

CASUALTY · LOSS · RESERVE · SEMINAR

# CLRS

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## After the Wind Blows

### Property Reserving in Gulf Coast States

09/13/2021

# Introduction

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# Reserving Coastal Catastrophes

Primary Carrier Perspective

# After the Wind Blows: Property Reserving Consideration - Primary Carrier Perspective

- Like snowflakes, no two CAT events are the same
  - And apparently an accumulation of snowflakes in TX can nearly shut down the electrical grid!
- Knowing the event profile is critical to developing a perspective on ultimate loss
- Florida Marketplace Constantly Evolving
- Understanding reinsurance contracts to develop net perspective

# Reserving Toolbox

- Identifying similarities and differences across historical events
- Developing event specific patterns
- Catastrophe Models
- Claims team guidance

# Reserving Toolbox

- Primary Perils and Impacts to Freq/Sev:
  - Hail/Thunderstorm
    - Concentrated to one area or wide-spread? Size of Hail?
  - Hurricane
    - Wind Speed at landfall? Geographies impacted?
  - Winter Storm
    - In Gulf Coast States, really?
    - Freezing Pipes? Snow Accumulation?
- Litigation Potential
- Late Claim Behavior
  - Door to Door knocking, advertisements, Roofclaim.com Bowl

# Florida Homeowner Claim Environment

COUNTDOWN TO KICKOFF: **130** DAYS **22** HRS **33** MIN **39** SEC



[THE BOWL](#)

[TICKET INFO](#)

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***DON'T MISS THE 2021  
ROOFCLAIM.COM BOCA RATON BOWL!***



DECEMBER 18, 2021 | 11 AM ET  
FAU STADIUM | BOCA RATON, FL

[MORE INFO →](#)

# Florida Catastrophe Events

- 2016: Hurricane Matthew (CAT 1; east coast)
- 2017: Hurricane Irma (CAT 4: southwest coast; CAT 1: rest of state)
- 2018: Large thunderstorms becoming more common (1-2 per year)
  - Claim filing tail of events extends beyond historical norms
  - Litigation from Irma expanding out to other events
    - AOB reform shifted Third Party suit to First Party suits
- 2018: Hurricane Michael (CAT 5; panhandle) & 3 Tropical Storms
- 2019: Brevard Hail Event
- 2020: 3 Tropical Storms & Hurricane Sally (panhandle) & Hurricane Eta (Tampa Bay)

# Florida Catastrophe Patterns

- Moving Target for reserving. Each subsequent event seems to show some worsening as compared to prior events.
- Public Adjusters, Contractors, and Litigators becoming more involved in settlement discussions and in many instances jumping the claim straight into suit.
- Does Senate Bill 76 have enough to change the pattern?
- Hurricane Michael Storm Surge:
  - What is water vs wind?
  - What happens when contractors are sparse and work not getting done?

# Texas Catastrophe Events

- Every Year: Hail, hail, and more hail
  - Are events getting worse or is there just more houses to hit?
  - Is there really supposed to be this much hail in coastal counties?
- 2017: Hurricane Harvey (CAT 4: central coast; 7 days of rain in Houston)
- 2020: Hurricane Hanna (CAT 1: southern coast)
- 2021: Winter Storm Uri (freezing pipes)

# Texas Catastrophe Patterns

- Event patterns tend to be fairly consistent
  - Early weather season events will be low volume until end of weather season, then will see an increase in volume
- No clear bad players in market. Just a general consumer awareness on when to file moderate hail damage
- What are the downstream impacts from Uri?
  - How to reserve an event unlike any other in company history? What kind of pattern will emerge?
  - Did carriers have enough non-hurricane reinsurance protection?
  - Are there residual impacts on houses without a burst pipe?
  - Can this happen again?

# Louisiana Catastrophe Events

- Every Year: Northern LA Hail and Thunderstorm activity
- No landfalling hurricanes between 2013 and 2019
- 2020: Hurricane Laura (CAT 4; August 27)
- 2020: Hurricane Delta (CAT 2; October 9th)
- 2020: Hurricane Zeta (CAT 3; October 28th)



# Louisiana Catastrophe Patterns

- How to handle overlapping events.
  - Laura, Delta, and Zeta all had overlapping wind bands
  - What to do in claims/reserving when a policyholder has damage from multiple events.
    - One claim?
    - Two claims?
    - Deductible impacts?
    - Severity estimates?
    - What development pattern will emerge for each event?

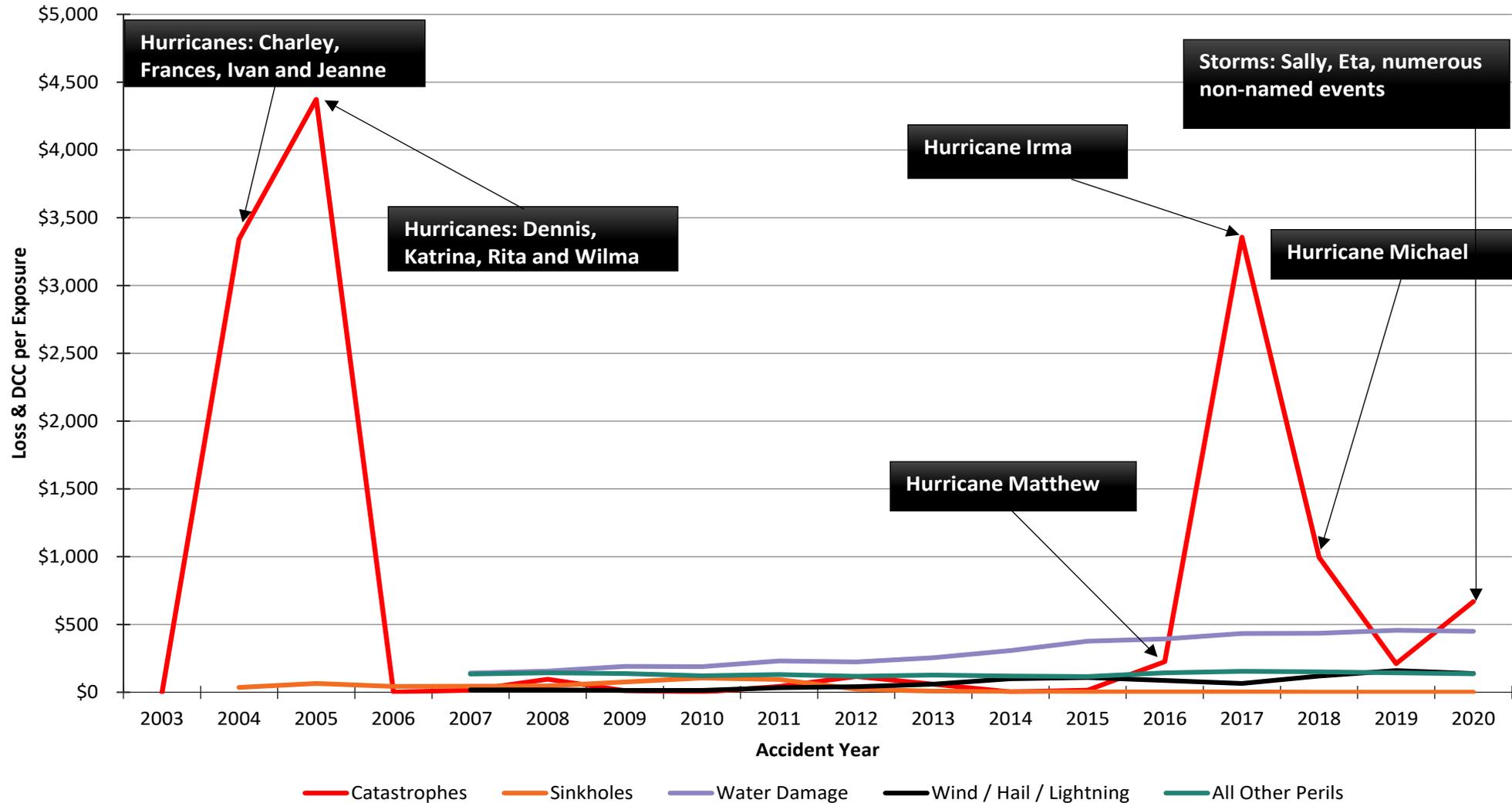
# Reinsurance Implications

- Develop understanding Contract Terms
- Recognize that selections impact reinsurers' views of events
  - Tail changing over time
  - Commutations
  - Collateral Release/Claw-back
  - Timing of analysis overlapping with timing of pricing negotiations

# Financial Implications & Catastrophe Reserving Considerations

The background features a complex, abstract design of overlapping geometric shapes. The top half is a solid light yellow. The bottom half is filled with a pattern of overlapping squares and rectangles in various colors: purple, orange, green, and blue. The shapes are semi-transparent, creating a layered effect. The overall aesthetic is modern and professional.

# FL Loss Costs by Cause of Loss

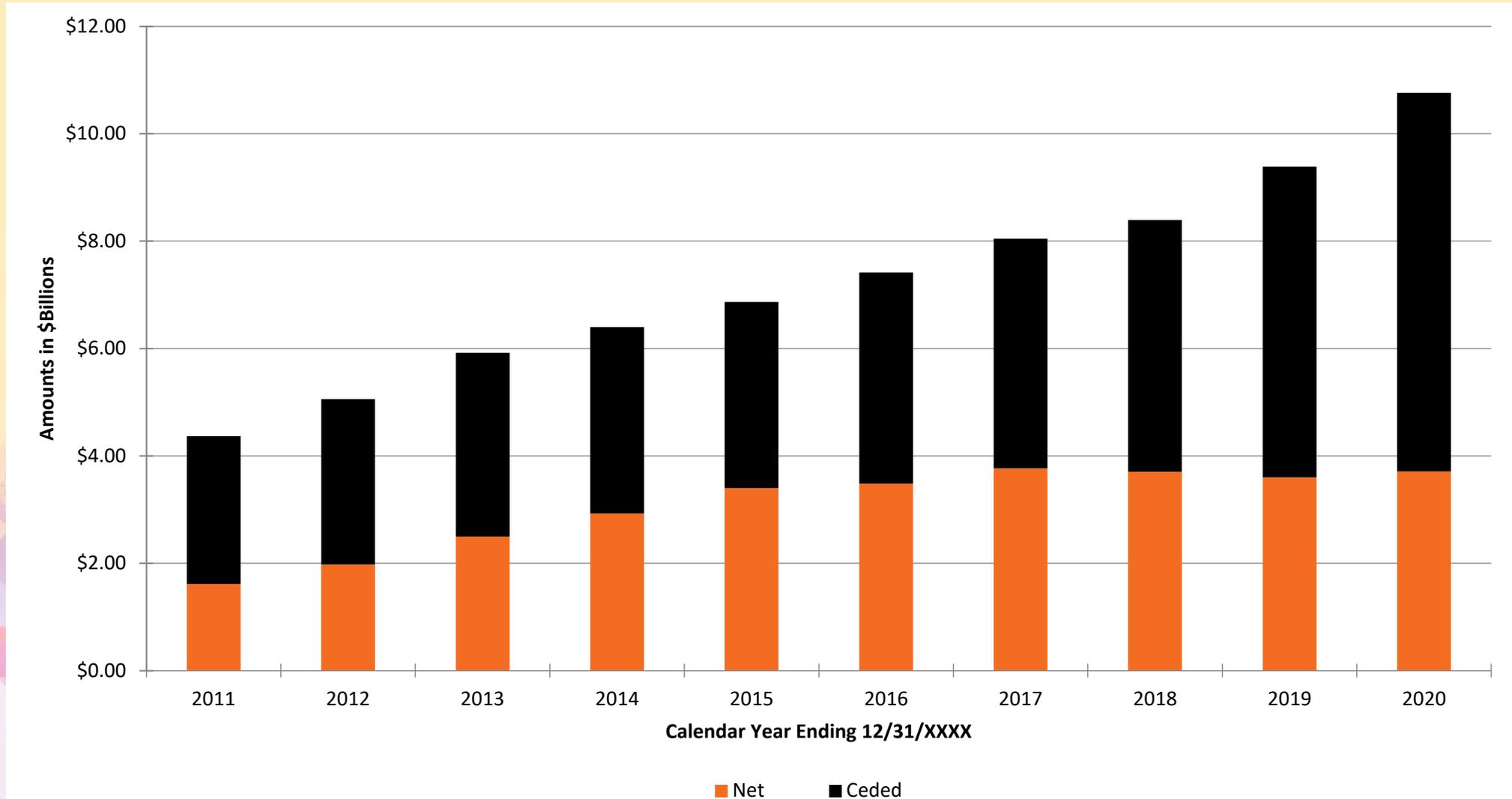


# Balance Sheet

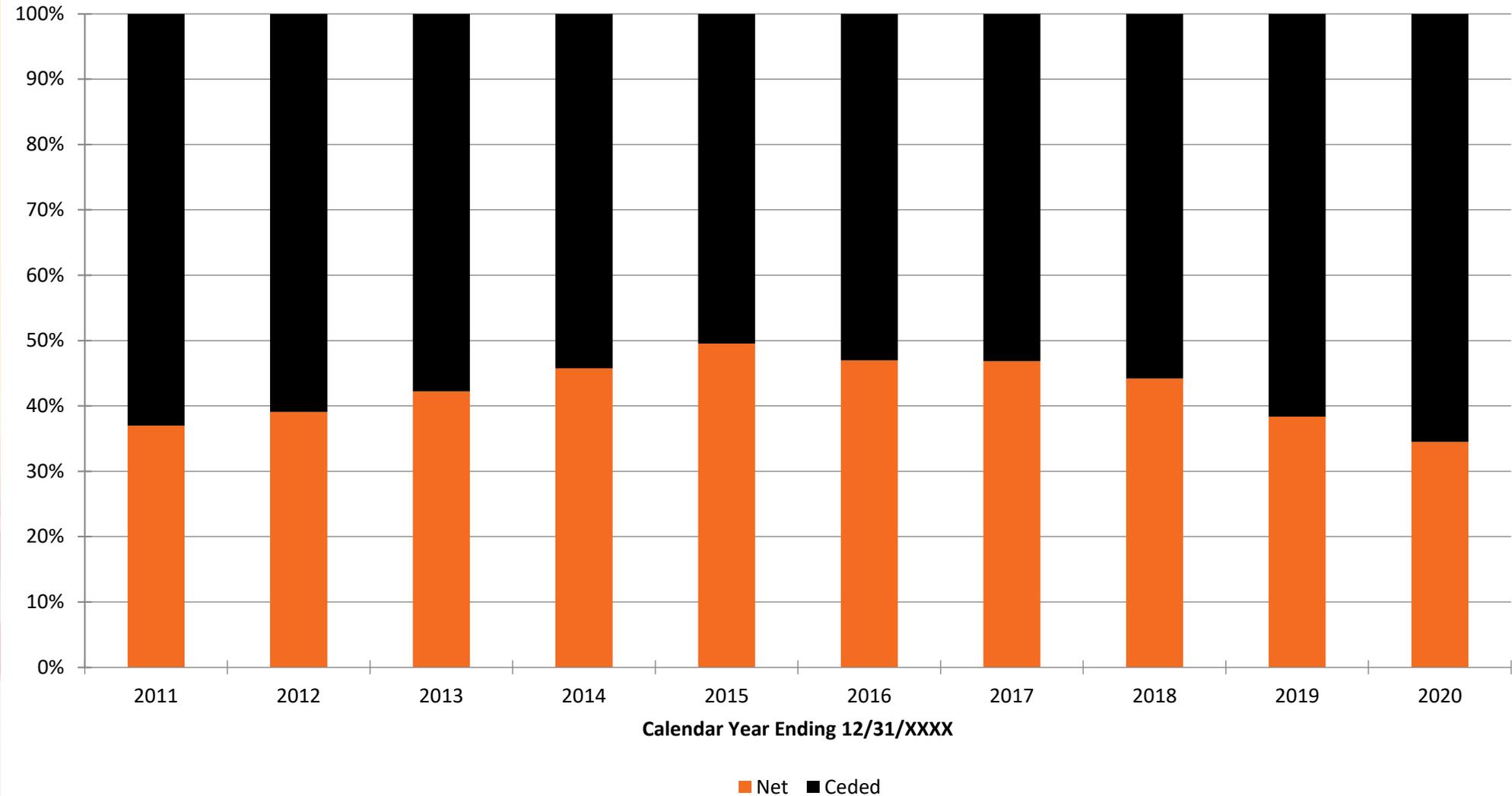
- Calendar years 2011 through 2020
- Presented for a sample of Florida-domiciled homeowners insurance companies
  - Majority of premium associated with FL HMP annual statement line
  - Generally, more than 10 years of experience for the group



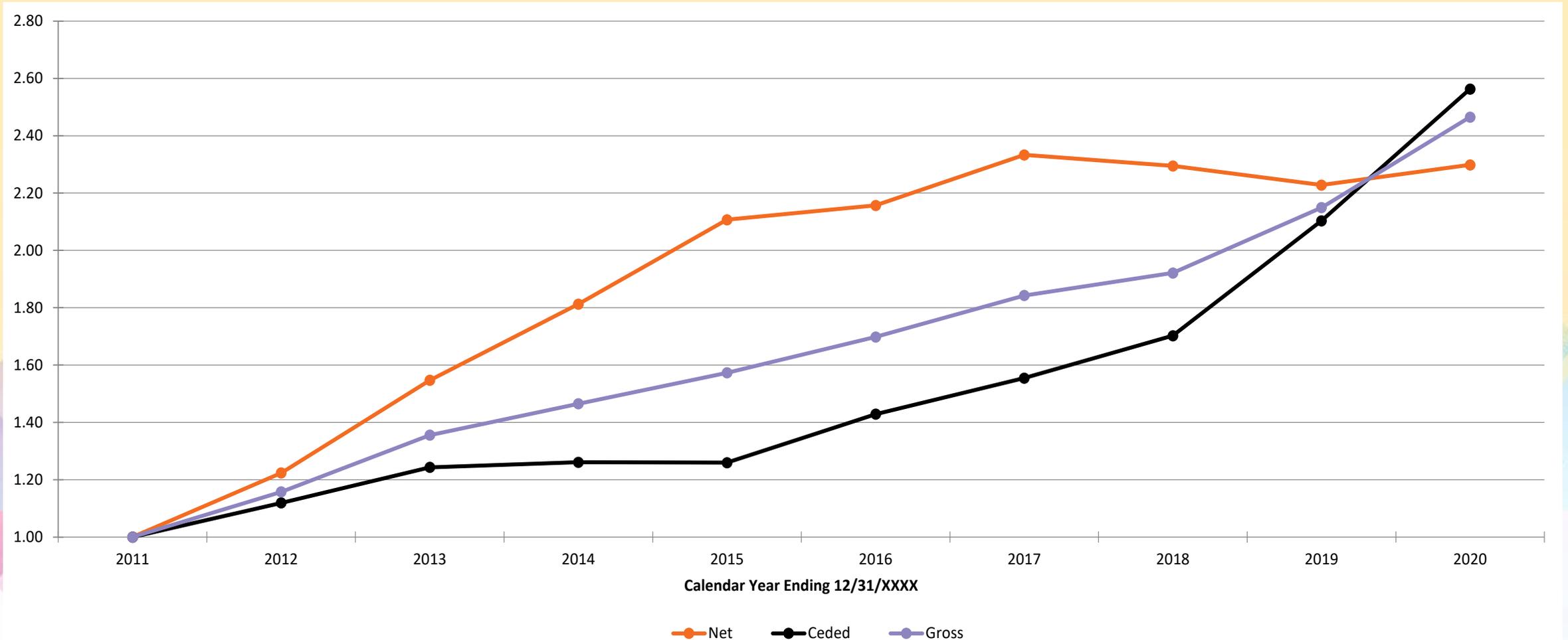
# Gross Written Premium by Component



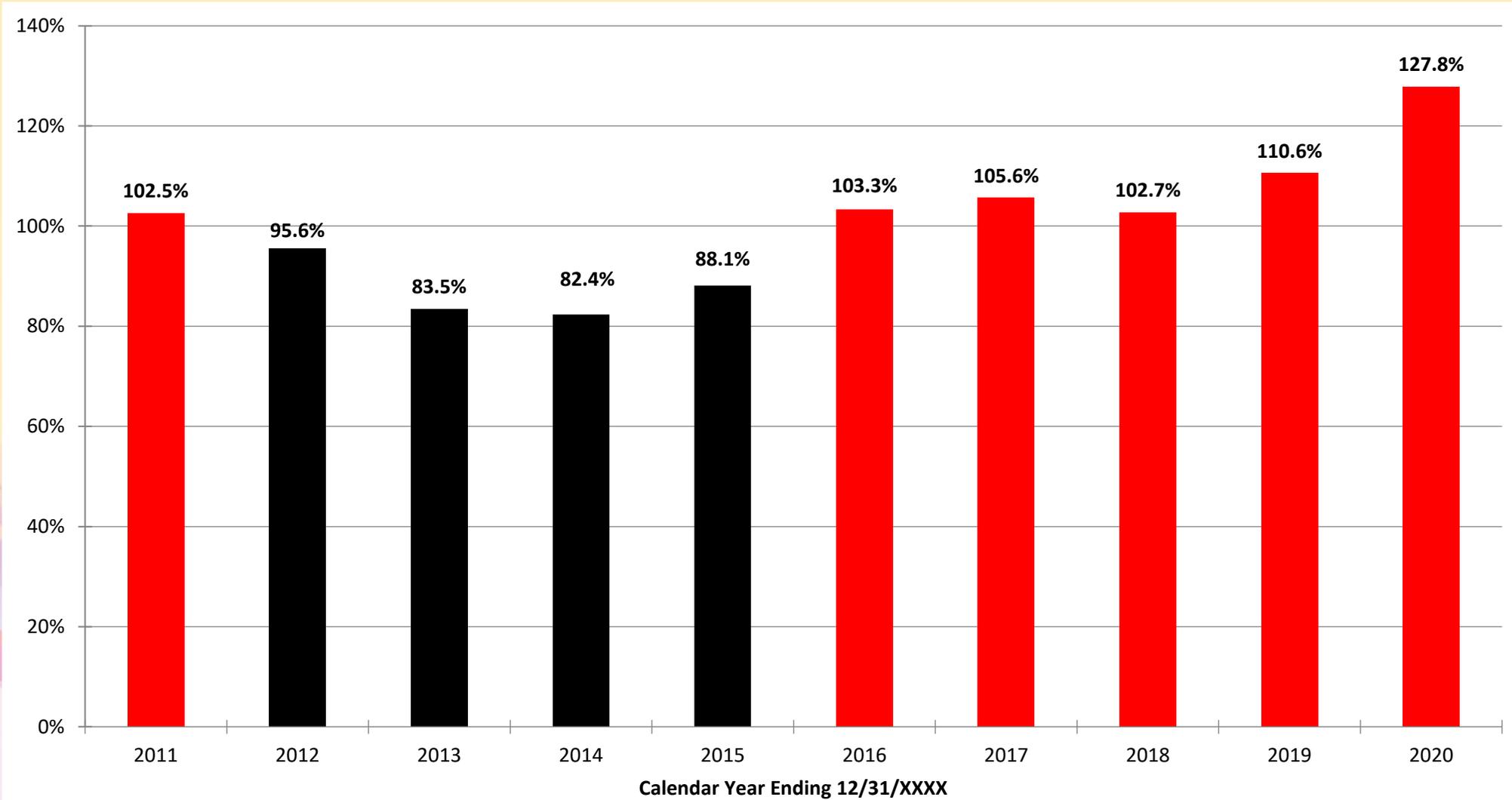
# Gross Written Premium Allocation



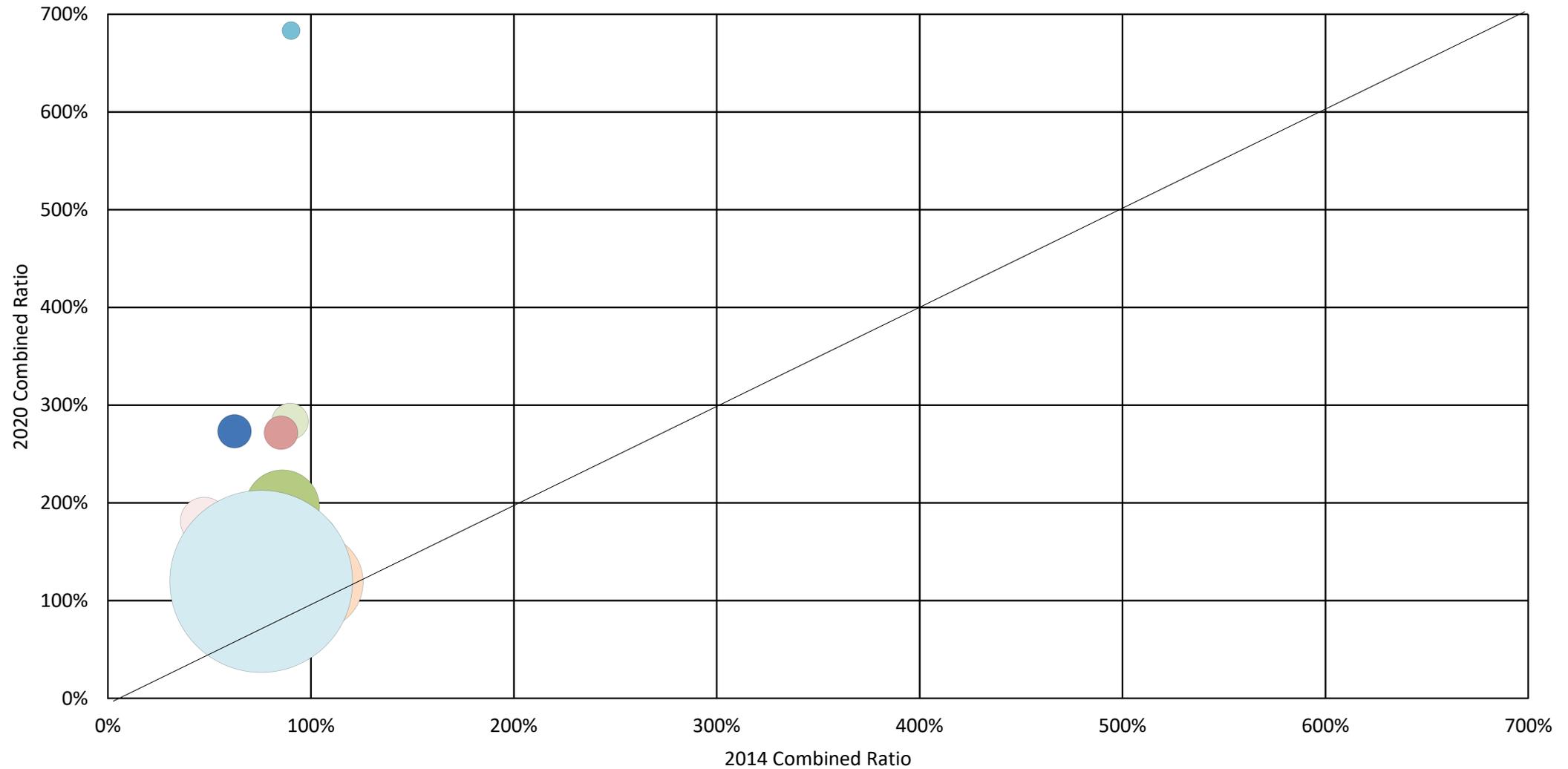
# Gross Written Premium: Indexed to 2011



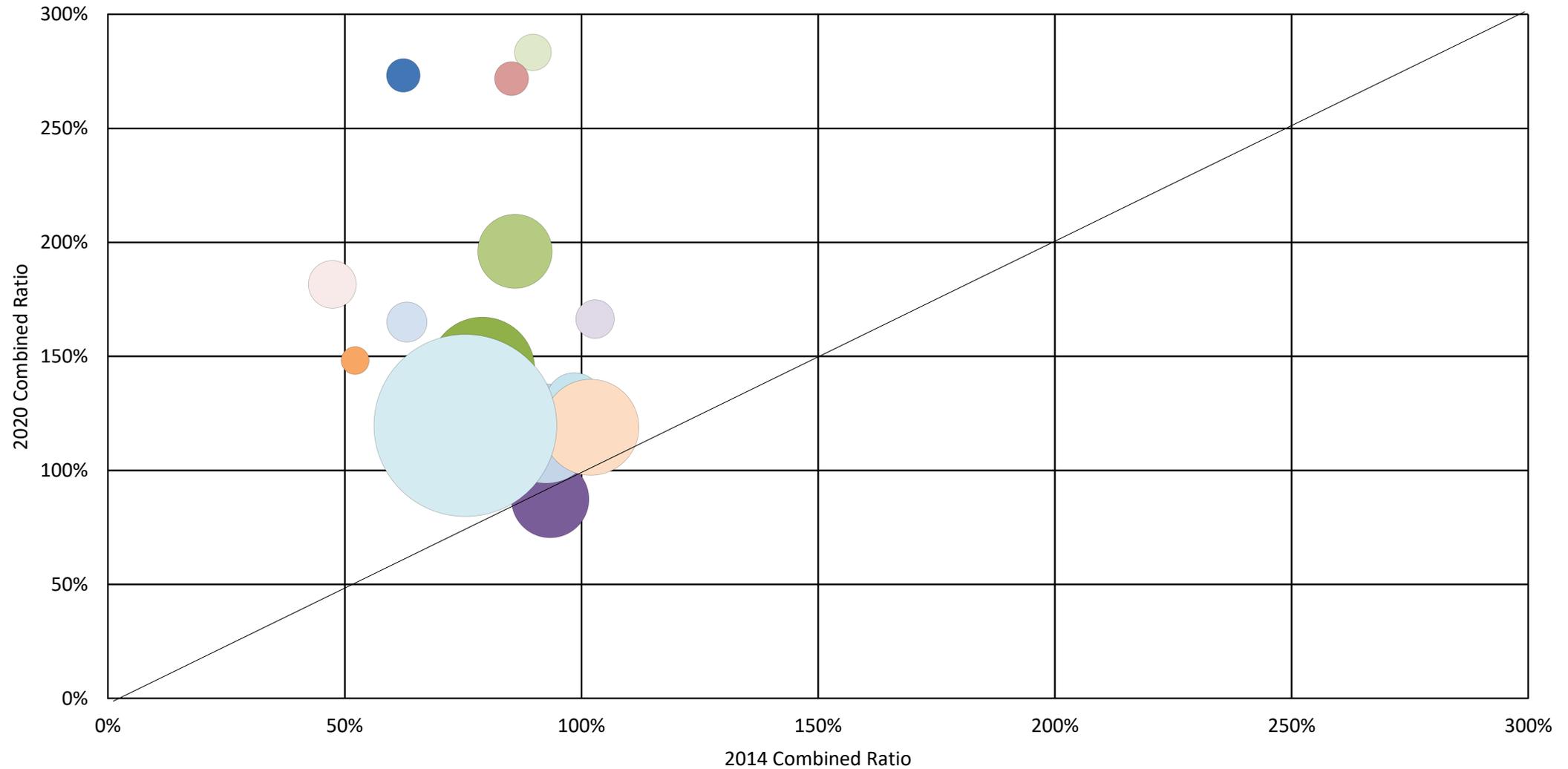
# Combined Ratio



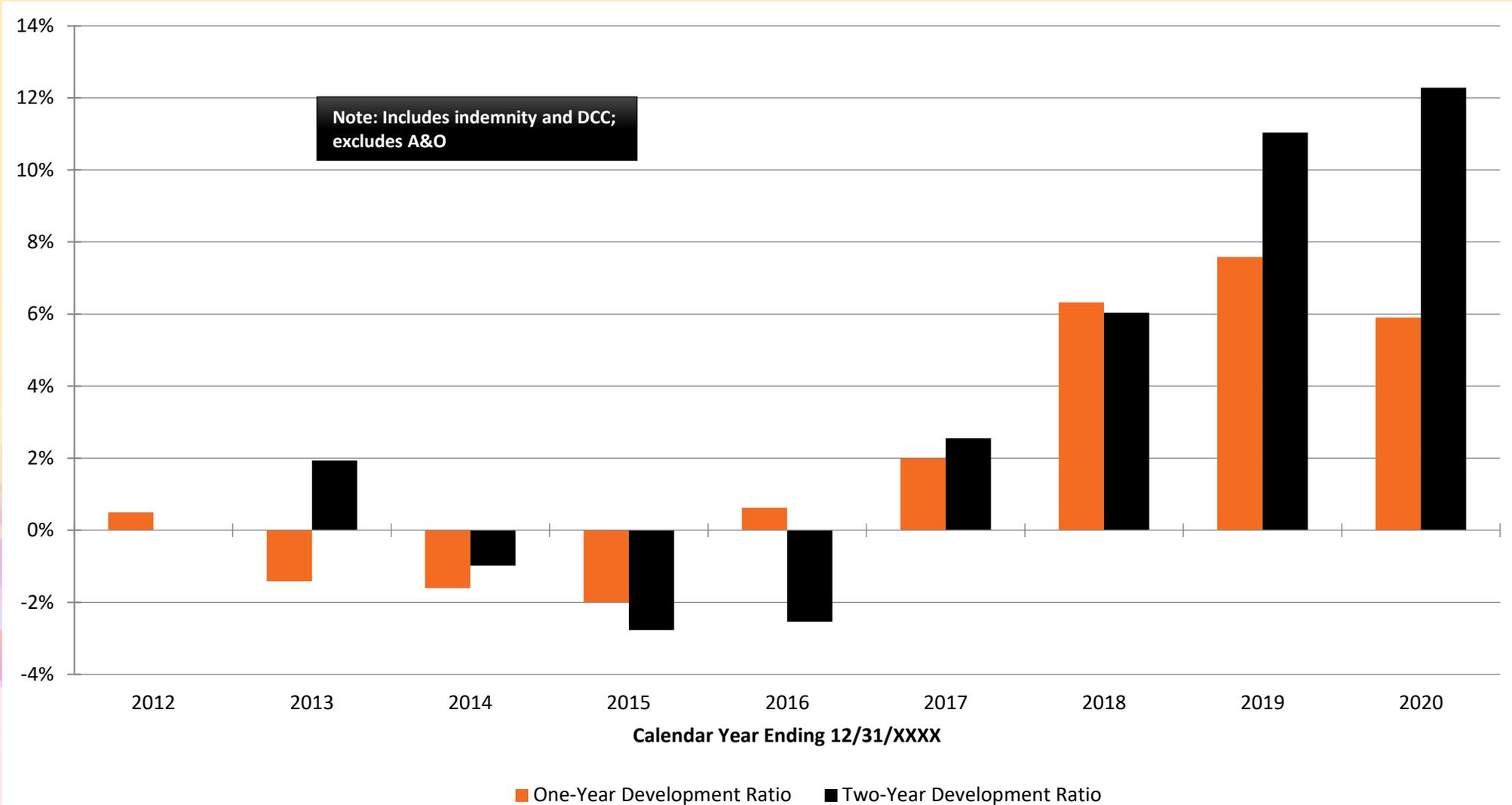
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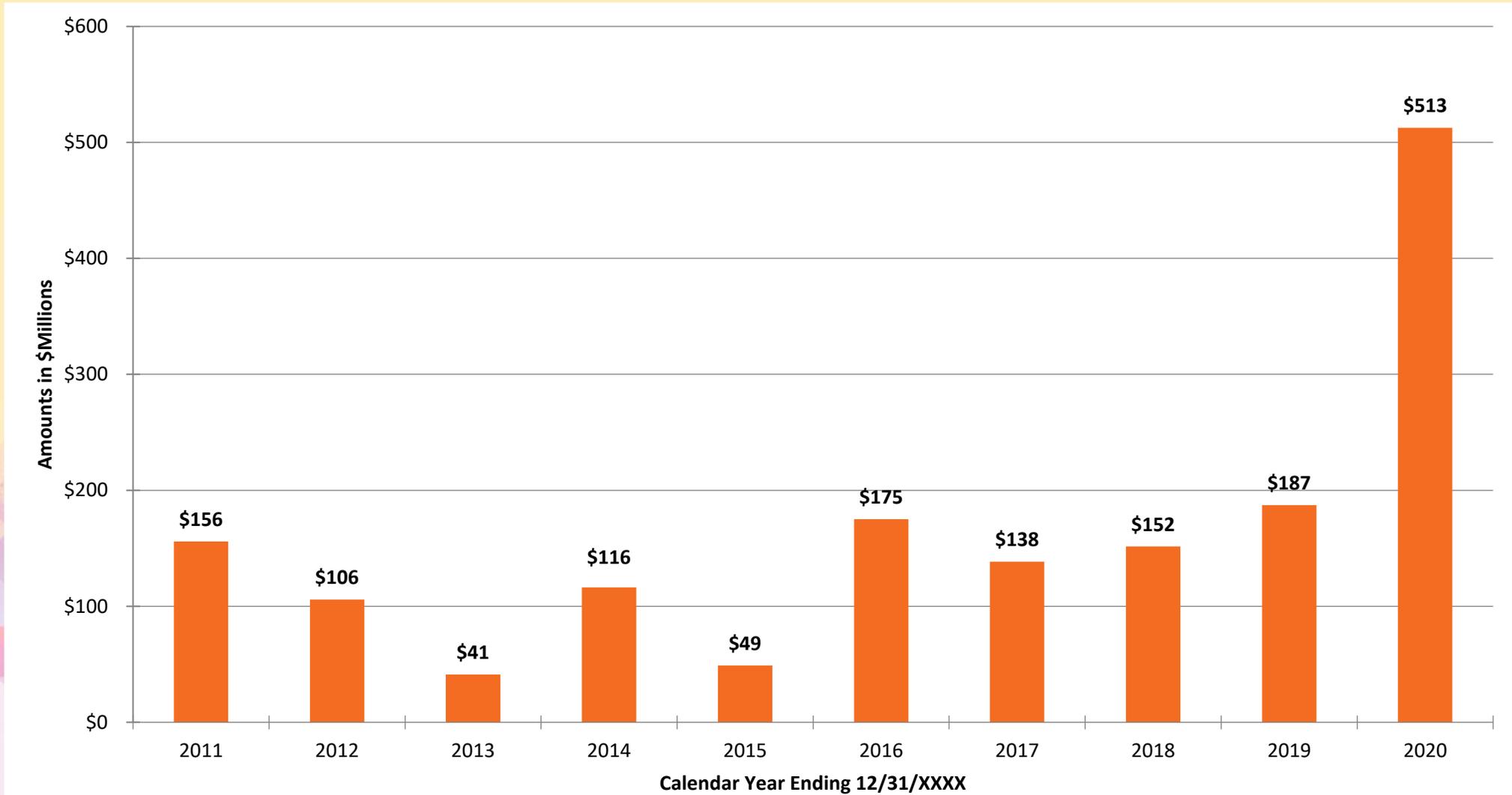
# Combined Ratio



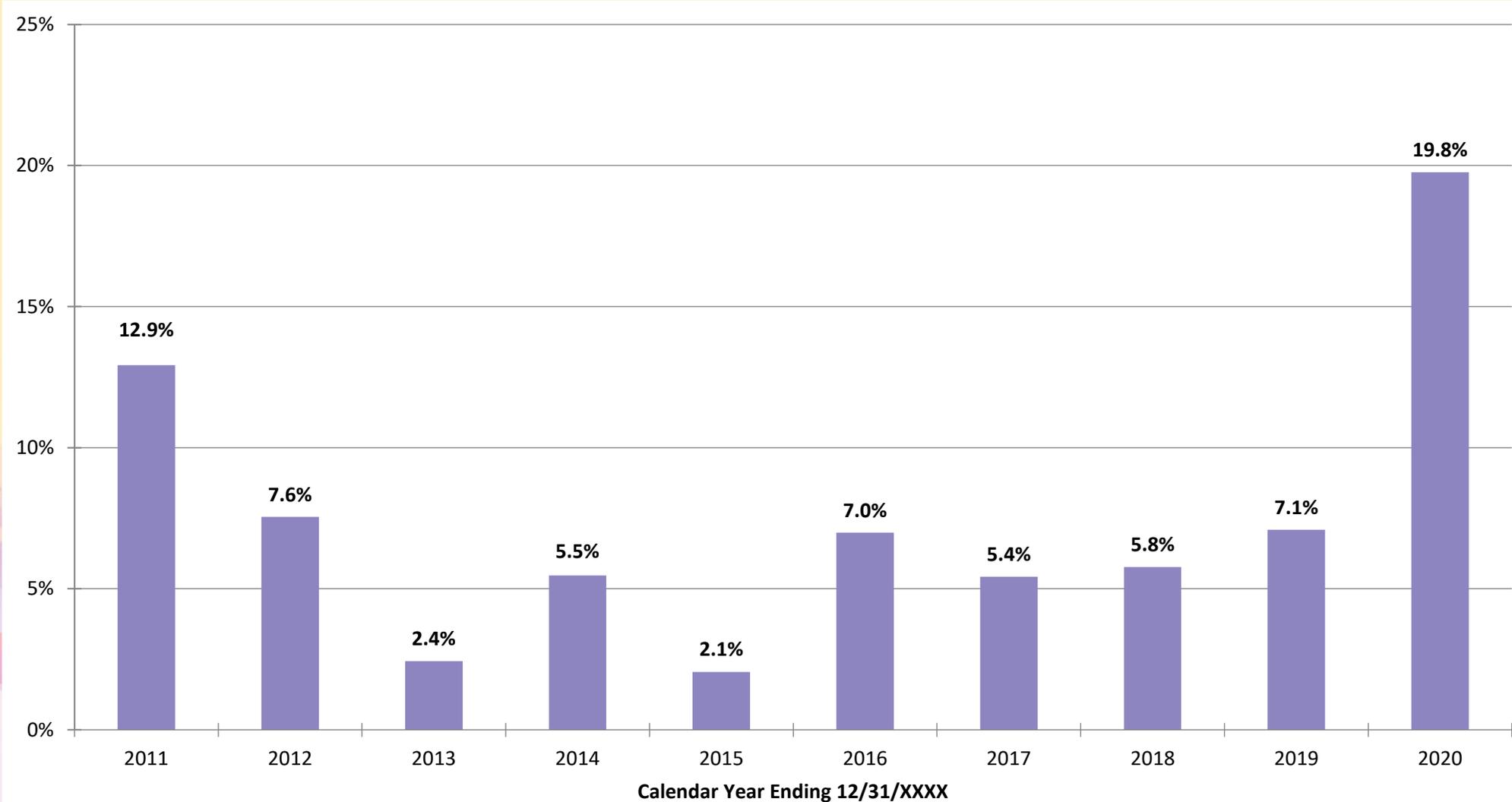
# % Change in Net Ultimate Loss & DCC to Prior Surplus



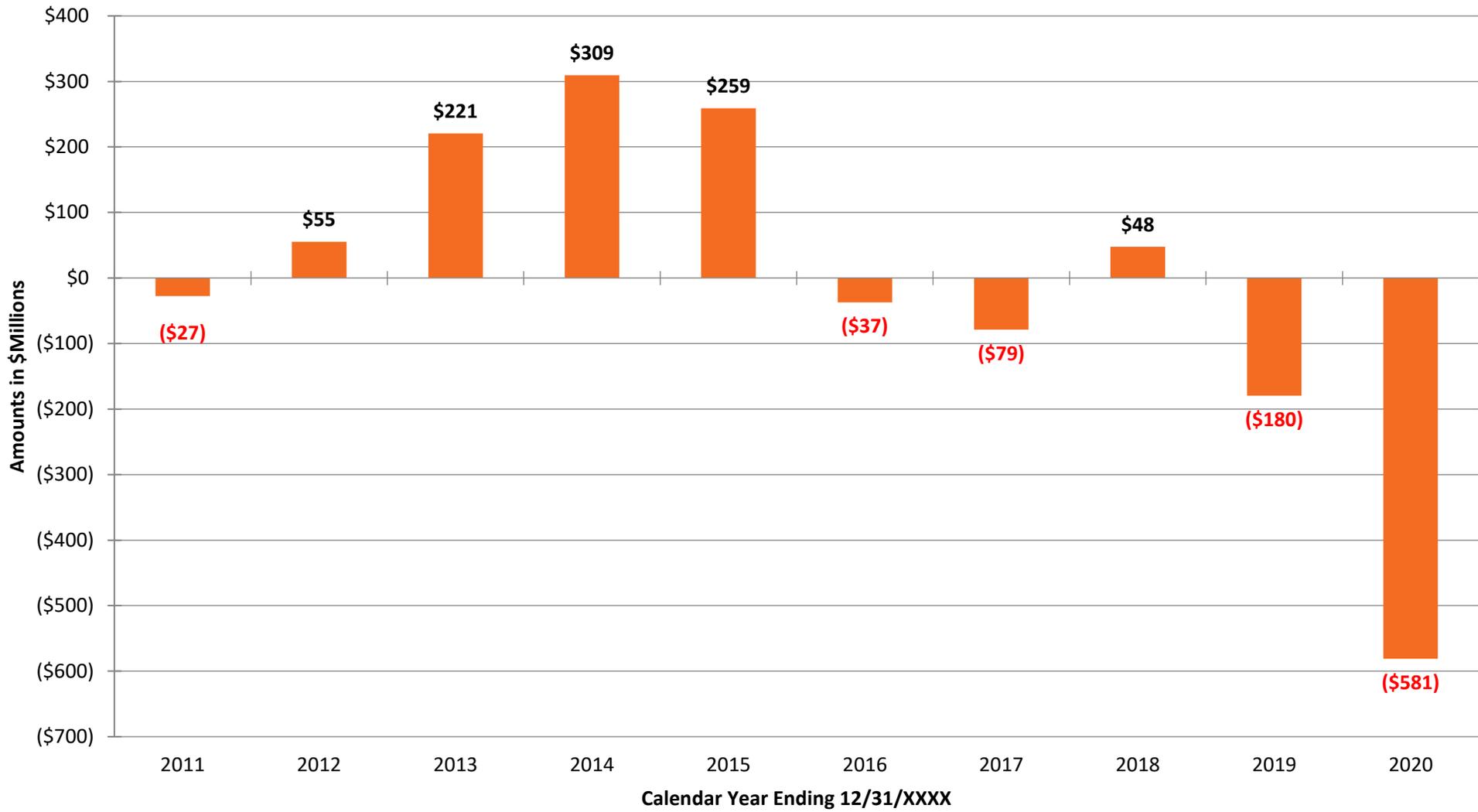
# Paid-In Surplus



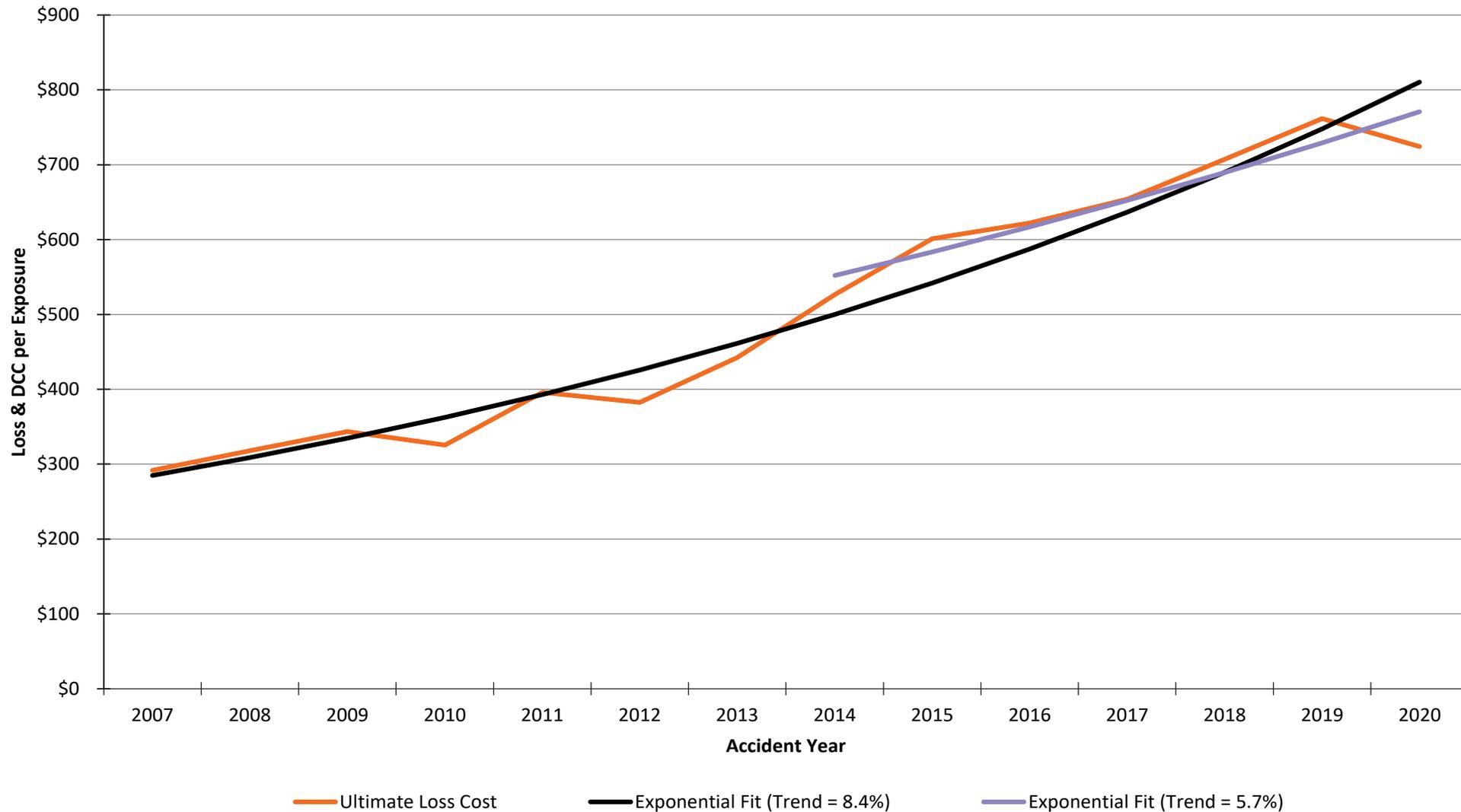
# Ratio of Paid-In Surplus to Total Surplus



# Net Income



# FL Non-CAT Loss Costs



# Catastrophe Claims: Reserving

- Reinsurance Association of America (RAA) patterns
- Company historical patterns
- Hurricane model expected loss & LAE - BF method input
- Claim decay approach  
occurrence = claims-made + tail (counts & averages)
- IBNR-to-case ratio approach

# Catastrophe Claims: Challenges

- Reluctance to rely on historical CAT development patterns
  - Change in statute of limitations
  - Florida's state of readiness
  - Loss creep
- Higher than normal LAE
- “Re-opened” claims - what deductible?
- Claim reclassifications
- Increased and protracted claim reporting
- Protracted claim settlement
- AOB impact on CAT XOL reinsurers and pricing

# Reinsurance and Property Cat Reserving

Operational and Actuarial Considerations

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**Operational Considerations – Reinsurance Reserving**

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**Development History – Historical and Recent Events**

**3**

**Special Considerations – Type of Cedent and ILS**

# Reinsurance Reserving - Standard Challenges

## Homogeneity

- Line of business
- Type of contract (facultative vs treaty)
- Layer (working versus cat)
- Type of cedent

## Reserve Leveraging

- Excess of Loss introduces leveraging of reserves
- Primary trends or volatility magnified in XoL layers

## Data Challenges

- Time lags – up to a quarter (or more)
- Lack of granularity
- Different formats for different cedents

# Reinsurance Reserving

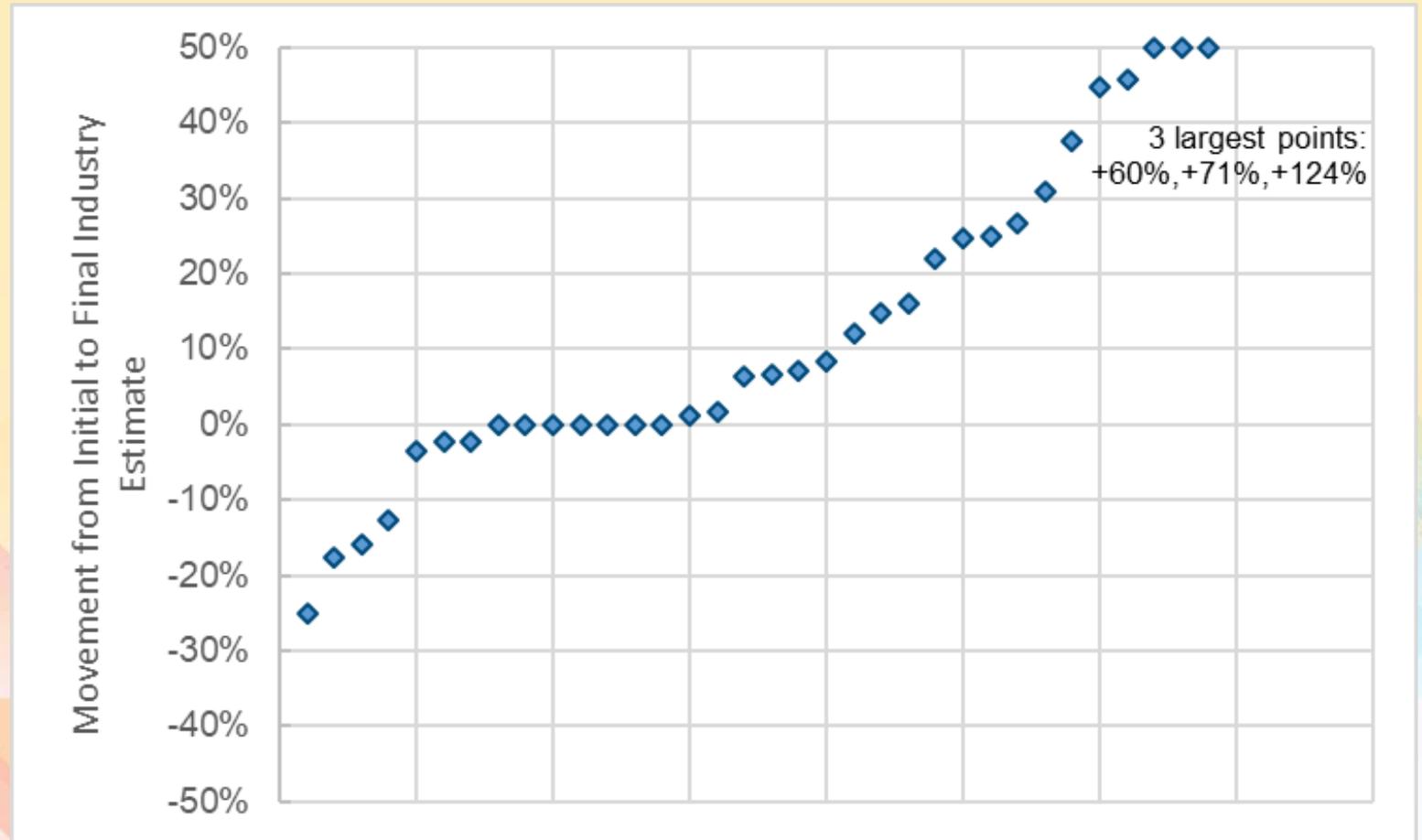
What happens after a major catastrophe?

Topic	Cat Impact	Overall Uncertainty
<b>Homogeneity</b>	<ul style="list-style-type: none"><li>▪ Cats impact several different classes of business (e.g., treaty and facultative property)</li><li>▪ Should event be carved out to stand on its own?</li></ul>	<b>High</b>
<b>Reserve Leveraging</b>	<ul style="list-style-type: none"><li>▪ Catastrophes put increased focus on XoL layers</li><li>▪ Working layers may be fully blown</li><li>▪ Higher exposed layers are often volatile to reasonably small fluctuations in the overall event loss</li></ul>	<b>High</b>
<b>Data Challenges</b>	<ul style="list-style-type: none"><li>▪ Cat-impacted layers generally have little prior history; initial estimates often model-driven</li><li>▪ Cedent data highly variable and not granular</li></ul>	<b>Very High</b>

# Volatility of Industry Cat Estimates

Summary of Movements from Initial to Final Industry Estimate

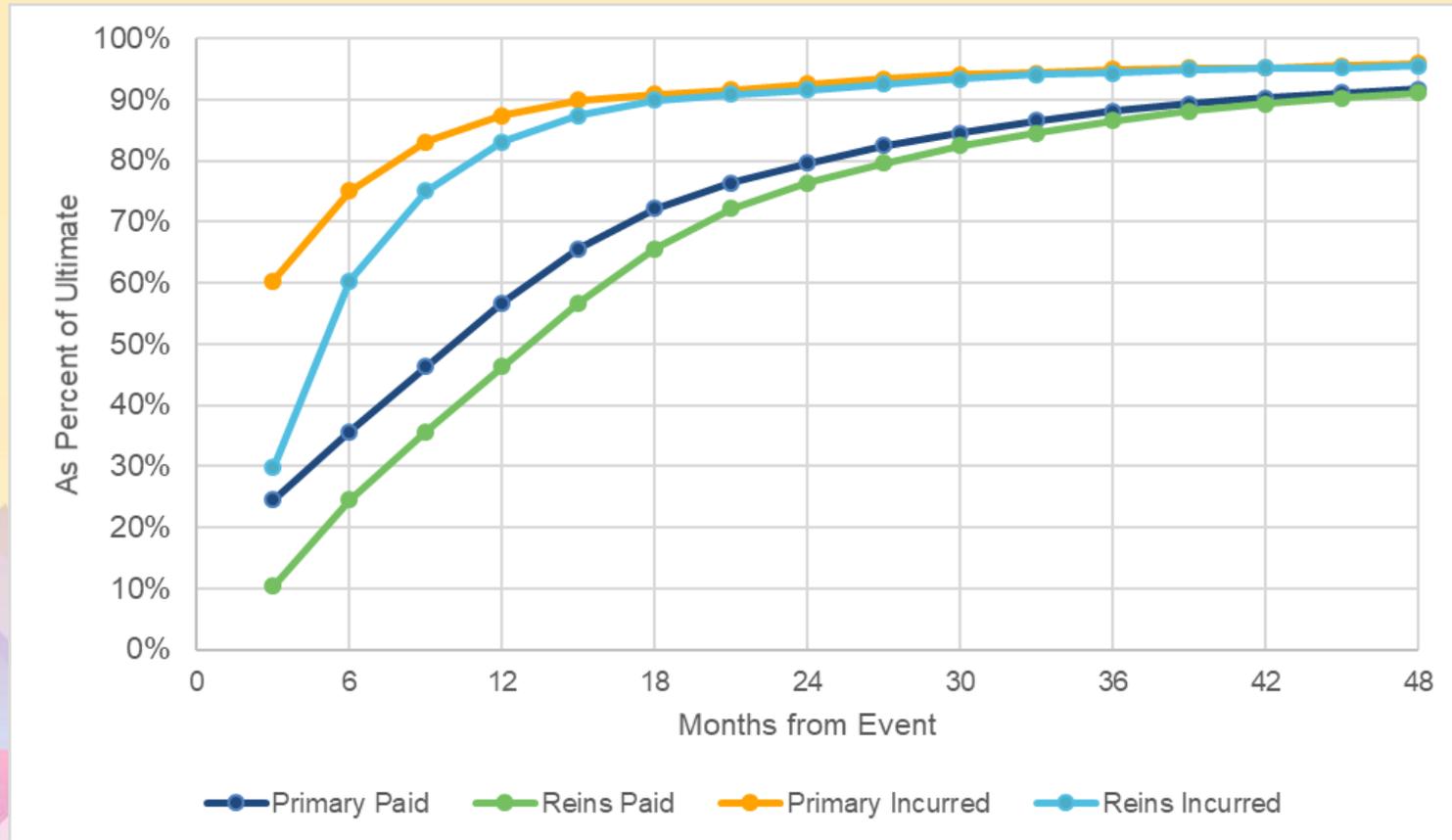
- Chart represents full **industry insured loss** estimate movements from *first year-end* to *final estimate*
- Example - Katrina ('05) industry loss estimate:
  - *As of 12/31/05 = 60B*
  - *At final estimate = 61B*
  - *Deviation = +1.7%*
- Cat reserving is difficult!
- Errors of 20%+ in the industry estimate often leverage further into the reinsurance layers



Data: Historical reports of Munich Re NATCATSERVICE and Swiss Re Sigma

# Summary Development Patterns

Primary Property Cat versus Reinsurance Property Cat



- Paid pattern is reliably slower for reinsurance over time
- Incurred pattern starts off significantly slower but roughly catches up by around 18 months post-event
- Note the appreciable amount of remaining reserves >36 months of maturity

Source: Milliman internal data and industry benchmarks

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# Two Eras of Major Cat Loss Activity

2004-2008



Charley ('04)



Katrina ('05)



Wilma ('05)



Ike ('08)

2017-2020



Harvey ('17)



Irma ('17)

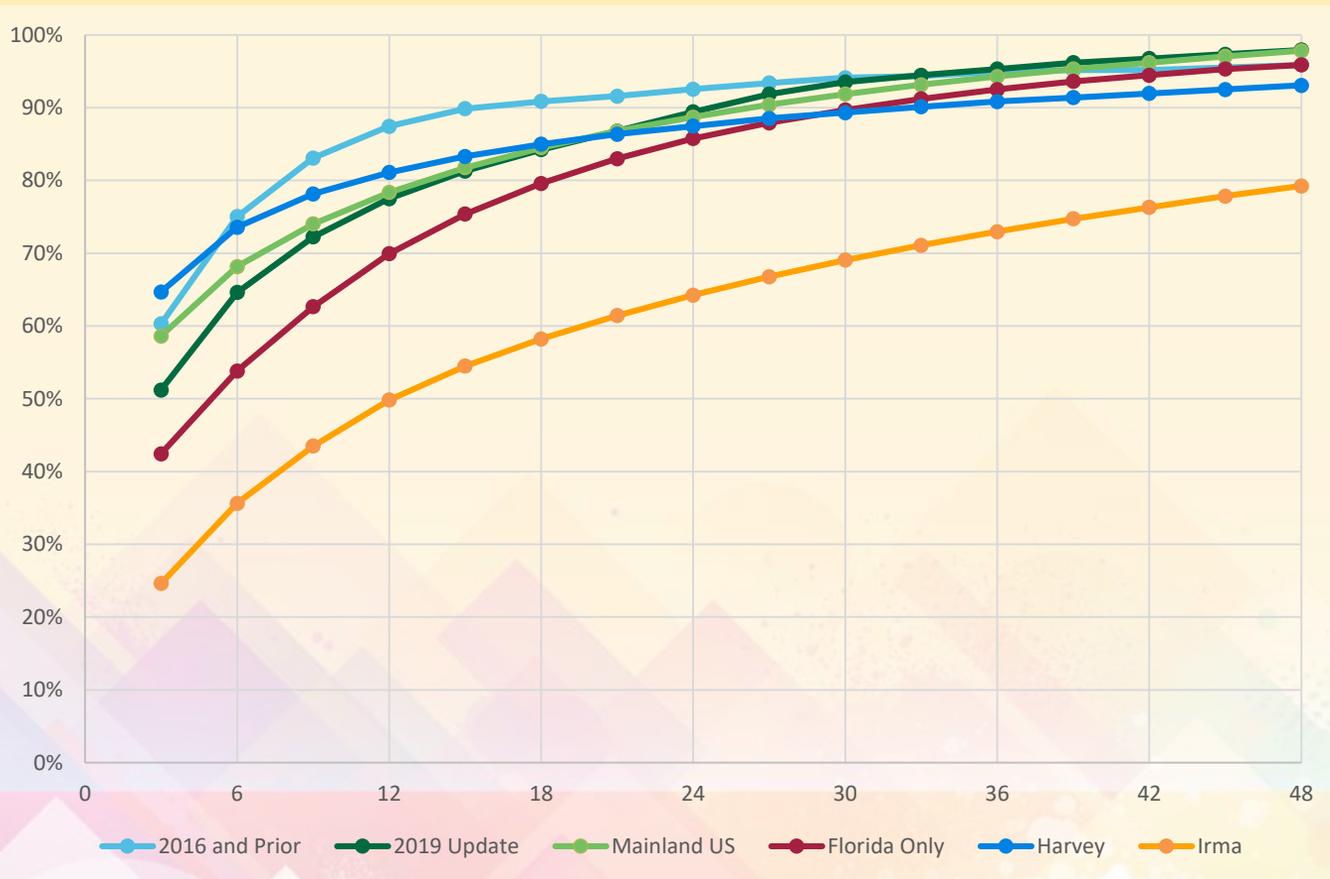


Michael ('18)



Laura ('20)

# Updating Selected Incurred Reserving Benchmarks



- Updated patterns in 2019 are slightly slower
- Slower pattern seems to be driven by US storms
- US Storms seem to be driven by FL-only events
- FL-only events are driven significantly by Irma

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# Reinsurance Reserving - Cedents

## Largest Homeowners Writers by State

### Texas

- State Farm
- Allstate
- USAA
- Farmers
- Liberty Mutual
- Travelers
- Texas Farm Bureau
- Nationwide
- Progressive
- Chubb

### Florida

- Universal Property and Casualty
- Citizens Property Insurance
- Security First
- Federated National
- Heritage Property & Casualty
- American Integrity
- United Property & Casualty
- St. John's
- Homeowners Choice
- Tower Hill Prime

### Louisiana

- State Farm
- Allstate
- USAA
- Liberty Mutual
- Louisiana Farm Bureau
- **United Insurance Group**
- **Federated National**
- Progressive
- **Lighthouse**
- GeoVera

Sources: Insurance Information Institute, FLOIR

# Cedent Comparison

## Large Nationals

- Benefits of diversification: often takes events >5B or even >10B (industry basis) to impact the reinsurance tower
- Large and reasonably stable market share

## Florida Specialists

- High reliance on reinsurance leads to variety of layers (some working layer, some high excess)
- Often smaller data history (although this is rapidly changing)
- Florida losses: FHCF and expense complications

*How can this information be used in an actuarial analysis?*

# ILS and Reinsurance Reserving

## Contract-Level Reserving

- Positions can be held in multiple sub-funds
- Increased granularity of estimates and process, in exchange for additional calculation complexity
- At the contract level, what kind of data is available?
- Is this scalable?

## Timing of Reserving

- Month-end valuation deadlines
- Initial estimates due within weeks (sometimes days)
- Are cedents updating as frequently as the ILS funds look to update estimates? Is it reasonable to expect them to?

## Collateral Locking

- If the collateral is given back on an ILS deal, it's "gone" (pending collateral claw-back)
- Thus ILS contracts must hold sufficient buffer margins to best-estimate reserves to protect against adverse deviation
- What are the implications of this on cedent reporting and reserving?

# Thank You!

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