



TEXAS WINDSTORM
INSURANCE ASSOCIATION



Actuarial & Underwriting Committee

TWIA Actuarial Department – 2021 Rate Indications

July 21, 2021

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Actuarial Principles

Casualty Actuarial Society Statement of Principles

1. A rate is an estimate of the expected value of future costs
2. A rate provides for all costs associated with the transfer of risk
3. A rate provides for the costs associated with an individual risk transfer
4. A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer

Statutory Language

Sec. 2210.001

“The association shall function in such a manner as to not be a direct competitor in the private market;...”

Sec. 2210.355 (b) In adopting rates under this chapter, the following must be considered:

- (1) the past and prospective loss experience within and outside this state of hazards for which insurance is made available through the plan of operation, if any;
- (2) expenses of operation, including acquisition costs;
- (3) a reasonable margin for profit and contingencies;
- (4) payment of public security obligations issued under this chapter, including the additional amount of any debt service coverage determined by the association to be required for the issuance of marketable public securities; and
- (5) all other relevant factors, within and outside this state.

Sec. 2210.355 (c) Rates must be reasonable, adequate, not unfairly discriminatory, and nonconfiscatory as to any class of insurer.

Recent Legislative Changes

HB 769

SECTION 1. Subchapter H, Chapter 2210, Insurance Code, is amended by adding Section 2210.3512 to read as follows:

Sec. 2210.3512. REQUIREMENT FOR VOTE ON RATE FILING. The board of directors may not vote on a proposed rate increase if:

- (1) there is a vacancy on the board; and
- (2) the vacancy has existed for at least 60 days at the time the vote is to be taken.

SECTION 2. The heading to Section 2210.453, Insurance Code, is amended to read as follows:

Sec. 2210.453. FUNDING LEVELS; REINSURANCE AND ALTERNATIVE RISK FINANCING MECHANISMS; REINSURANCE FROM CERTAIN INSURER OR BROKER PROHIBITED.

SECTION 3. Section 2210.453, Insurance Code, is amended by adding Subsection (f) to read as follows:

(f) The association may not purchase reinsurance under this section from an insurer or broker involved in the execution of a catastrophe model on which the association relies in:

- (1) determining the probable maximum loss applicable for the period covered by the reinsurance; or
- (2) adopting rates under Section 2210.355.

SECTION 4. The Texas Department of Insurance shall amend the Texas Windstorm Insurance Association's plan of operation to conform to the changes in law made by this Act not later than the 60th day after the effective date of this Act.

SECTION 5. This Act takes effect September 1, 2021.

Recent Legislative Changes

SB 1448

SECTION 1. Section 2210.351, Insurance Code, is amended by amending Subsection (d) and adding Subsection (f) to read as follows:

(d) The association may use a rate filed by the association without prior commissioner approval if:

(1) the filing is made not later than the 30th day before the date of any use or delivery for use of the rate;

(2) the filed rate does not exceed ~~[105 percent of]~~ the rate in effect on the date on which the filing is made; and

(3) ~~[the filed rate does not reflect a rate change for an individual rating class that is 10 percent higher than the rate in effect for that rating class on the date on which the filing is made; and~~

~~[-(4)-]~~ the commissioner has not disapproved the filing in writing, advising of the reasons for the disapproval and the criteria the association is required to meet to obtain approval.

(f) The association may not file a rate under this section that exceeds the rate in effect on the date on which the filing is made unless two-thirds of the board of directors votes to approve the rate.

Recent Legislative Changes

SB 1448

SECTION 2. Section 2210.352, Insurance Code, is amended by amending Subsection (a-1) and adding Subsection (a-3) to read as follows:

(a-1) The association may use a rate filed by the association under this section without prior commissioner approval if:

(1) the filing is made not later than the 30th day before the date of any use or delivery for use of the rate; and

(2) the filed rate does not exceed [~~105 percent of~~] the rate used by the association in effect on the date on which the filing is made[~~;~~ and

~~[(3) the filed rate does not reflect a rate change for an individual rating class that is 10 percent higher than the rate in effect for that rating class on the date on which the filing is made].~~

(a-3) The association may not file a rate under this section that exceeds the rate in effect on the date on which the filing is made unless two-thirds of the board of directors votes to approve the rate.

Overview of Rate Adequacy Analysis

- The Loss and LAE Ratio include a provision for:
 - Hurricane losses
 - Non-Hurricane Losses
- Fixed Expense Ratio includes:
 - General operating expenses
 - The net cost of reinsurance (total premiums less expected average annual recoveries)
 - Debt service outstanding pre-event Class 1 Public securities
 - Note: Previously considered part of provision for contribution to CRTF . Now that proceeds of Series 2014 Bonds have been used for Hurricane Harvey, debt service is considered a fixed expense
- Variable Expense includes:
 - Commissions, taxes, licenses and fees.
 - Provisions for CRTF and contingencies

Overview of Rate Adequacy Analysis

- **The Association employs the “Loss Ratio Method” to determine rate level indications.**
 - This approach compares the estimated percentage of each premium dollar needed to cover future losses, loss adjustment expense and other fixed expenses for a prospective accident year to the amount of each premium dollar that is available to pay for such costs (referred to as the permissible loss ratio).
 - This relationship is defined as:

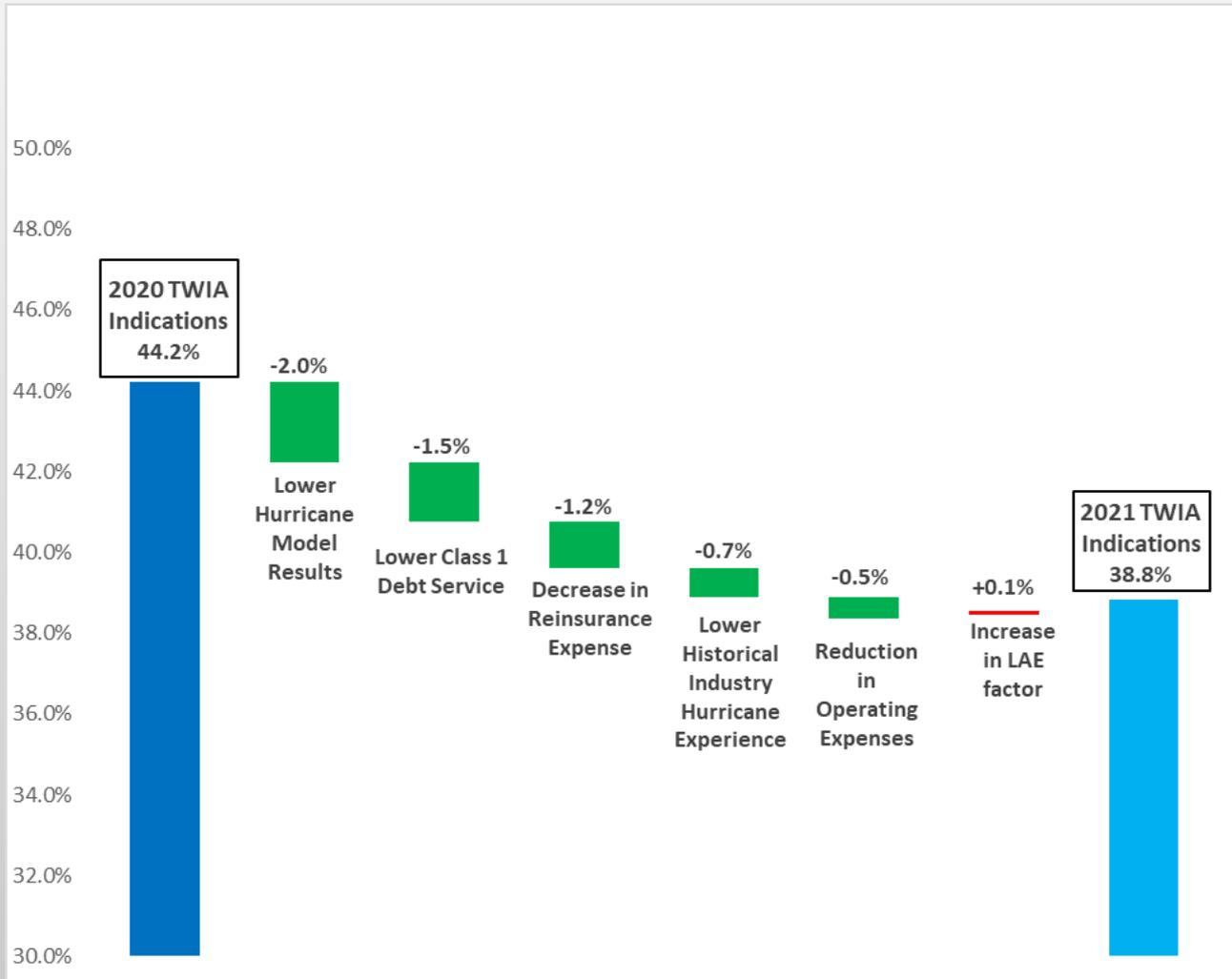
Indicated Rate

$$\text{Change Factor} = \frac{\text{(Loss \& LAE Ratio + Fixed Expense Ratio)}}{\text{(1 - Variable Expense Ratio - Target UW Profit)}}$$

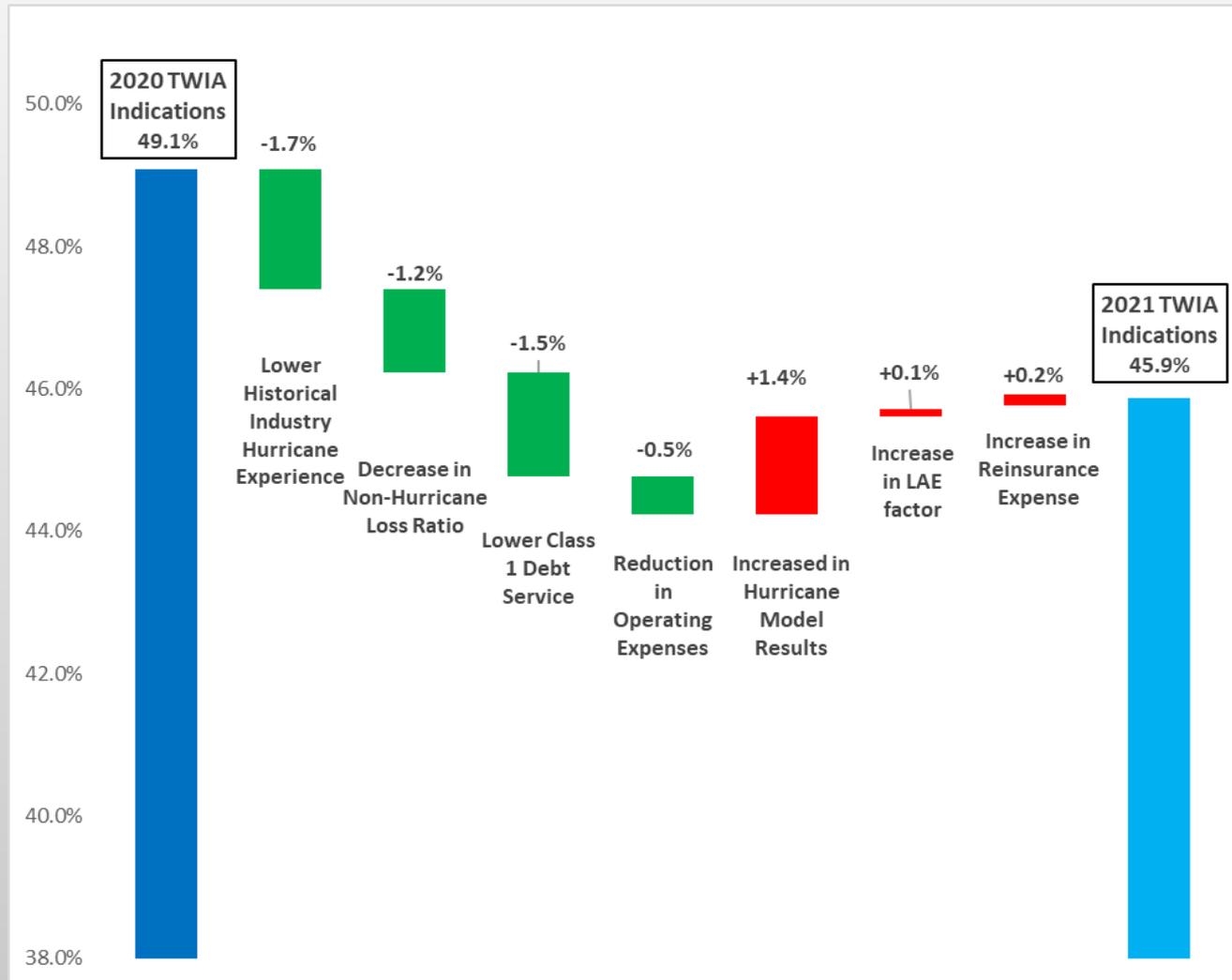
Rate Adequacy Analysis

Rate Element	Residential					Commercial				
	2018 Review	2019 Review	2020 Review	2021 Review	2021 vs. 2020	2018 Review	2019 Review	2020 Review	2021 Review	2021 vs. 2020
Non-Hurricane Loss Provision	15.4%	14.2%	14.6%	14.9%	0.3%	9.1%	9.3%	9.0%	8.1%	-0.9%
Hurricane Loss Provision										
Experience	41.5%	42.7%	42.5%	41.5%	-1.0%	55.1%	56.9%	54.3%	51.7%	-2.6%
Modeled	50.8%	51.9%	55.1%	52.2%	-3.0%	57.5%	59.7%	62.1%	64.4%	2.3%
Combined	46.2%	47.3%	48.8%	46.8%	-2.0%	56.3%	58.3%	58.2%	58.1%	-0.2%
Fixed Expenses										
Operating	5.7%	6.2%	8.5%	8.1%	-0.4%	5.7%	6.2%	8.5%	8.1%	-0.4%
Reinsurance	16.0%	16.6%	19.5%	18.6%	-0.9%	16.0%	16.6%	19.5%	19.7%	0.1%
Outstanding Class 1 Bond Debt Service	18.6%	25.1%	19.7%	18.6%	-1.1%	18.6%	25.1%	19.7%	18.6%	-1.1%
Total	40.3%	47.9%	47.7%	45.3%	-2.4%	40.3%	47.9%	47.7%	46.4%	-1.4%
(A) Total Loss Provision plus Fixed Expenses	101.9%	109.4%	111.1%	107.1%	-4.1%	105.7%	115.5%	114.9%	112.5%	-2.4%
Variable Expenses										
Commissions	16.0%	16.0%	16.0%	16.0%	0.0%	16.0%	16.0%	16.0%	16.0%	0.0%
Taxes and Fees	2.0%	2.0%	1.9%	1.9%	0.0%	2.0%	2.0%	1.9%	1.9%	0.0%
CRTF Funding & Contingencies	5.0%	5.0%	5.0%	5.0%	0.0%	5.0%	5.0%	5.0%	5.0%	0.0%
(B) Total Variable Expenses	23.0%	23.0%	22.9%	22.9%	0.0%	23.0%	23.0%	22.9%	22.9%	0.0%
(C) Permissible Loss & LAE Ratio (1-B)	77.0%	77.0%	77.1%	77.1%	0.0%	77.0%	77.0%	77.1%	77.1%	0.0%
(D) Rate Indication (A/C -1)	32.3%	42.1%	44.0%	39.0%	-5.0%	37.3%	50.0%	49.0%	46.0%	-3.0%

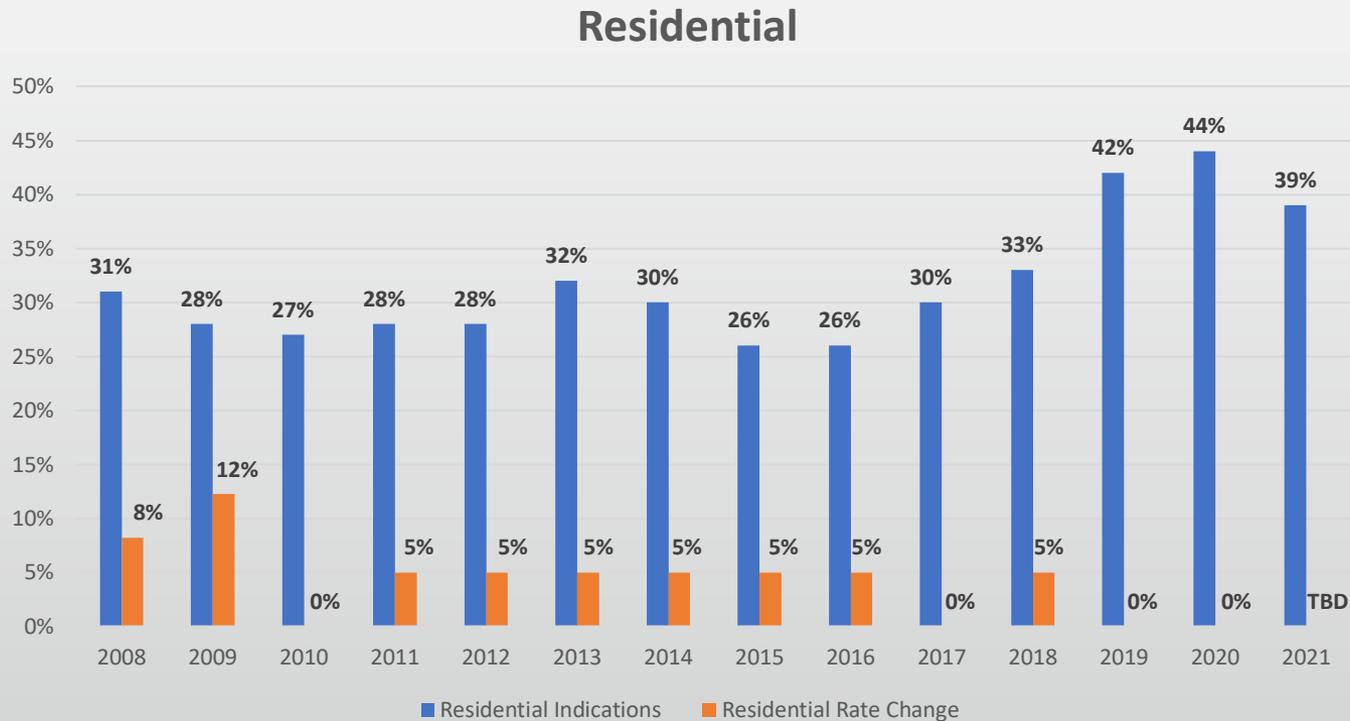
Reconciliation of Change in Rate Indications – Residential 2021 vs 2020



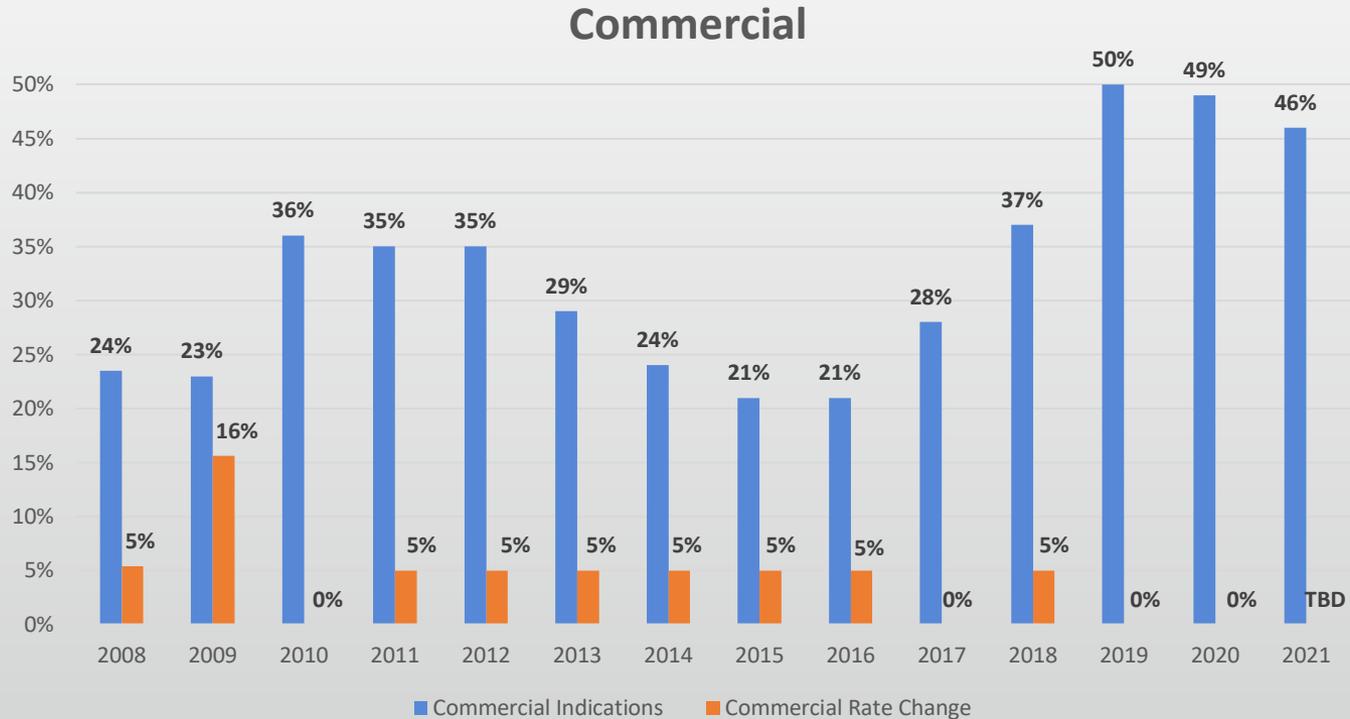
Reconciliation of Change in Rate Indications – Commercial 2021 vs 2020



Residential Rate Indications vs Rate Changes 2008-2021



Commercial Rate Indications vs Rate Changes 2008 -2021



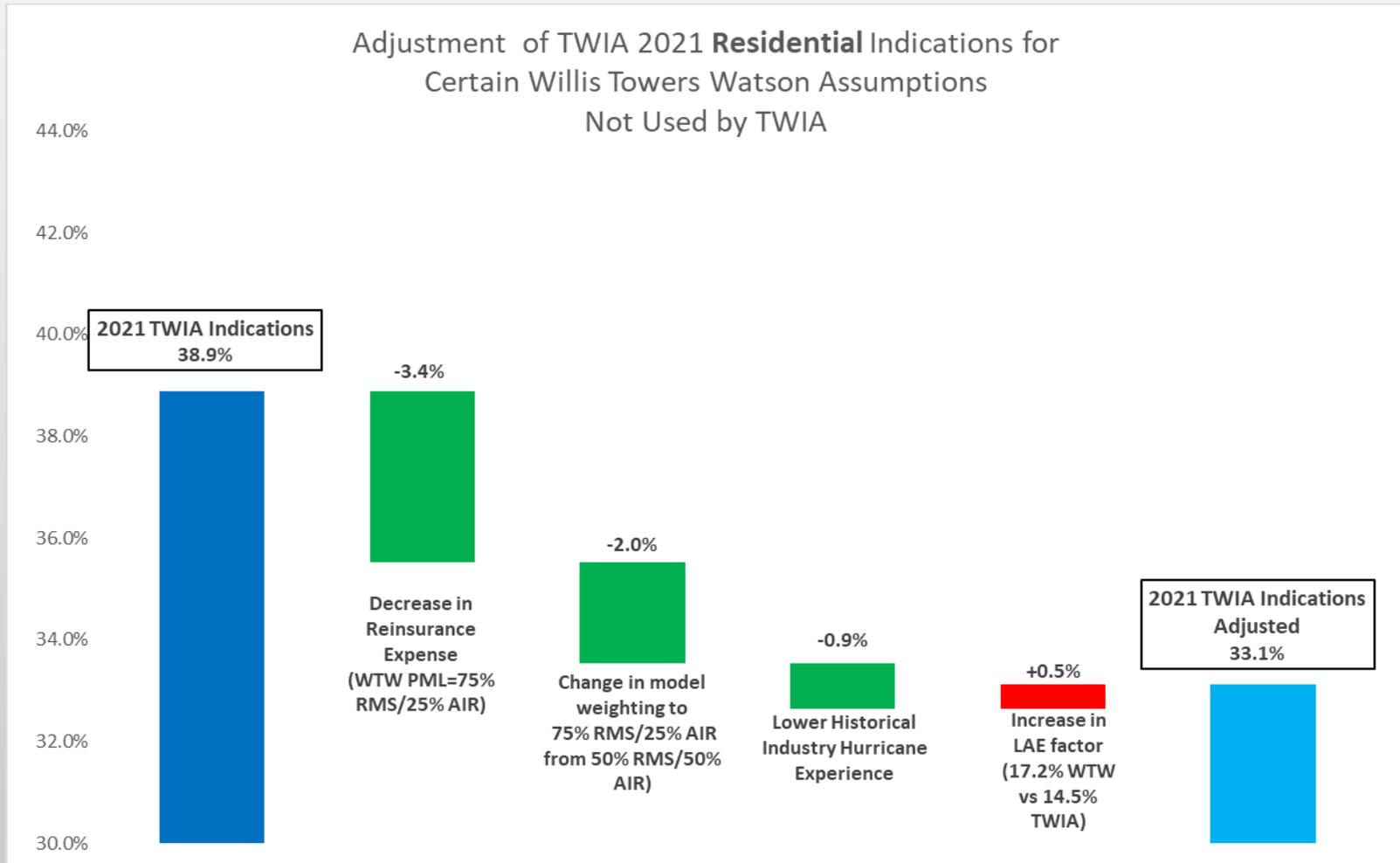
Impact of Alternative Rate Increases - Residential

Rate Element	2021	Residential Rate Increase - Illustrative							Indicated
	0.0%	2.5%	5.0%	7.5%	10.0%	12.5%	15.0%	...	39.0%
Non-Hurricane Loss Provision	14.9%	14.5%	14.2%	13.9%	13.5%	13.2%	13.0%		10.7%
Hurricane Loss Provision									
Industry Experience	41.5%	40.5%	39.5%	38.6%	37.7%	36.9%	36.1%		29.9%
Modeled (50/50 AIR and RMS)	52.2%	50.9%	49.7%	48.5%	47.4%	46.4%	45.3%		37.5%
Combined	46.8%	45.7%	44.6%	43.6%	42.6%	41.6%	40.7%		33.7%
Fixed Expenses									
Operating Expenses	8.1%	7.9%	7.7%	7.5%	7.4%	7.2%	7.0%		5.8%
Reinsurance	18.6%	18.2%	17.8%	17.3%	17.0%	16.6%	16.2%		13.4%
Outstanding Class 1 Bond Debt Service	18.6%	18.1%	17.7%	17.3%	16.9%	16.5%	16.2%		13.4%
Total	45.3%	44.2%	43.2%	42.2%	41.2%	40.3%	39.4%		32.6%
Total Loss Provision plus Fixed Expenses	107.1%	104.5%	102.0%	99.6%	97.3%	95.2%	93.1%		77.0%
Variable Expenses									
Commissions	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%		16.0%
Taxes and Fees	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%		1.9%
CRTF Funding & Contingencies	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%		5.0%
Total Variable Expenses	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%		22.9%
Rate Indication (rounded)	39.0%	35.0%	32.0%	29.0%	26.0%	23.0%	21.0%		0.0%

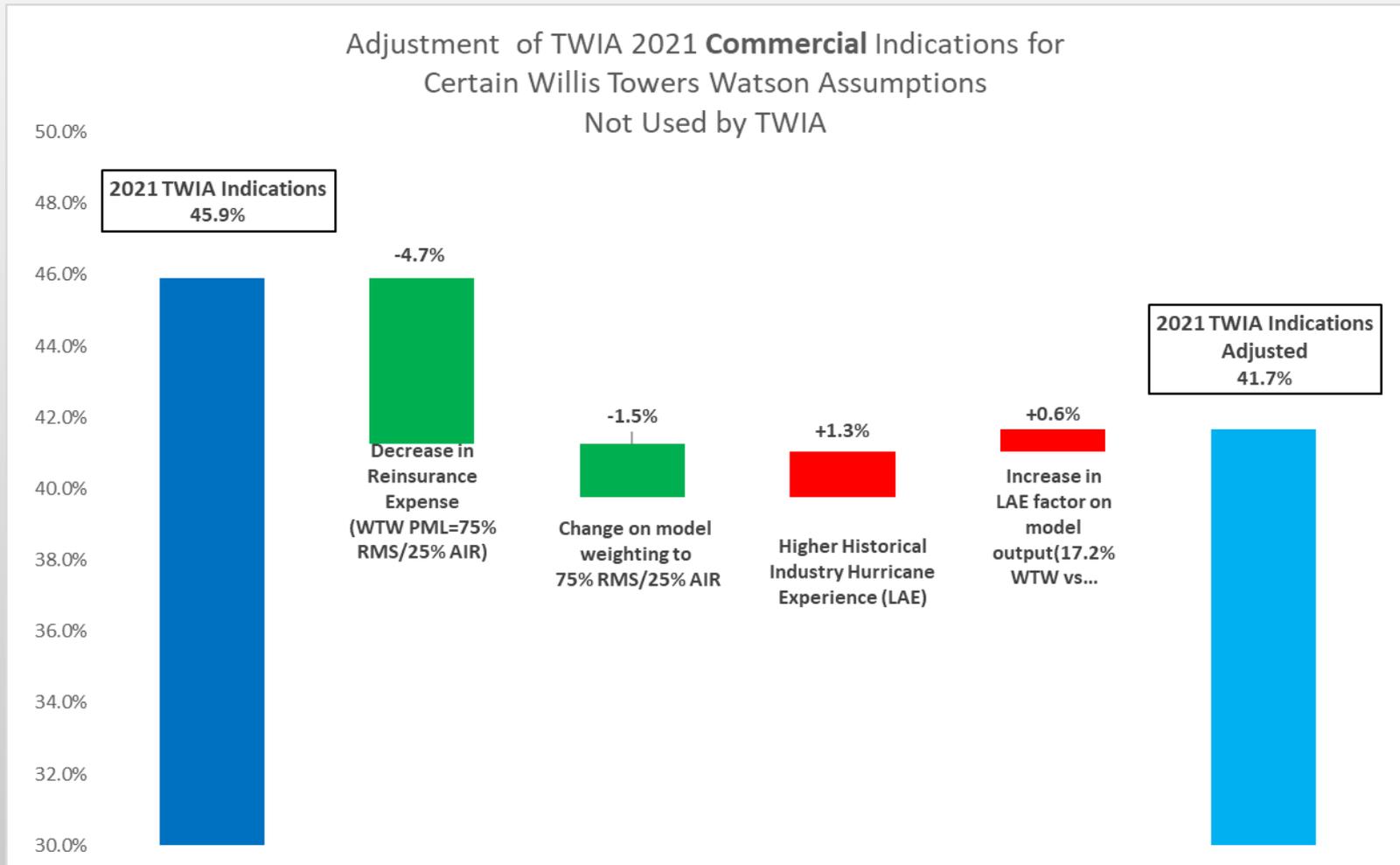
Impact of Alternative Rate Increases - Commercial

Rate Element	2021	Commercial Rate Increase - Illustrative							Indicated
	0.0%	2.5%	5.0%	7.5%	10.0%	12.5%	15.0%	46.0%
Non-Hurricane Loss Provision	8.1%	7.9%	7.7%	7.5%	7.4%	7.2%	7.0%		5.5%
Hurricane Loss Provision									
Experience	51.7%	50.4%	49.2%	48.1%	47.0%	46.0%	45.0%		35.4%
Modeled (50/50 AIR and RMS)	64.4%	62.8%	61.3%	59.9%	58.5%	57.2%	56.0%		44.1%
Combined	58.1%	56.6%	55.3%	54.0%	52.8%	51.6%	50.5%		39.8%
Fixed Expenses									
Operating Expenses	8.1%	7.9%	7.7%	7.5%	7.4%	7.2%	7.0%		5.5%
Reinsurance	19.7%	19.2%	18.7%	18.3%	17.9%	17.5%	17.1%		13.5%
Outstanding Class 1 Bond Debt Service	18.6%	18.1%	17.7%	17.3%	16.9%	16.5%	16.2%		12.7%
Total	46.4%	45.2%	44.1%	43.1%	42.1%	41.2%	40.3%		31.7%
Total Loss Provision plus Fixed Expenses	112.5%	109.8%	107.1%	104.7%	102.3%	100.0%	97.8%		77.1%
Variable Expenses									
Commissions	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%		16.0%
Taxes and Fees	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%		1.9%
CRTF Funding & Contingencies	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%		5.0%
Total Variable Expenses	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%		22.9%
Rate Indication (rounded)	46.0%	42.0%	39.0%	36.0%	33.0%	30.0%	27.0%		0.0%

Certain WTW Assumptions



Certain WTW Assumptions



Questions
