined indemnity and medical reported losses and LAE
- Loss development factors are analyzed and selected for paid loss & LAE, paid+case loss & LAE, and incurred loss & LAE
- Analyze and select ultimate incurred loss and LAE ratios
- Redundancy/Deficiency = Reported – NCCI Selected Ultimate

Challenges in Estimating Industry Reserves

- Selecting appropriate tail factors
- Reclassification of historical data to 'Other Liability'
- Significant changes in link ratios

Improvements and Additions

- Reviewed independent bureau tail factors
- Adjusted link ratios to reflect carrier reclassification of historical data



Key Results

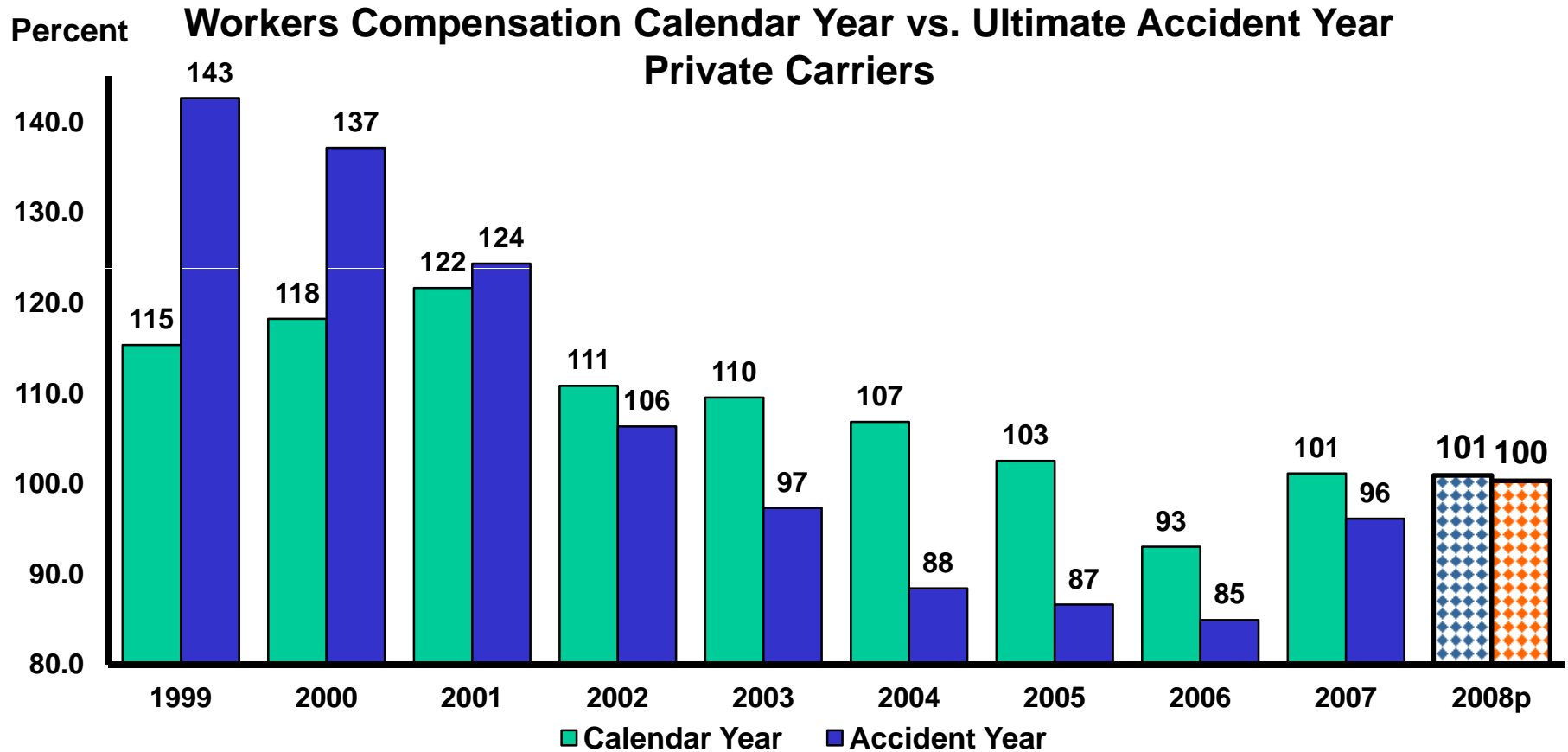
Summary of Changes in NCCI AY Loss & LAE Ratio Selections

AY	@2007 Loss & LAE Ratio Selections	@2008 Loss & LAE Ratio Selections	Change
1999	108.0%	109.0%	1.0%
2000	105.0%	106.0%	1.0%
2001	93.5%	94.5%	1.0%
2002	79.0%	80.0%	1.0%
2003	72.0%	73.5%	1.5%
2004	65.0%	65.0%	0.0%
2005	61.0%	63.0%	2.0%
2006	63.0%	64.0%	1.0%
2007	67.0%	70.0%	3.0%
2008	n/a	74.0%	n/a

Reasons for Changes in NCCI Selected Loss & LAE Ratios

- Indicated 'paid+case loss and LAE tail factor' increased from 1.084 to 1.106
- Loss development link ratios increased for early reports
- Loss ratio Indications for more recent AYs were higher, so NCCI loss ratio selections reflect this

Accident Year Combined Ratio



p Preliminary

Accident Year data is evaluated as of 12/31/2008 and developed to ultimate

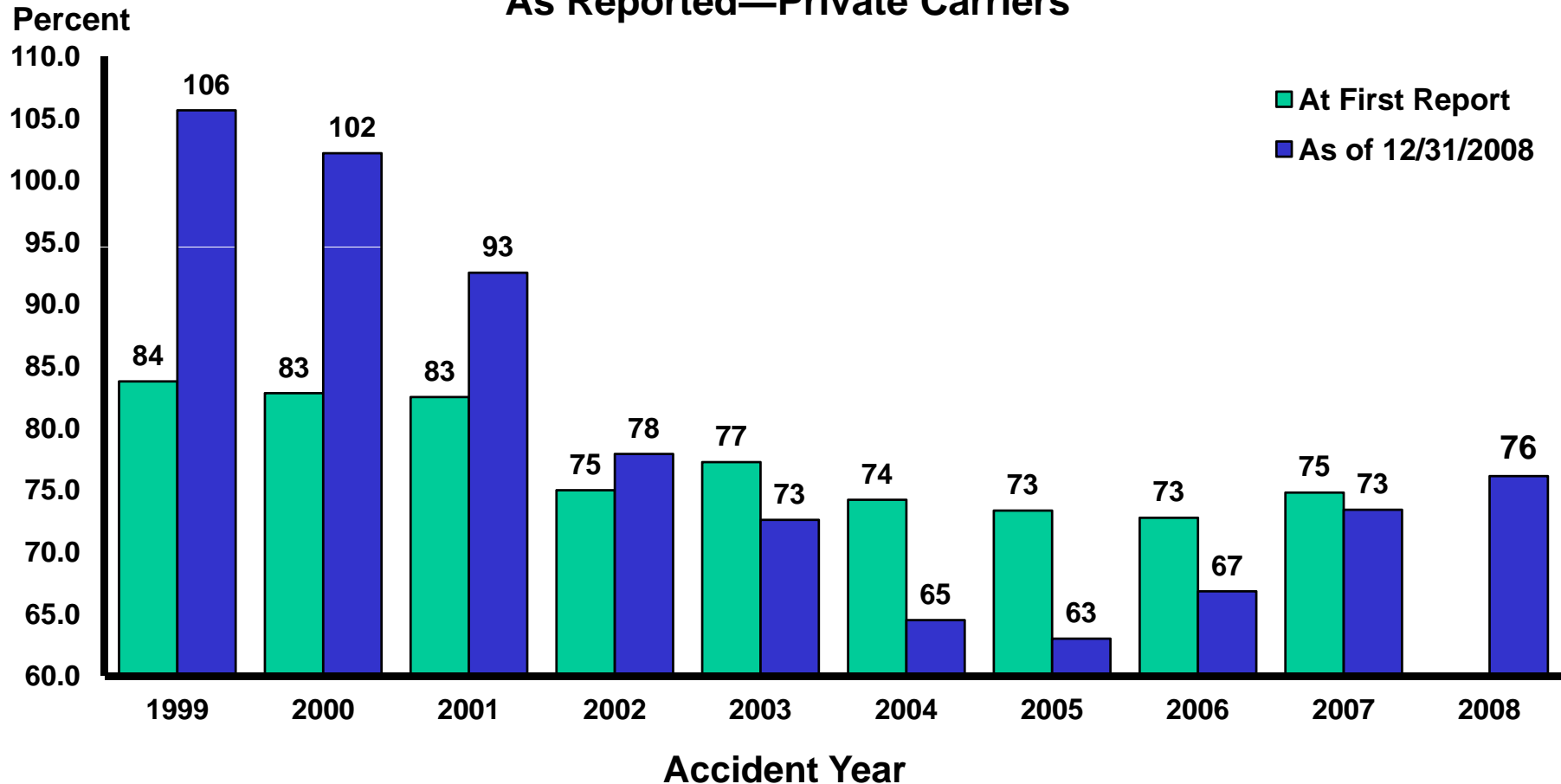
Source: Calendar Years 1999–2007, *Best's Aggregates & Averages*;

Calendar Year 2008p and Accident Years 1999–2008p, NCCI analysis based on Annual Statement data

Includes dividends to policyholders

Workers Compensation Accident Year Loss and LAE Ratios

As Reported—Private Carriers

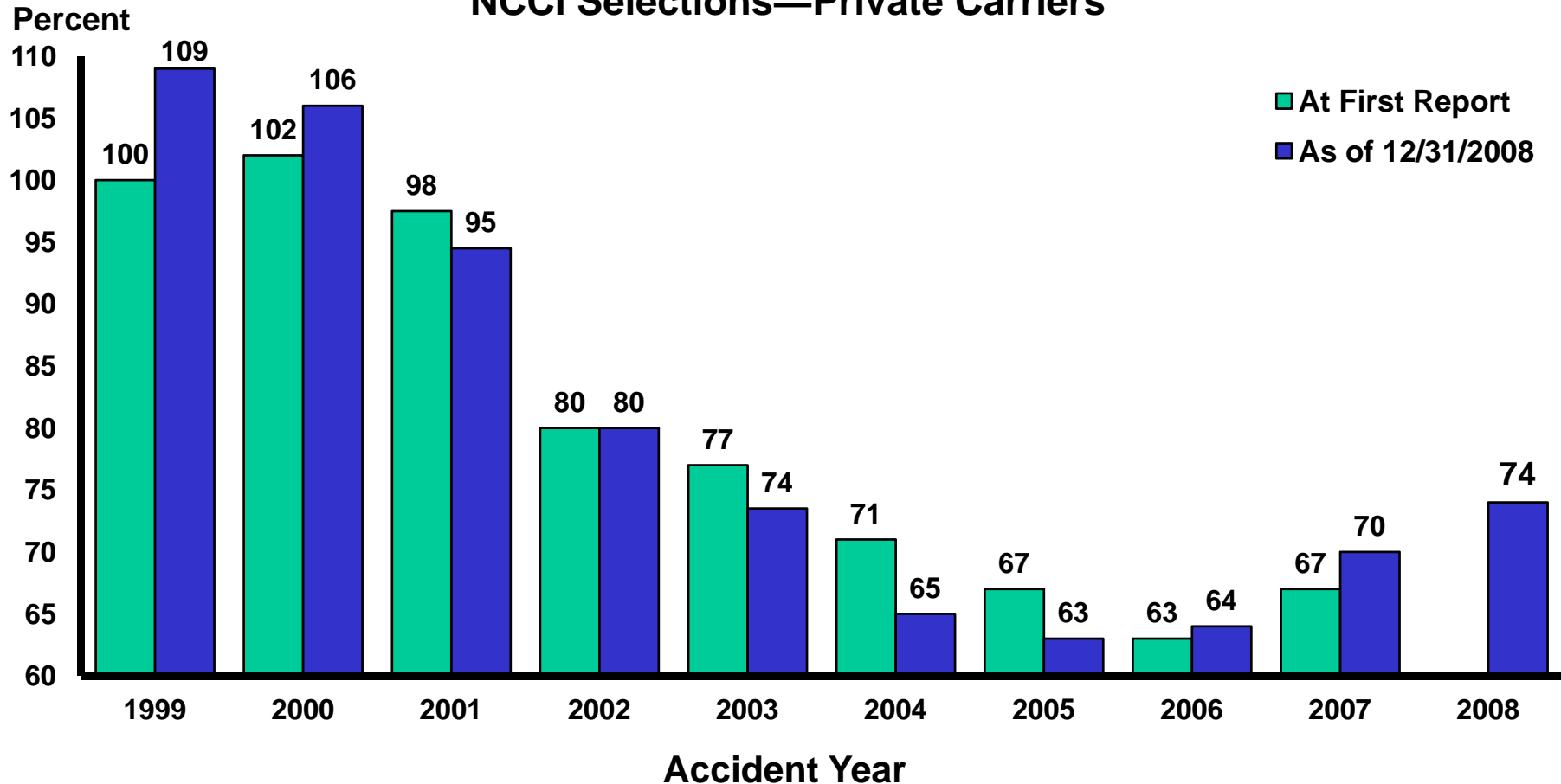


Reported Loss and LAE ratios

Source: NAIC Annual Statement, Schedule P data as reported by Private Carriers

Workers Compensation Accident Year Loss and LAE Ratios

NCCI Selections—Private Carriers



Selected Loss and LAE ratios

Source: NCCI Reserve Analysis

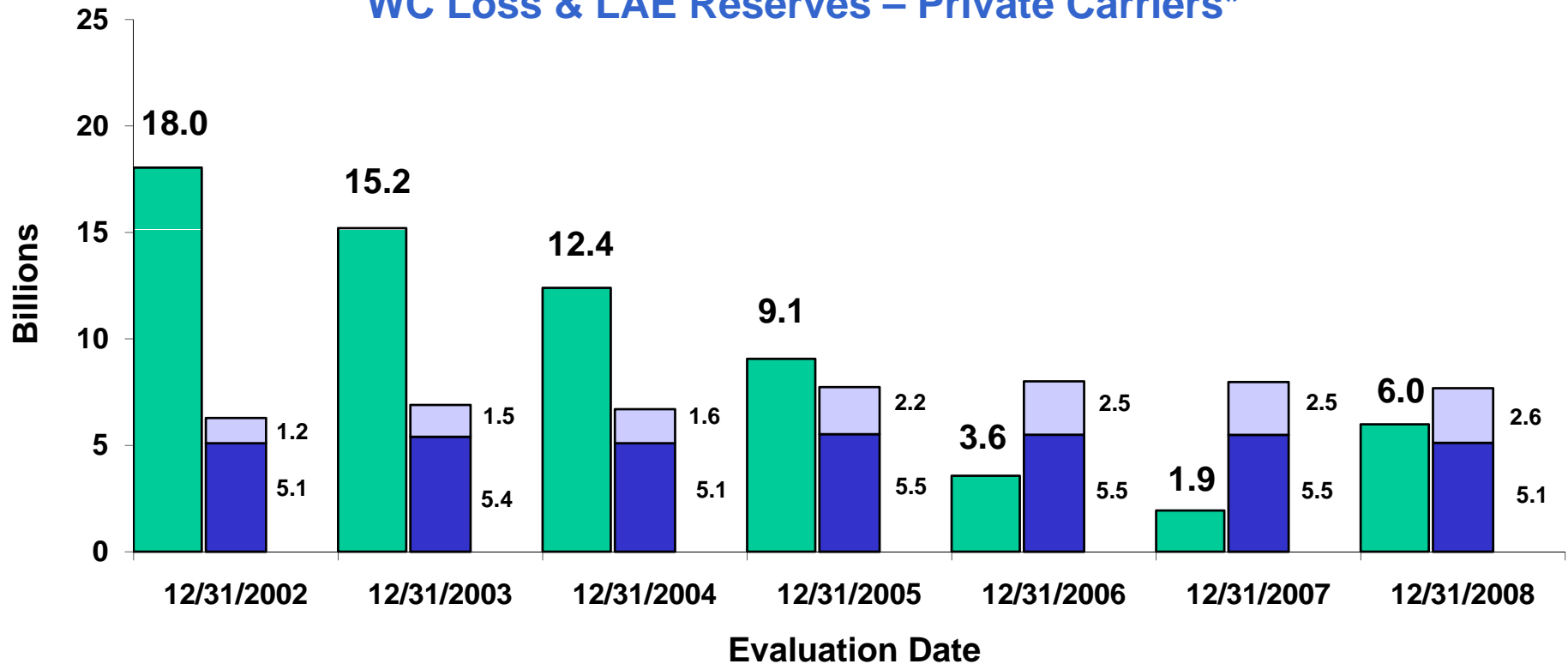
Reserve Strengthening by Accident Year

WC Loss & LAE, As Reported by Private Carriers*
During Calendar Year 2008

Accident Year	Total Reserve Strengthening (Billions)
Prior	0.4
1999	-0.1
2000	-0.1
2001	0.0
2002	0.1
2003	0.1
2004	-0.1
2005	-0.4
2006	-0.7
2007	-0.5
2008	n/a

Comparison of the Deficiency at Different Evaluation Dates

WC Loss & LAE Reserves – Private Carriers*



■ Non-Tabular Reserve Discount
 ■ Tabular Reserve Discount
 ■ Reserve Deficiency

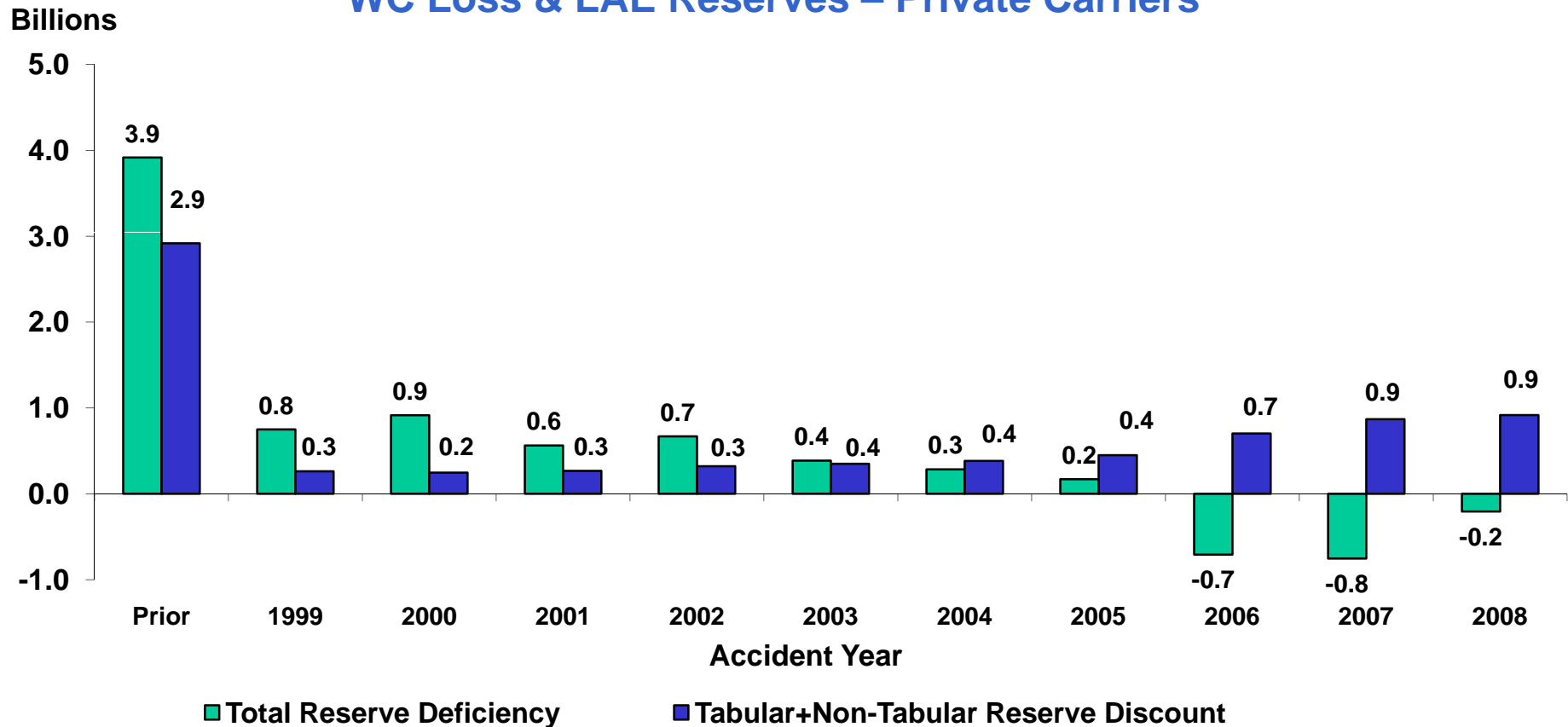
*@12/04 through @12/08 include Maine and Minnesota state funds

Reserve Deficiency considers all reserve discounts as deficient

Figures are based on the respective Annual Statement data and NCCI selections for each evaluation date

Reserve Deficiency and Reserve Discount by Accident Year as of 12/31/2008

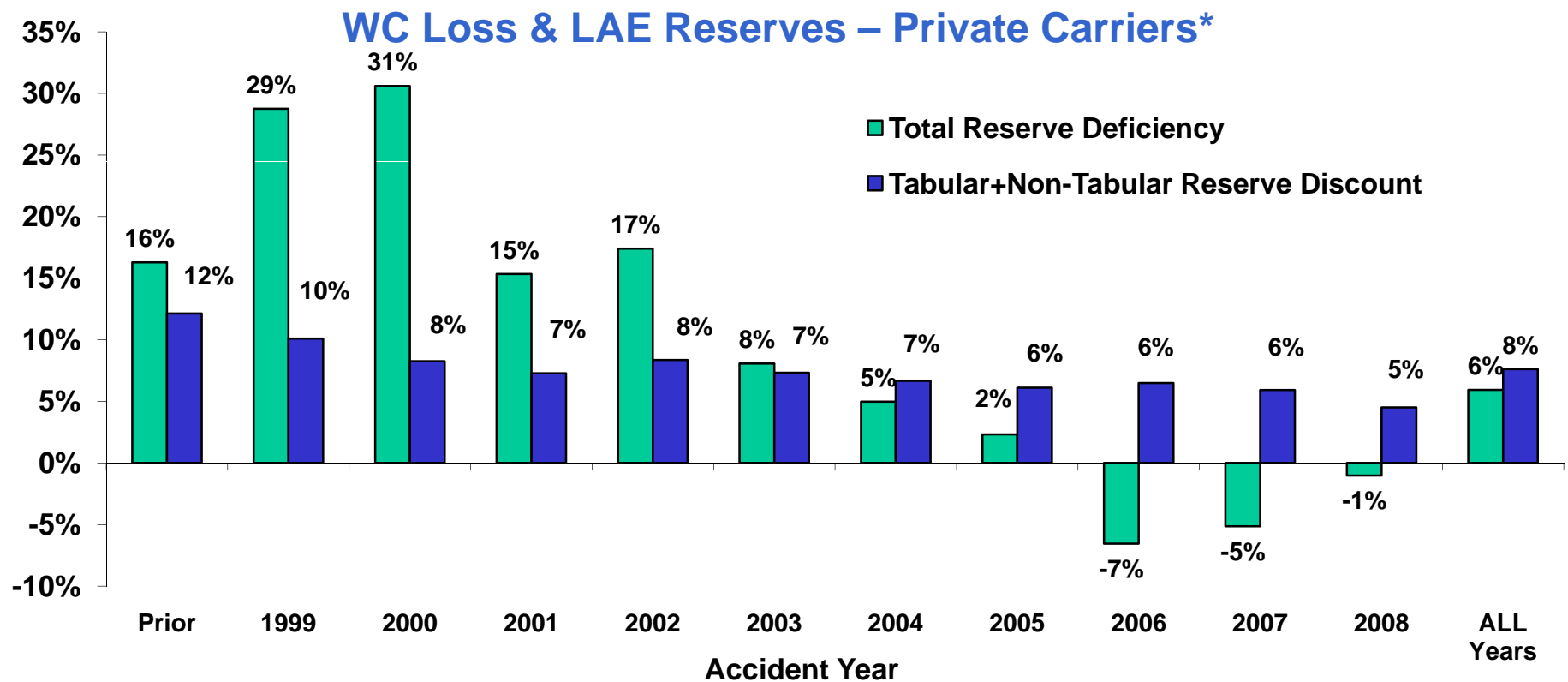
WC Loss & LAE Reserves – Private Carriers*



Deficiency considers all reserve discounts as deficient

Reserve Deficiency and Reserve Discount by Accident Year as of 12/31/2008

as a Percentage of Carried Reserve



Deficiency considers all reserve discounts as deficient



Tail Factor Analysis

Tail Factor Analysis Overview

- In previous reserve analyses, NCCI ratemaking states' tail factors were included in the analysis
- This year to improve the analysis of the tail calculation, non-NCCI states' tail factors were reviewed along with NCCI states' tail factors
- The non-NCCI states included in the tail factor analysis were CA, MI, NJ, NY, PA, TX and WI

Tail Factor Analysis

Sources of Information

- All NCCI states combined indemnity and medical paid and paid + case tail factors @ 10th report were obtained from the ratemaking Financial data
- The non-NCCI states indemnity and medical paid and paid + case tail factors at 10th report were obtained from each independent rating bureau.

Tail Factor Analysis

Independent Bureau Analysis

- For loss-only tail factors
- Obtain indemnity/medical split at ultimate from Workers Compensation Statistical plan data, by state
- Calculate indemnity/medical split at 10th report by dividing split at ultimate by 10th to ultimate loss development factor
- Indemnity and medical tail factors at 10th report were weighted using indemnity/medical split at 10th report to obtain combined tail factor @ 10th report

Tail Factor Analysis

Independent Bureau Analysis

- Calculate NCCI and independent bureau states combined tail factor @10th report using calendar year premium as weights by state for paid and paid plus case reserves
- Compare NCCI and independent bureau states combined tail factors to NCCI states only
- NCCI and independent bureau states combined tail factors were larger than NCCI states only

Tail Factor Analysis

Selected Loss and LAE Tail Factors

- Several alternative tail factor indications were calculated as in the past for NCCI states for paid and paid+case
- Tail factor indications were based on NCCI Financial data for NCCI states; that showed an increase was warranted for paid+case
- Tail factor selections are based on 19th to ultimate incurred tail, converting at 19th, and applying link ratios to result in final selected paid and paid+case tail factors

Tail Factor Analysis

Selected Loss and LAE Tail Factors

Tail Factor 10th/Ult	@2007	@2008
Paid & LAE	1.175	1.176
Paid + Case & LAE	1.084	1.106

Prior Period Reserve Adequacy

- Additional Prior Period Deficiency analysis (1.0B)*

plus

- Prior Period Reserve Discounts (2.9B)

equals

- AY 1998 & Prior Period Deficiency (3.9B)

*No change from last year's estimate

Reinsurance Usage

- Reinsurance usage varies by AY; peaked in 2001 and then decreased after AY 2002
- Observed low 5th/6th link ratios due to reinsurance usage for AY 2000 and 2001
- NCCI selected 3 year average link ratio for paid (except 5th/6th) and paid+case methods
- A 2-year average link ratio was selected for 5th/6th to avoid understating future development on recent AYs
- Impact of reinsurance is considered in AY 2000 and AY 2001 ultimate loss and LAE ratio selections



Methods Analysis

NCCI Uses a Variety of Methods to Estimate Ultimate Losses

- Paid losses and LAE
- Paid losses, case reserves, and LAE
- Incurred losses (including company IBNR estimates)
- Bornhuetter-Ferguson

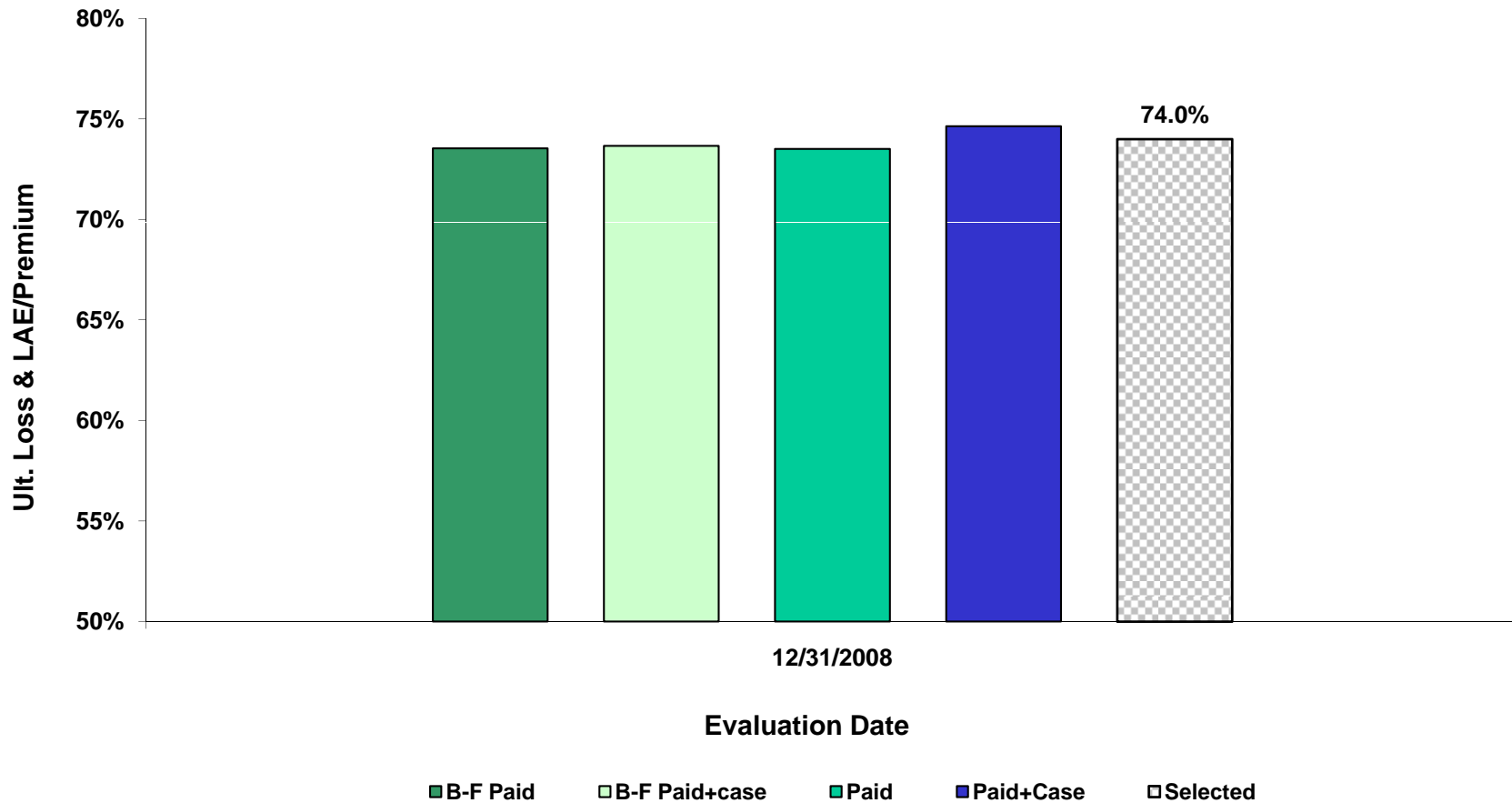
AY 2008 B-F ELR Assumptions

- Start with NCCI Selected AY 2007 L+LAE ratio
- Apply the following adjustments/assumptions:

Row #	Assumption	Value	Source
1	Selected AY 2007 L+LAE Ratio	67.0%	@2007 NCCI Analysis
2	Frequency	0.960	Selected; NCCI F&S
3	Severity	1.056	Selected; NCCI F&S
4	Wage	1.030	Employment Cost Index
5	Price	0.887	Price Change Analysis
6	AY 2008 B-F ELR	74.3%	(1) x (2) x (3) / (4) / (5)

Comparison of Methods Accident Year 2008

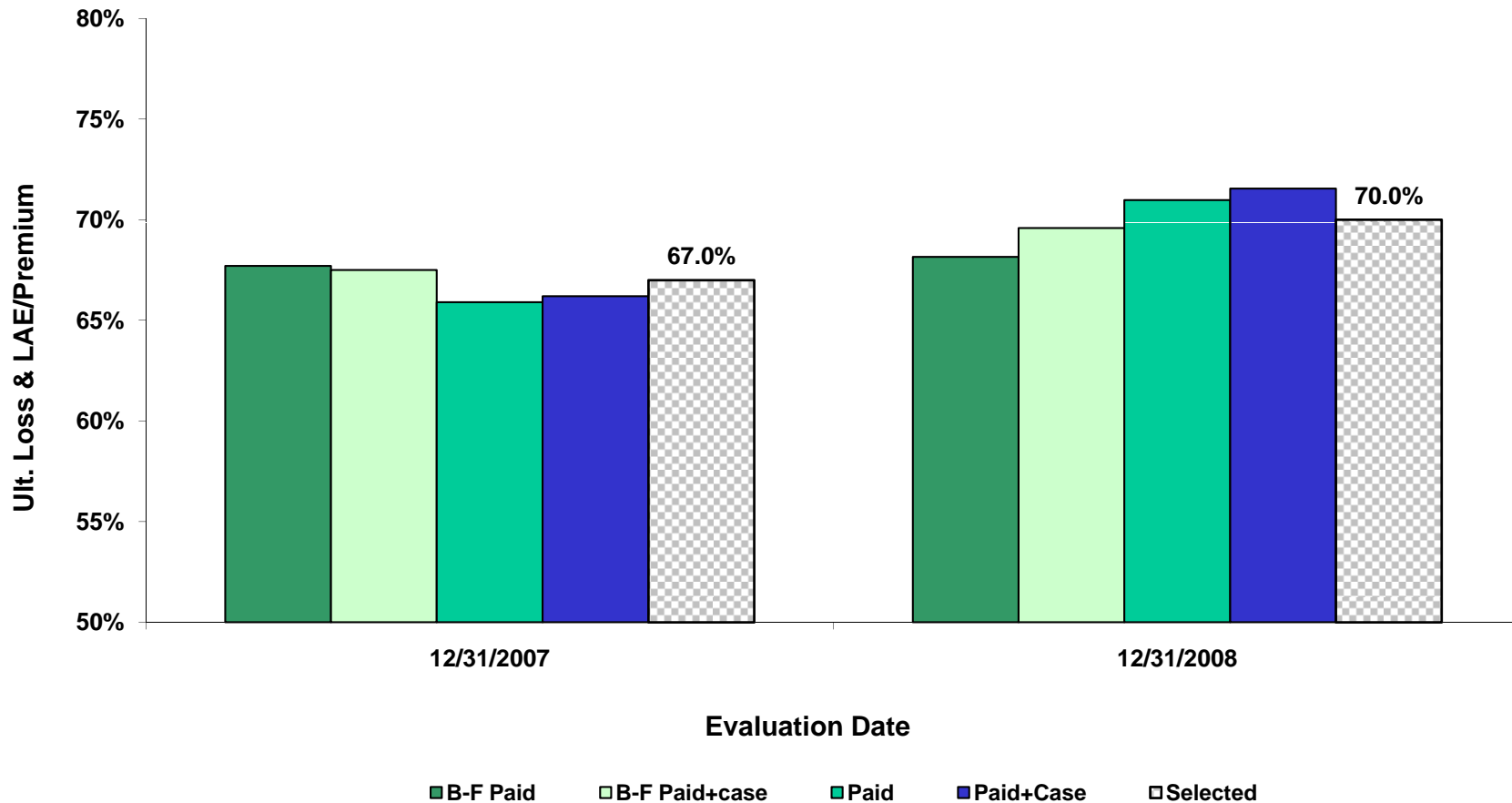
WC Loss & LAE Reserves – Private Carriers*



All methods include LAE

Comparison of Methods Accident Year 2007

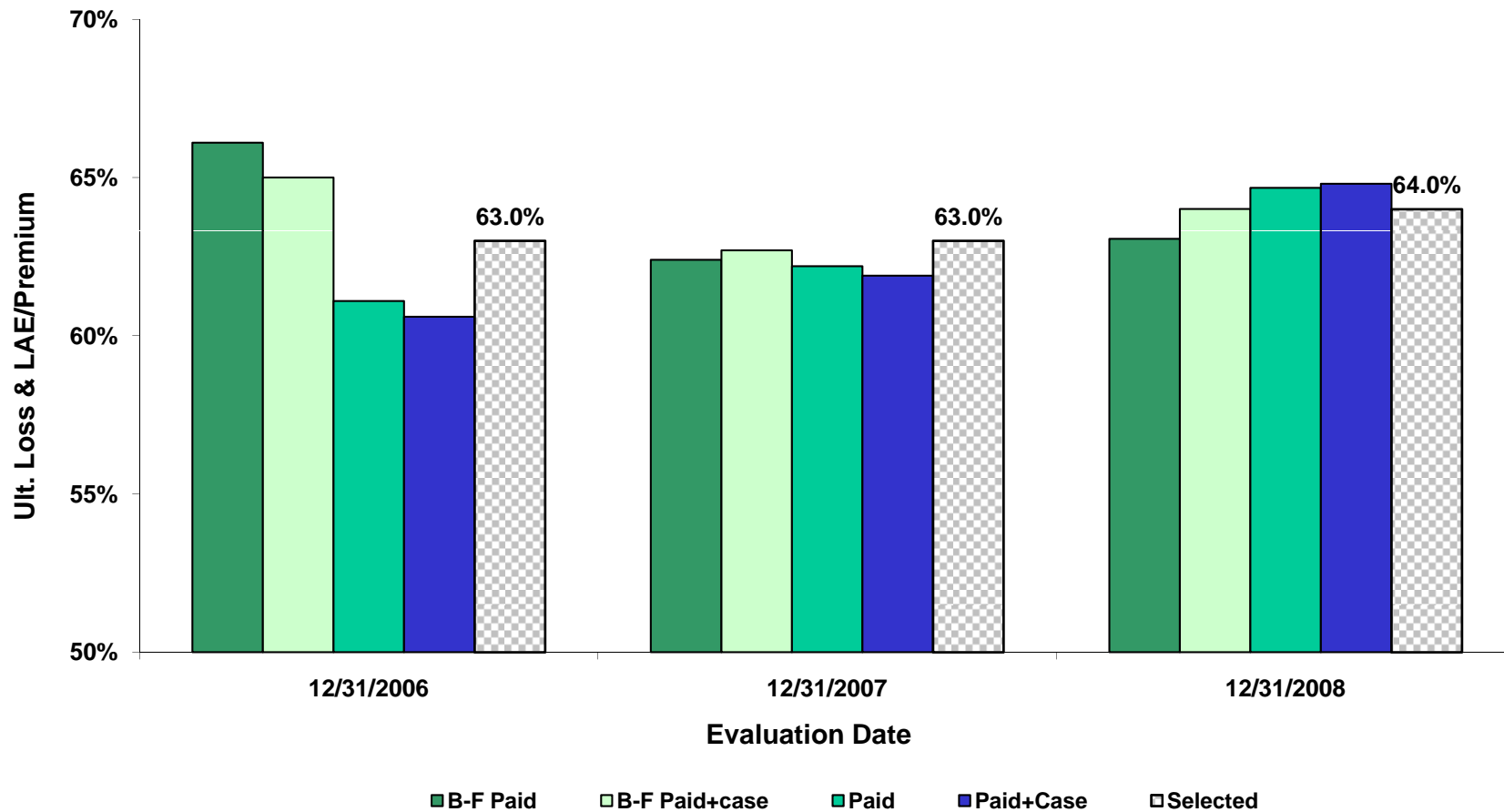
WC Loss & LAE Reserves – Private Carriers*



All methods include LAE

Comparison of Methods Accident Year 2006

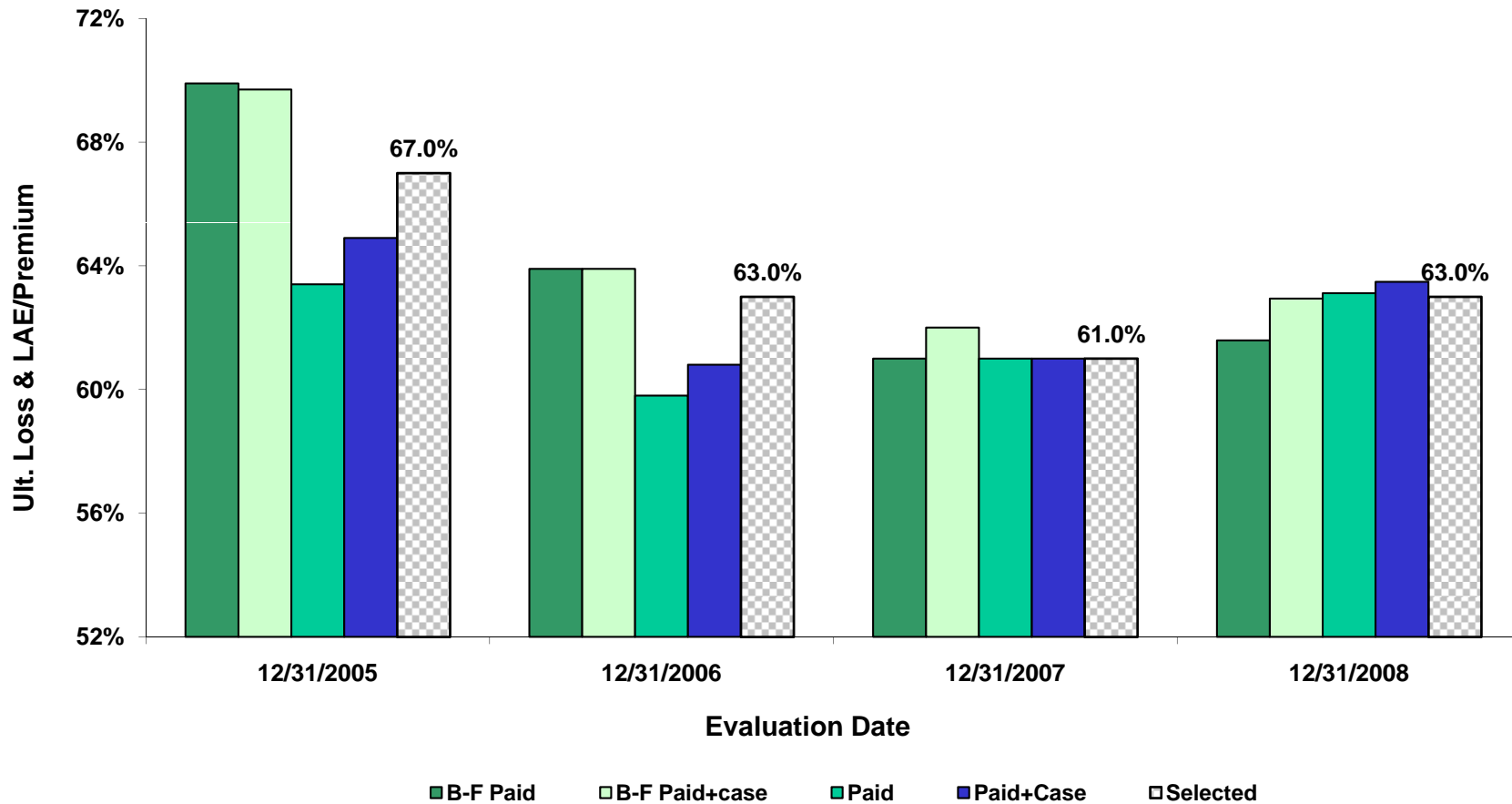
WC Loss & LAE Reserves – Private Carriers*



All methods include LAE

Comparison of Methods Accident Year 2005

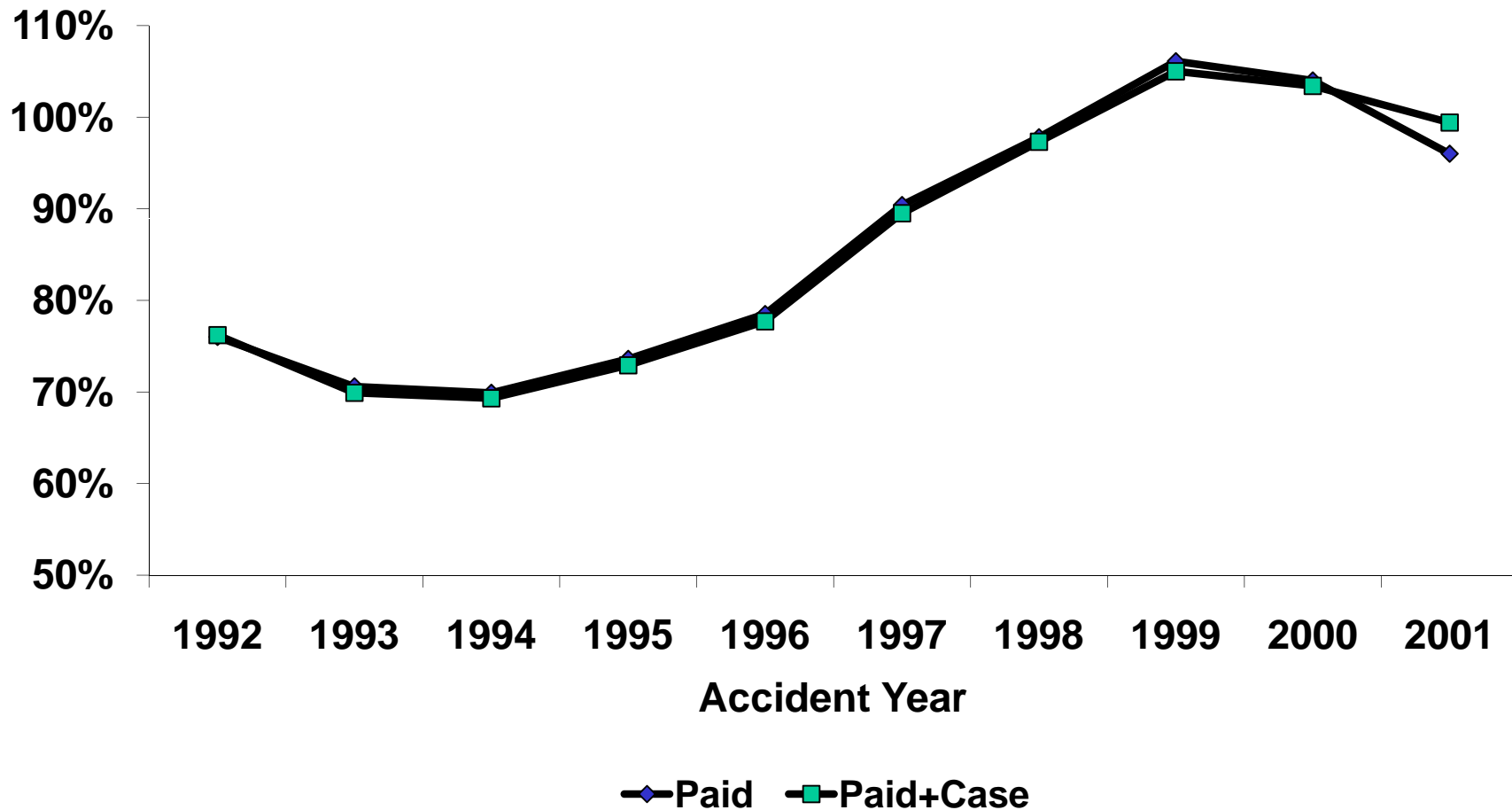
WC Loss & LAE Reserves – Private Carriers*



All methods include LAE

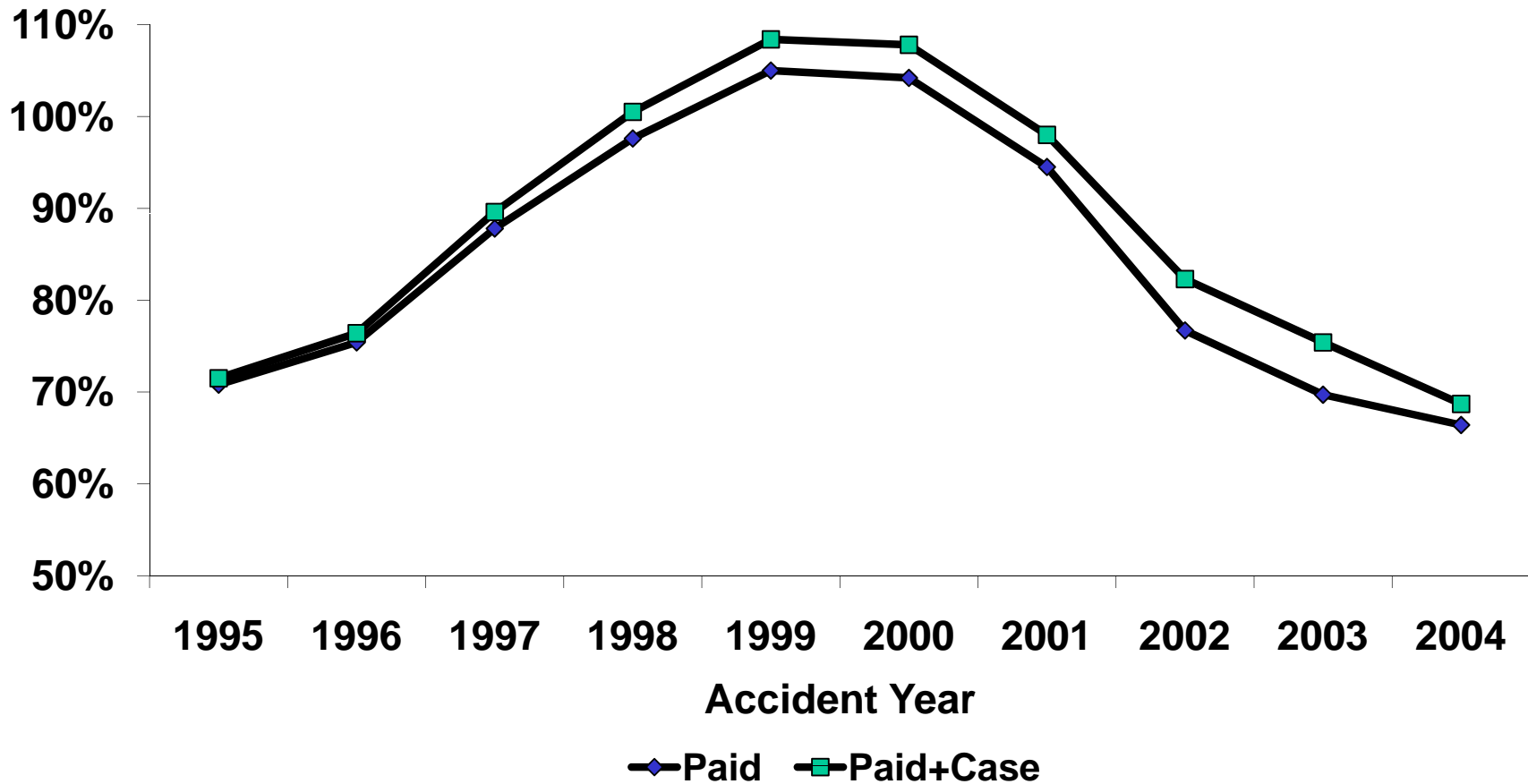
Paid vs. Paid+Case Loss and LAE Ratios Valued as of 12/01 (1992-2001)

WC— Private Carriers



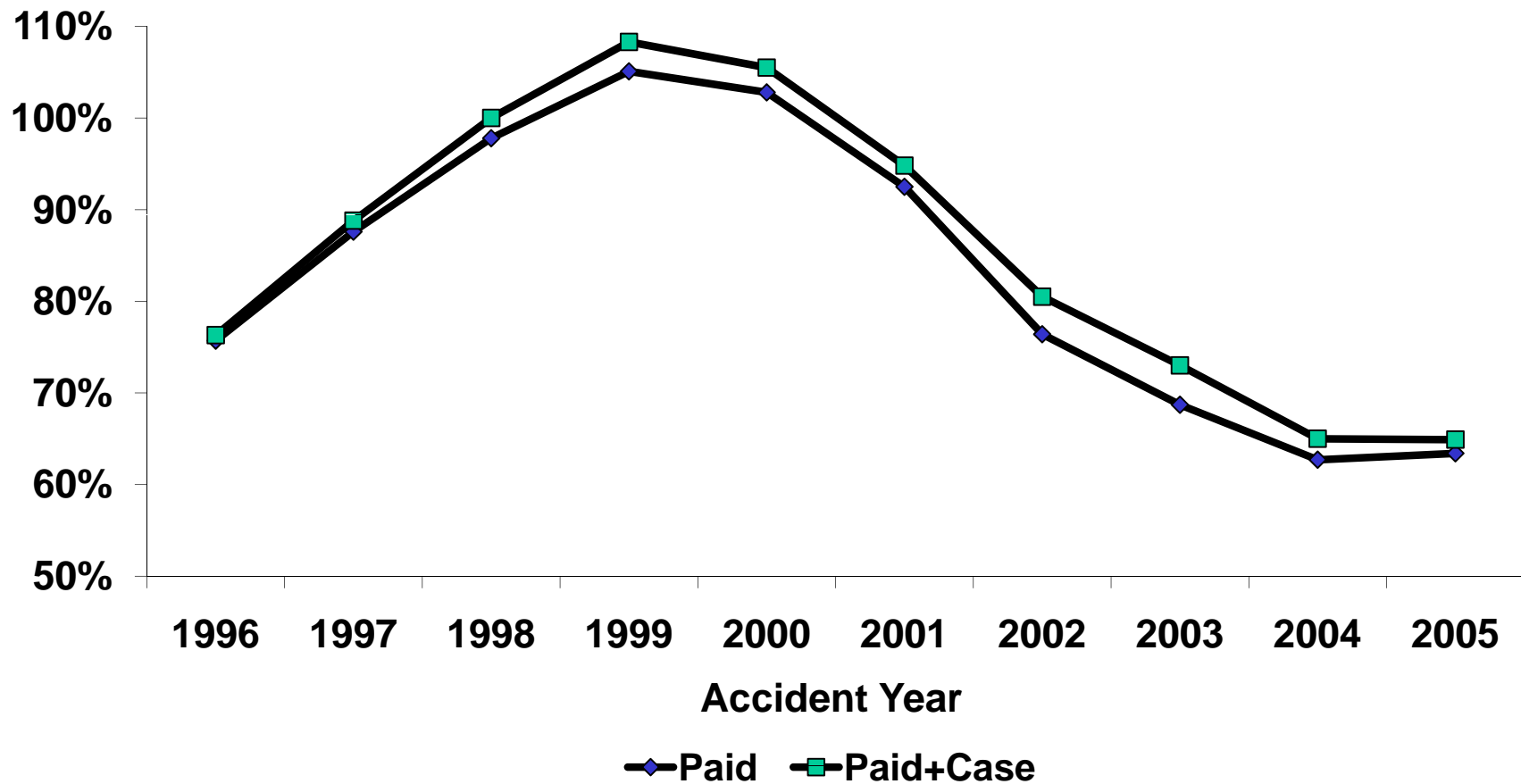
Paid vs. Paid+Case Loss and LAE Ratios Valued as of 12/04 (1995-2004)

WC- Private Carriers*



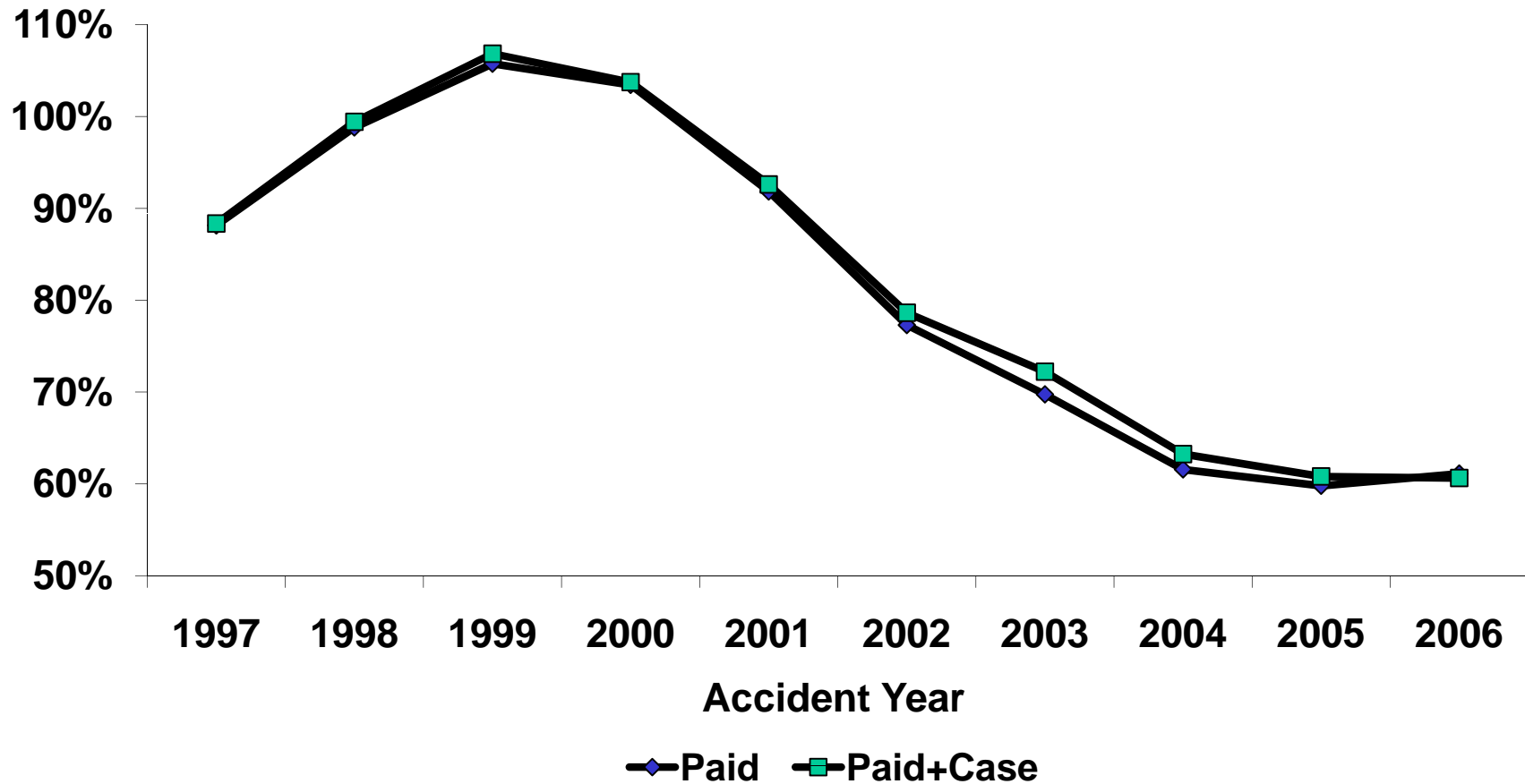
Paid vs. Paid+Case Loss and LAE Ratios Valued as of 12/05 (1996-2005)

WC- Private Carriers*

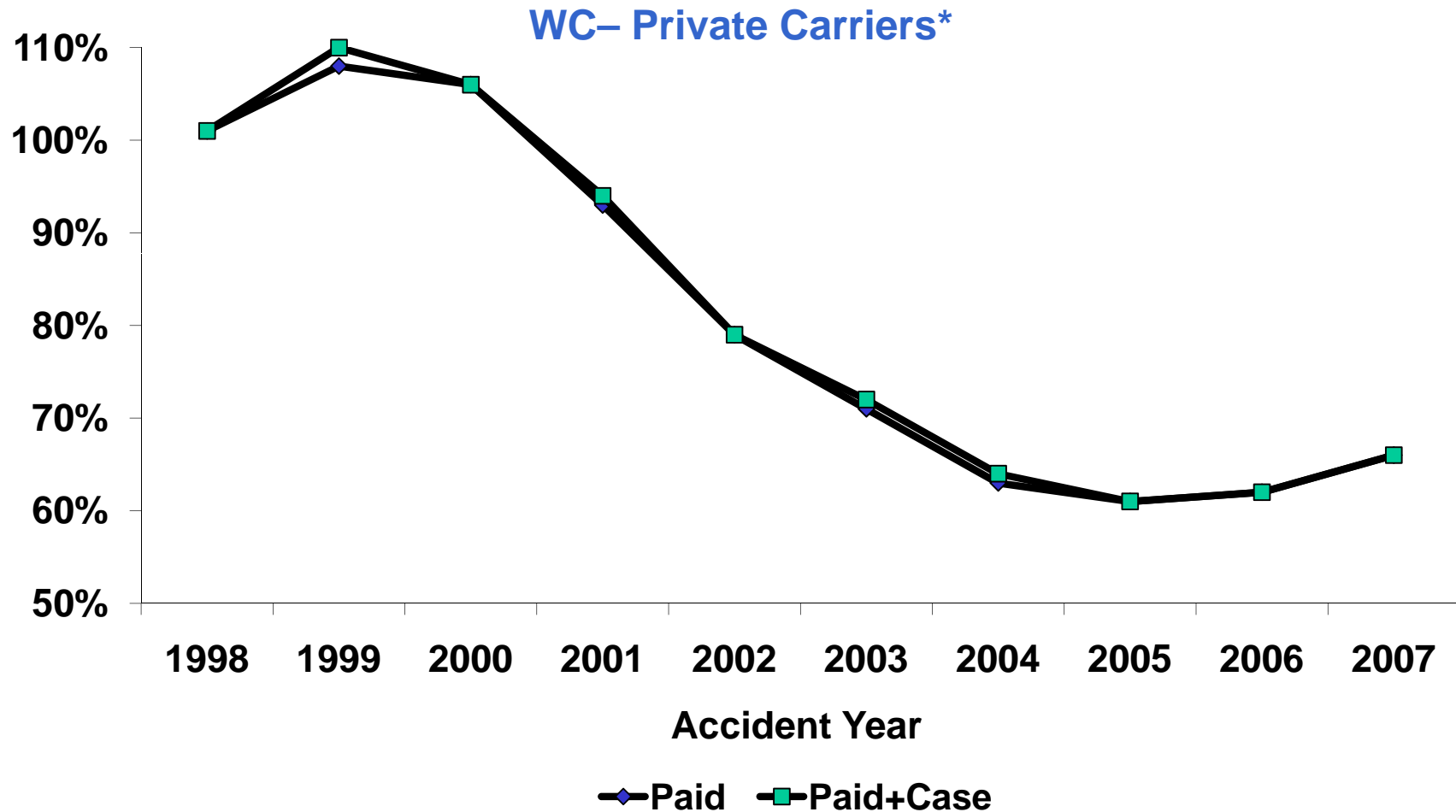


Paid vs. Paid+Case Loss and LAE Ratios Valued as of 12/06 (1997-2006)

WC- Private Carriers*

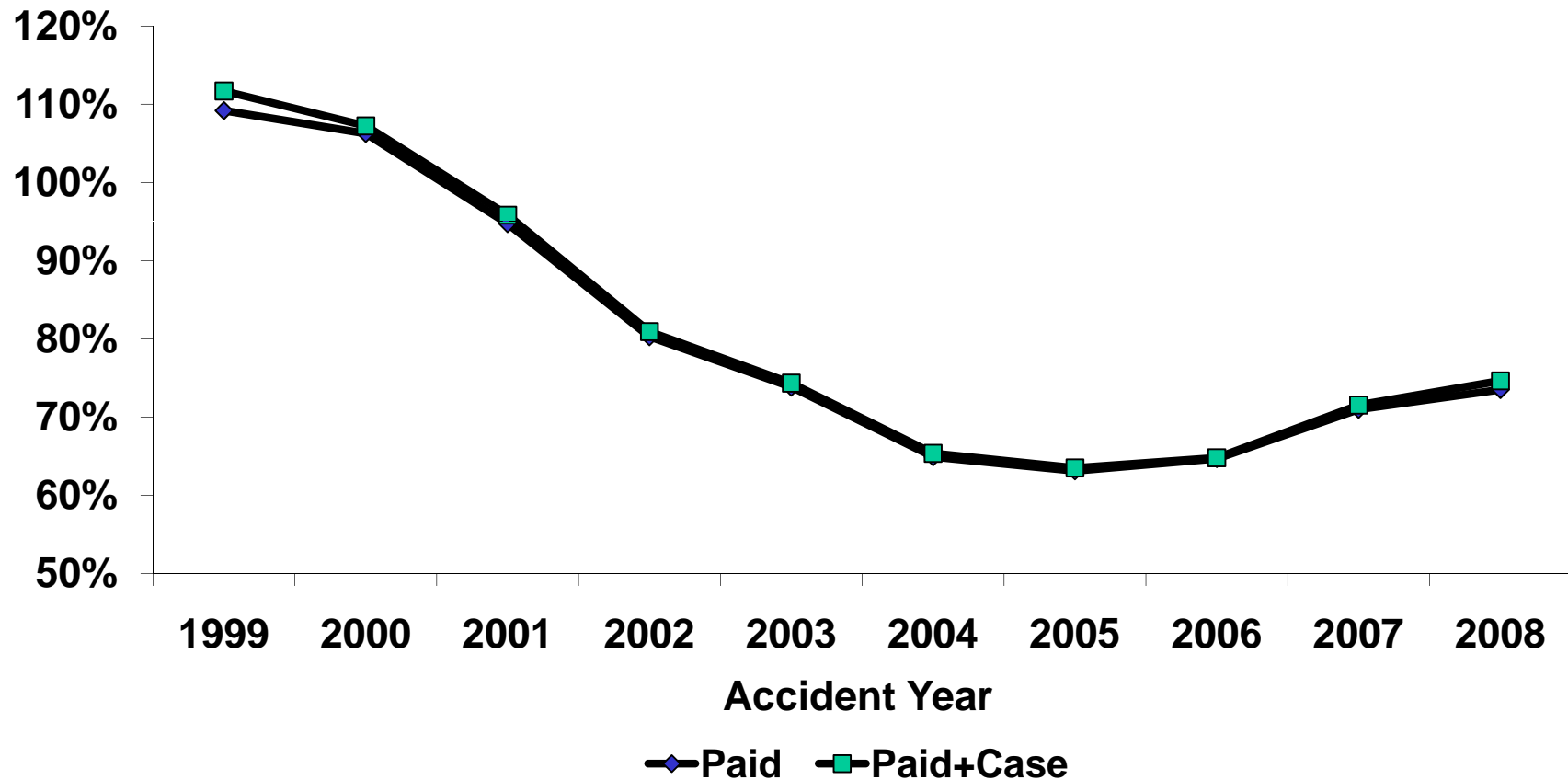


Paid vs. Paid+Case Loss and LAE Ratios Valued as of 12/07 (1998-2007)



Paid vs. Paid+Case Loss and LAE Ratios Valued as of 12/08 (1999-2008)

WC- Private Carriers*



Questions and Answers?