

Prepared for:  
**Florida Hurricane Catastrophe Fund**



# 2013 Ratemaking Formula Report

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March 21, 2013

# 2013 RATEMAKING FORMULA REPORT

## Agenda

- 1. What's New?**
- 2. Overall Indications**
- 3. Ratemaking Overview**
- 4. Premium, Rates and Coverage**
- 5. Other Topics of Interest**
- 6. Recap**
- 7. Questions**



# 1. What's New?

# 2013 RATEMAKING FORMULA REPORT

## What's New?

- **0% Exposure Trend (3rd Year)**
- **Statutory Changes:**
  - Mandatory Cash Build-up Factor increases from 20% to 25%
  - Optional TICL premium factor increases from 500% to 600%
  - Maximum TICL limit declines from \$4B to \$2B
- **Per Company Limit /Retention Adjustment (-0.73% in 2012, +1.60% in 2012)**
- **Projected Pre-Event Notes Expense \$43.3 Million**
  - \$14.5 Million for partial year coverage in 2012
- **Maximum mitigation credit/debit increased to 30% from 20%.**
- **Use of Florida Public Model Commercial Losses**



## 2. Overall Indications

# 2013 RATEMAKING FORMULA REPORT

## Overall Indications

### FHCF Reimbursement Premium (\$ Billions)

	FHCF	TICL	Total
2012 Premium (Actual)	\$1.262	\$0.003	\$1.265
2013 Premium (Projected)	\$1.343	\$0.002	\$1.345
% Premium Change	6.4%	-33.3%	6.3%
% Rate Change (Exposure adjusted)	6.4%	NA	NA

Note: 2013 TICL premium based on reported selections through March 17, 2013

# 2013 RATEMAKING FORMULA REPORT

## Overall Indications

### Rate Changes by Type of Business

Type of Business	<u>FHCF Layer</u>	
	(No change to Cash Build-up*)	(Per Statute*)
Residential	2.25%	6.51%
Tenants	4.11%	8.45%
Condominiums	5.22%	9.60%
Mobile Home	-3.91%	0.10%
Commercial Habitational	2.13%	6.38%
<b>Total Rate Change</b>	<b>2.18%</b>	<b>6.43%</b>

\* Cash Build-up Factor for 2012 was 20%; for 2013 it is 25%



# 2013 RATEMAKING FORMULA REPORT

## Overall Indications

### Rate On Line Changes

LIMIT (FHCF + TICL)		FHCF + TICL Layer			
		2012	2013	Change	
\$17,000,000,000	Mandatory	Actual 2012	7.42%	7.90%	6.43%
\$17,000,000,000	Mandatory	Modeled	7.73%	7.90%	2.21%
\$1,000,000,000	TICL	Modeled	16.10%	18.92%	17.48%
\$2,000,000,000	TICL	Modeled	15.69%	18.38%	17.13%

Note: Projected 2013 TICL limit purchased is 0.7% of maximum available.



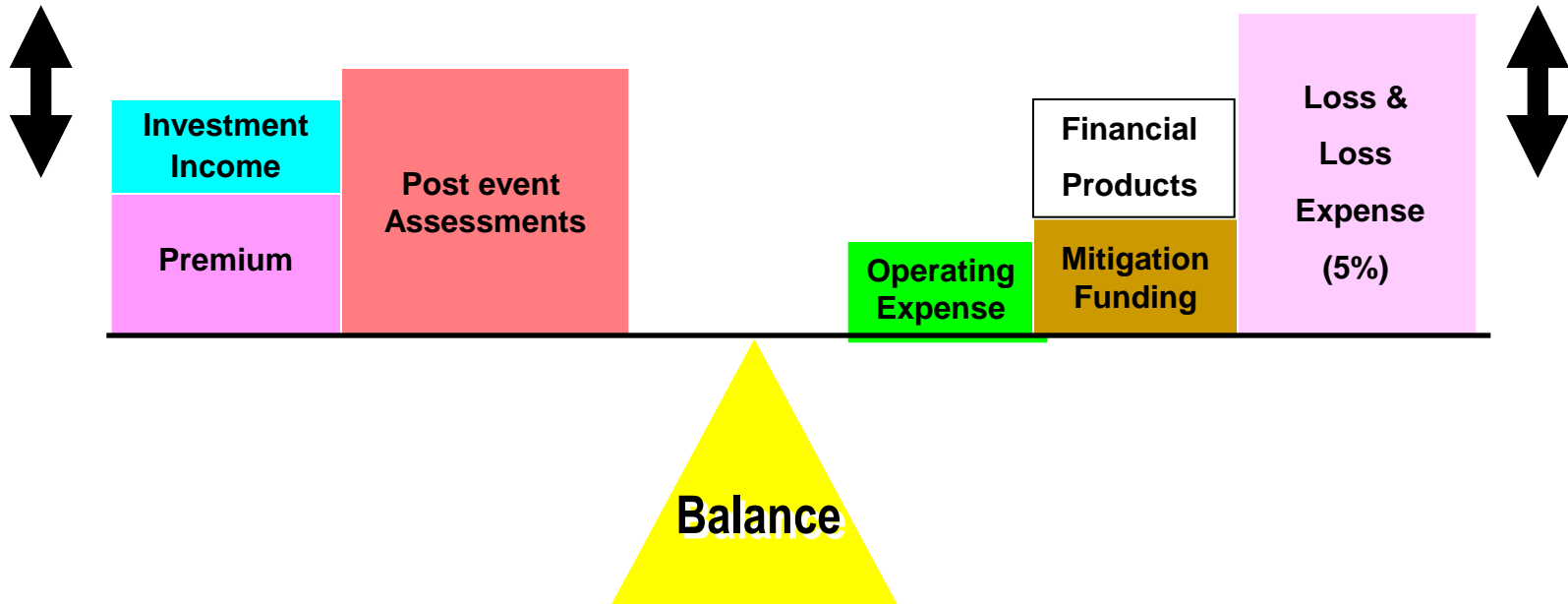


## 3. Ratemaking Overview

# 2013 RATEMAKING FORMULA REPORT

## Ratemaking Overview

### Where Does the FHCF Get Its Funds? Where Do They Go?



Premiums are derived from the Ratemaking Formula

# 2013 RATEMAKING FORMULA REPORT

## Ratemaking Overview

1. Trend 6/30 Prior Year Exposure Data & Send Modelers
2. Combine Results for Industry Excess Loss Costs
3. Add Allocated Loss Adjustment Expenses (5%)
4. Misc. Technical Adjustments
  - **Retention & limit**
  - Law & ordinance
  - Aggregate wind deductible adjustment
  - Reconciliation to accepted model level (one model)
  - **Actual FPM commercial losses used in 2013**

# 2013 RATEMAKING FORMULA REPORT

## Ratemaking Overview

### 5. Fixed Loadings

- Operating expenses
- **Expenses for pre-event notes**

### 6. Allocation to Classes

- Type of business, territory, construction, deductible

# 2013 RATEMAKING FORMULA REPORT

## Ratemaking Overview

### **7. Rating Classifications for Mitigation**

- **Year built**
- **Structure opening protection**
- **Roof shape**

### **8. TICL Coverage**

### **9. Apply Cash Build-up Factor and TICL Premium Loading**



## 4. Premium, Rates and Coverage

# 2013 RATEMAKING FORMULA REPORT

## Overall Indications

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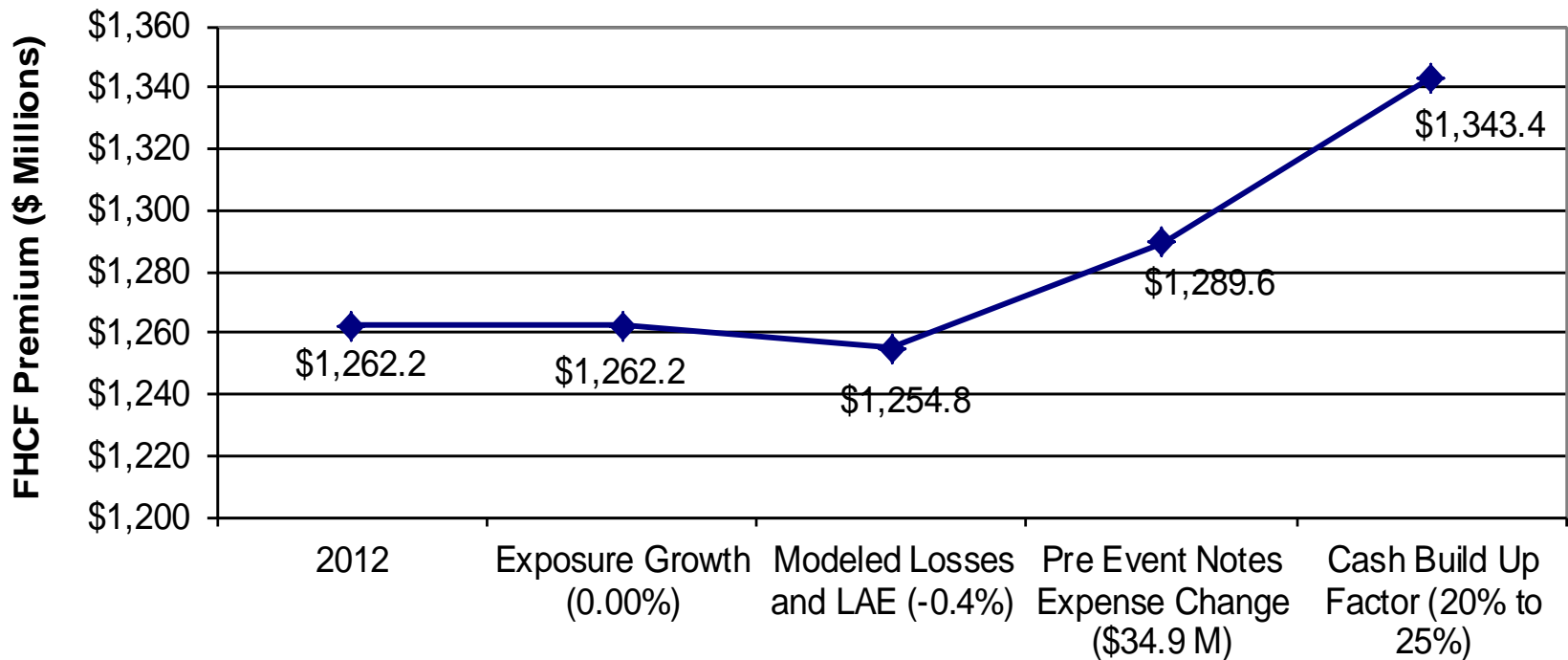
Note: 2013 TICL premium based on reported selections through March 17, 2013



# 2013 RATEMAKING FORMULA REPORT

## Premium, Rates and Coverage

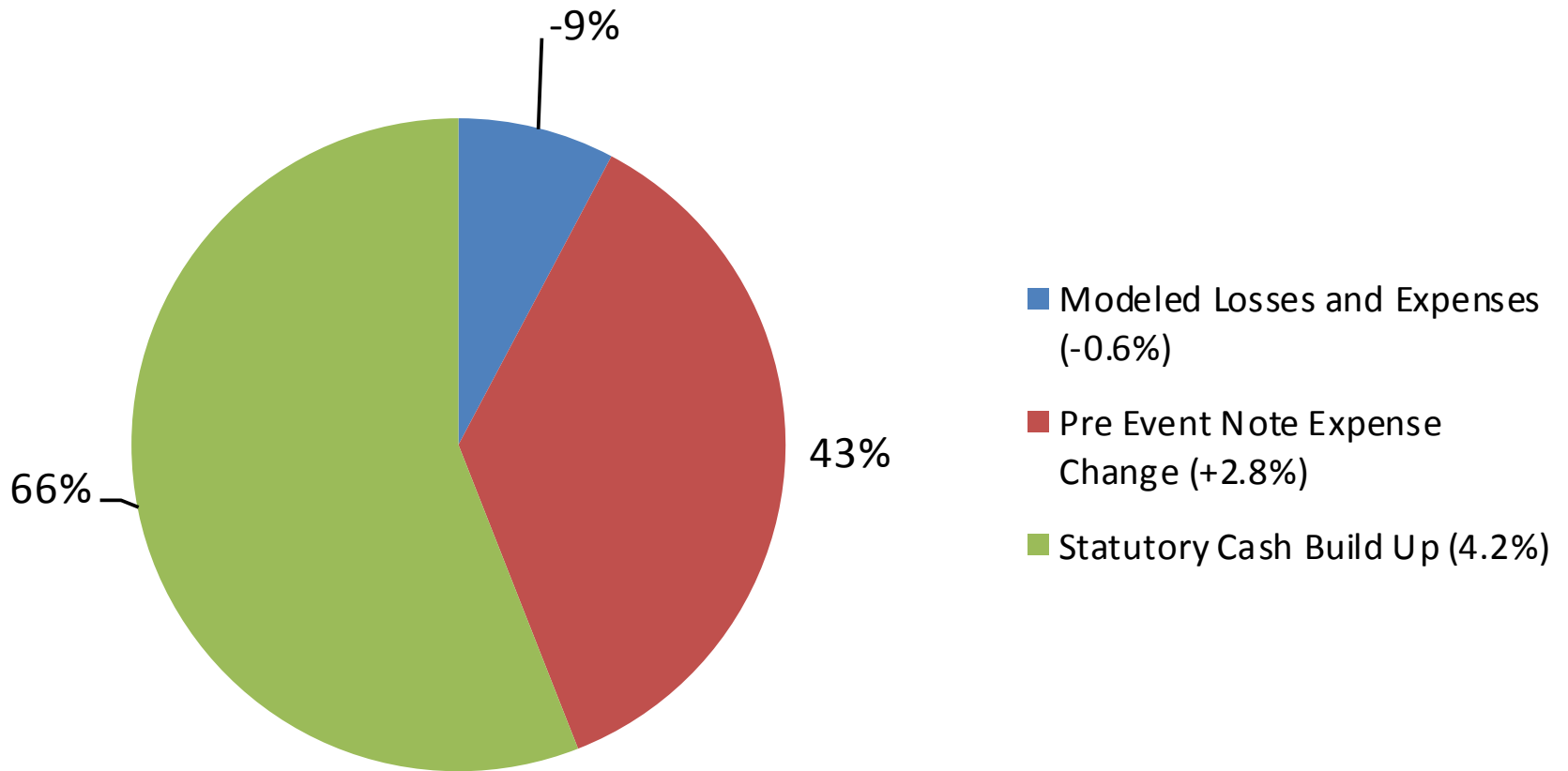
**Components of 2013 Mandatory Premium Change (+6.43%)**



# 2013 RATEMAKING FORMULA REPORT

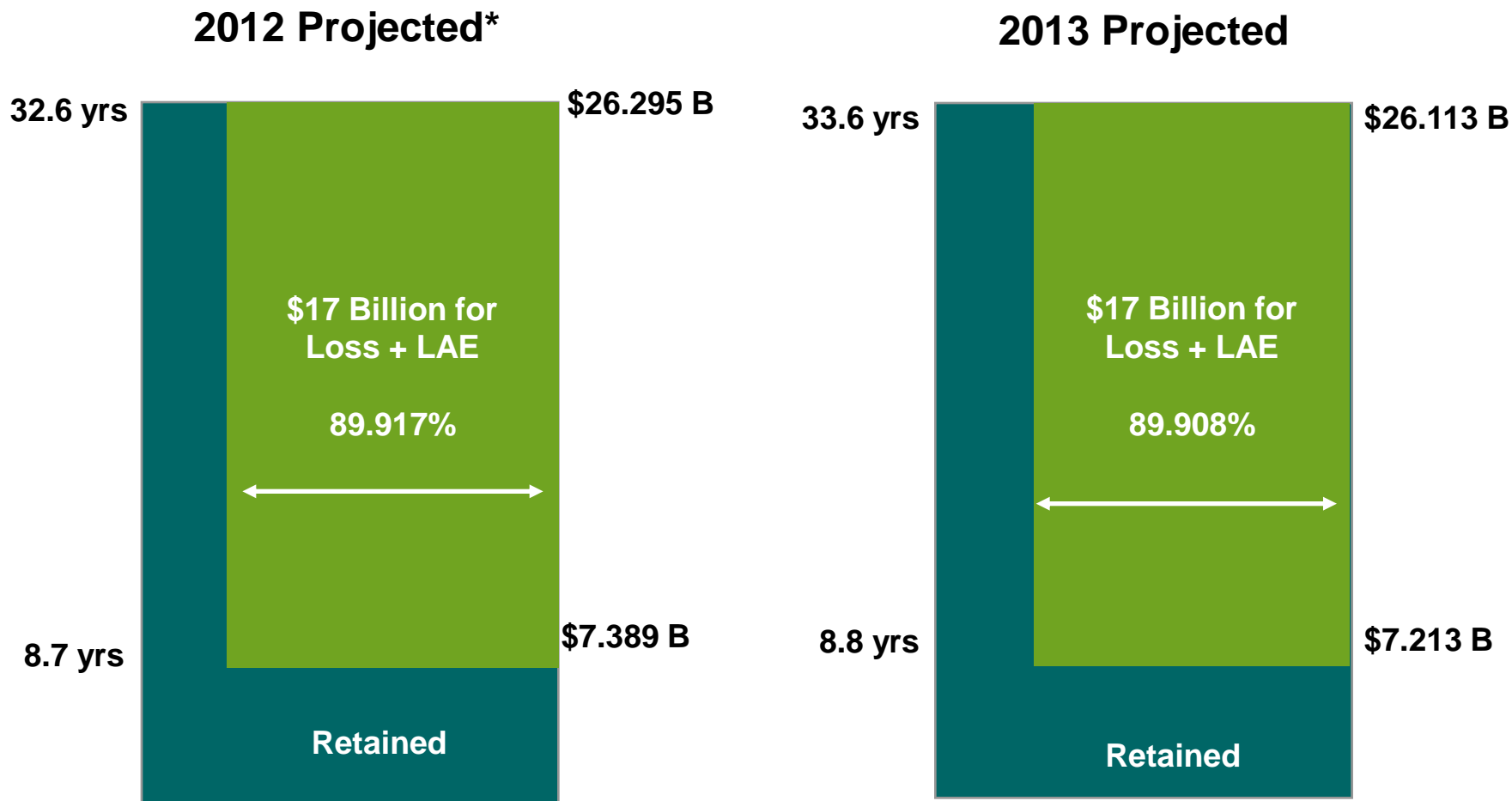
## Premium, Rates and Coverage

### Rate Change Component Impact



# 2013 RATEMAKING FORMULA REPORT

## The Covered Layer



\* 2012 actual coverage, after all reporting of exposures, was 89.908% of \$18.908 B xs \$7.097 B

# 2013 RATEMAKING FORMULA REPORT

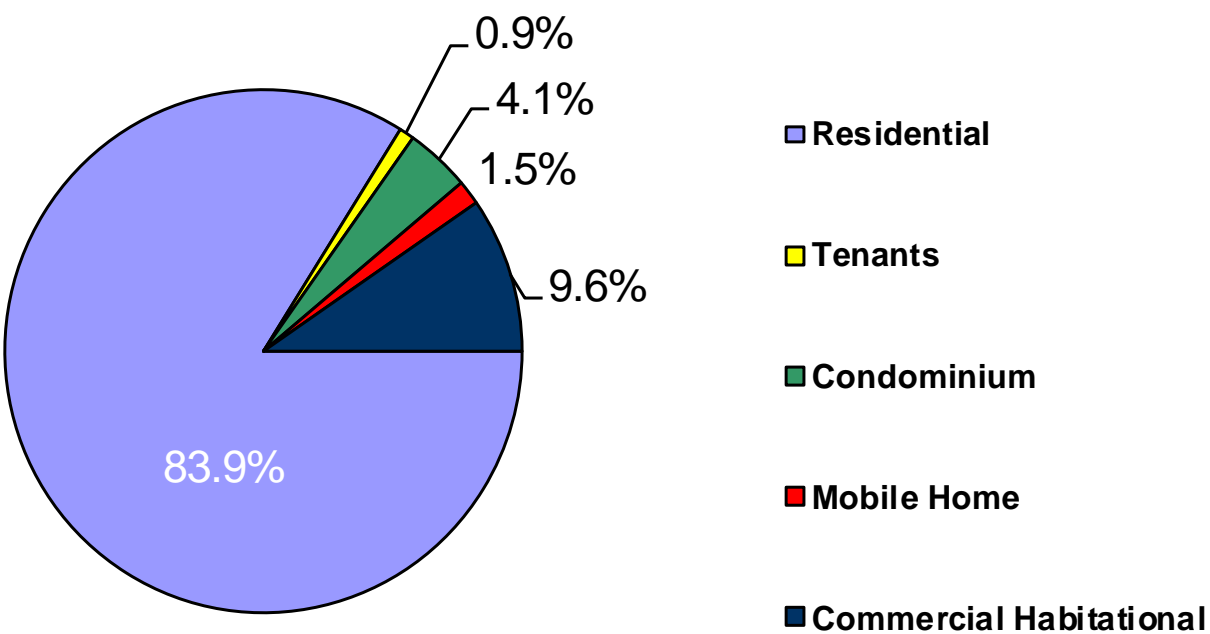
## Mandatory Coverage

	2012 Actual	2013 Proposed
<b>FHCF Retention</b>	\$7.097 B	\$7.213 B
<b>FHCF Limit</b>	\$17.000 B	\$17.000 B
<b>FHCF Mandatory Premium</b>	\$1.262 B	\$1.343 B
<b>Coverage</b>	89.908%	89.908%
<b>Payout Multiple</b>	13.4690	12.6548
<b>Retention Multiples for FHCF Coverage Selections</b>		
<b>90%</b>	5.6170	5.3639
<b>75%</b>	6.7404	6.4366
<b>45%</b>	11.2340	10.7277

# 2013 RATEMAKING FORMULA REPORT

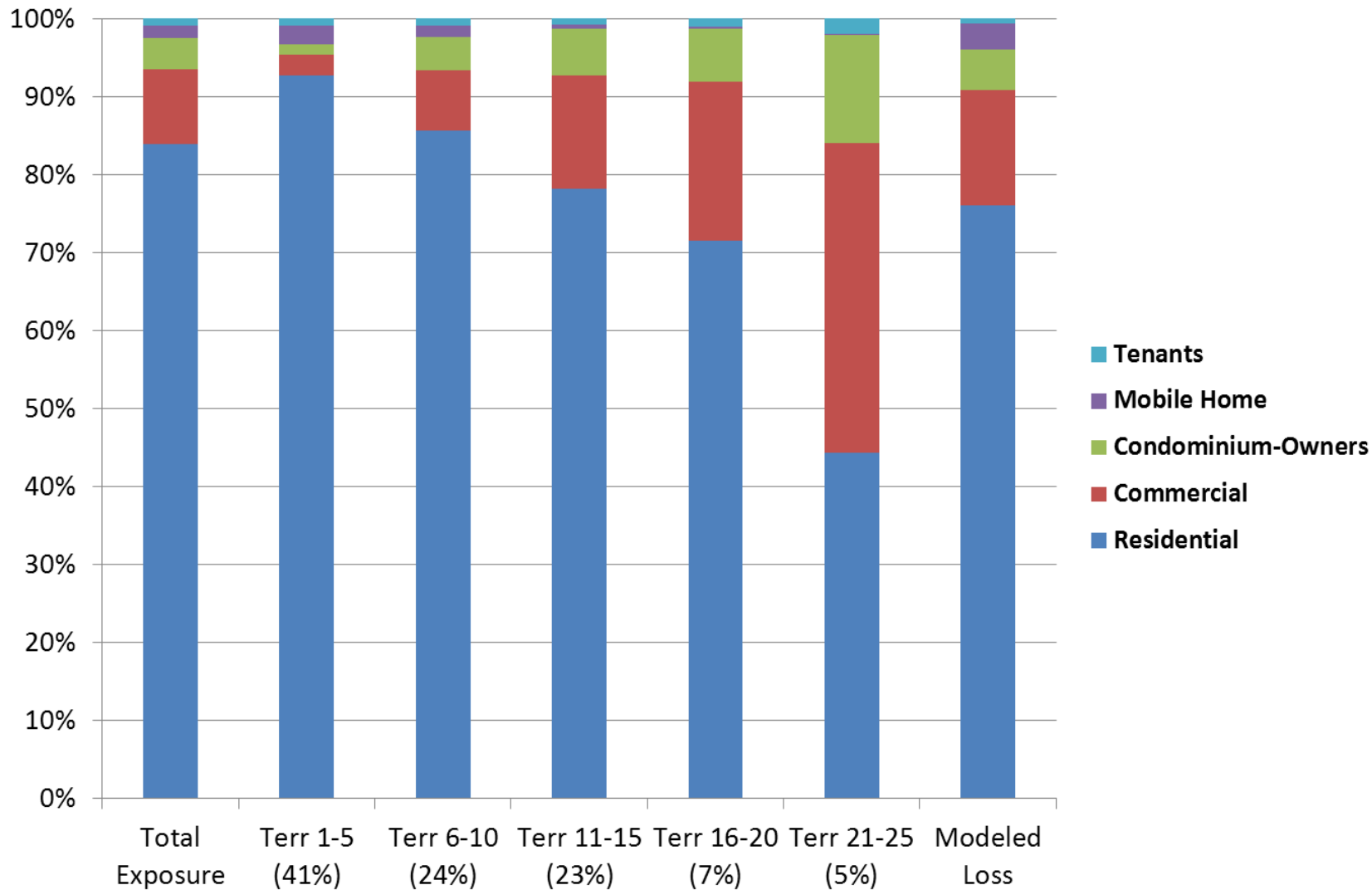
## Exposures by Type of Business

### 2013 Exposure Distribution



# 2013 RATEMAKING FORMULA REPORT

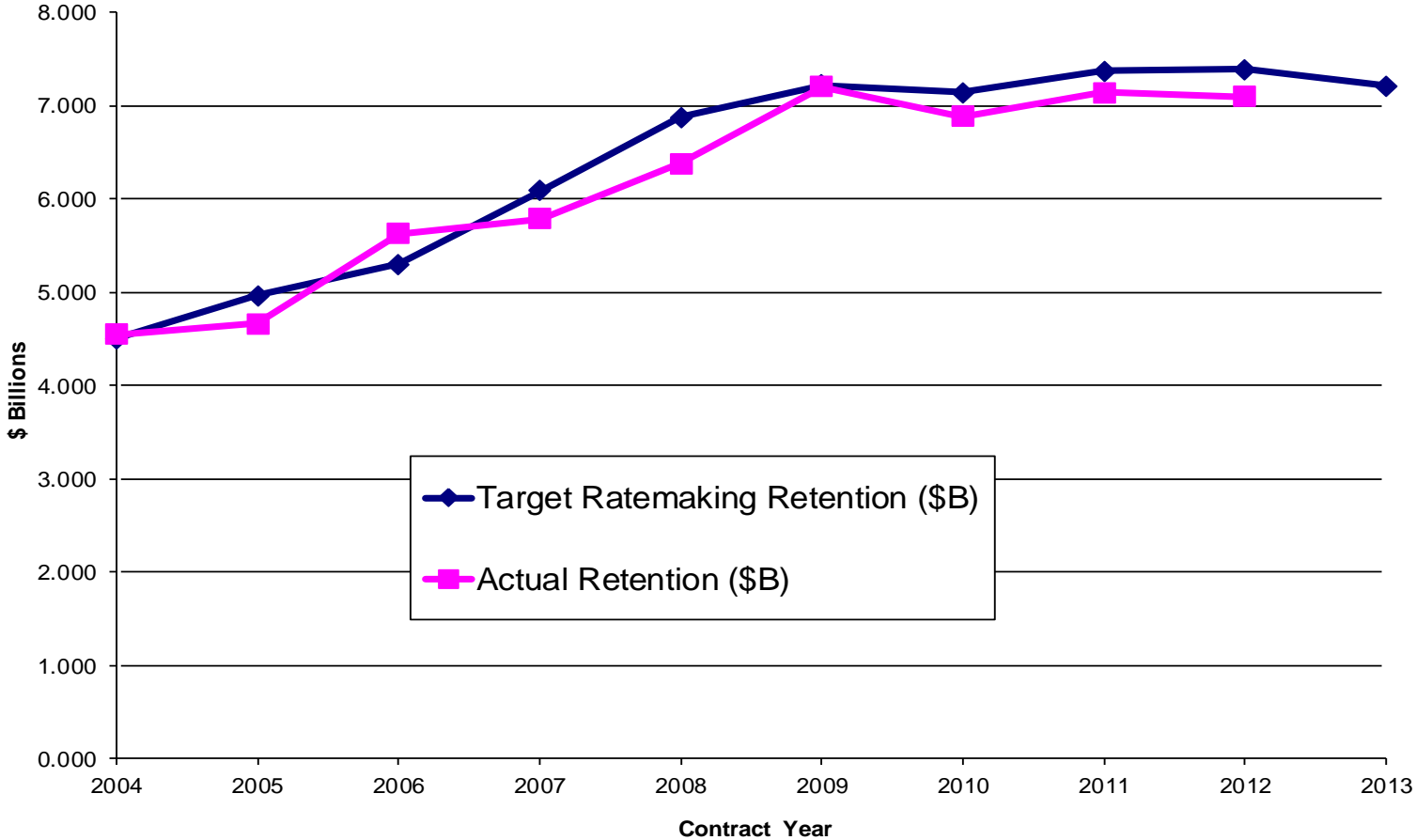
## Exposure and Loss by Type of Business



# 2013 RATEMAKING FORMULA REPORT

## Retention History

### FHCF Retention History



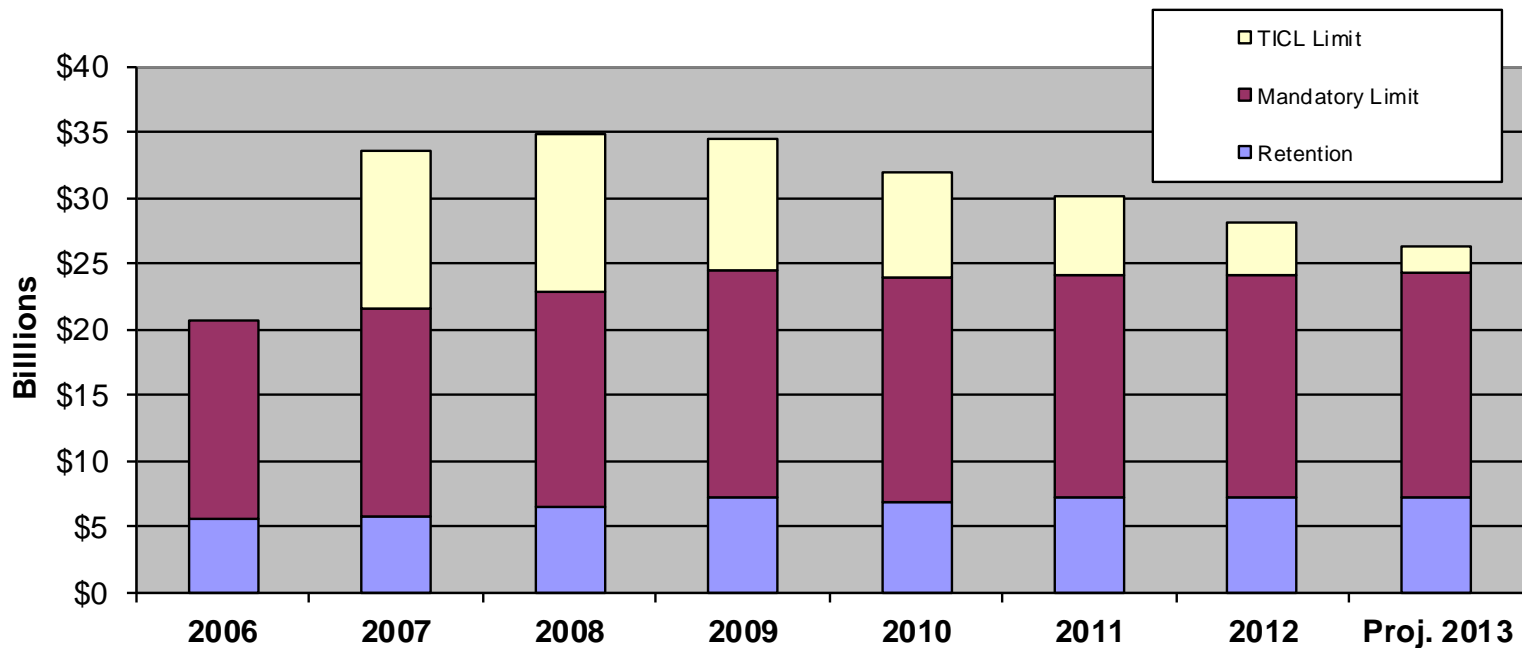


# 2013 RATEMAKING FORMULA REPORT

## Limit History

(\$B)	2006	2007	2008	2009	2010	2011	2012	Proj. 2013
<b>Retention</b>	5.627	5.785	6.377	7.204	6.881	7.143	7.097	7.213
<b>Mandatory</b>	15.000	15.845	16.530	17.175	17.000	17.000	17.000	17.000
<b>TICL Limit</b>	0.000	12.000	12.000	10.000	8.000	6.000	4.000	2.000

### FHCF Coverage



# 2013 RATEMAKING FORMULA REPORT

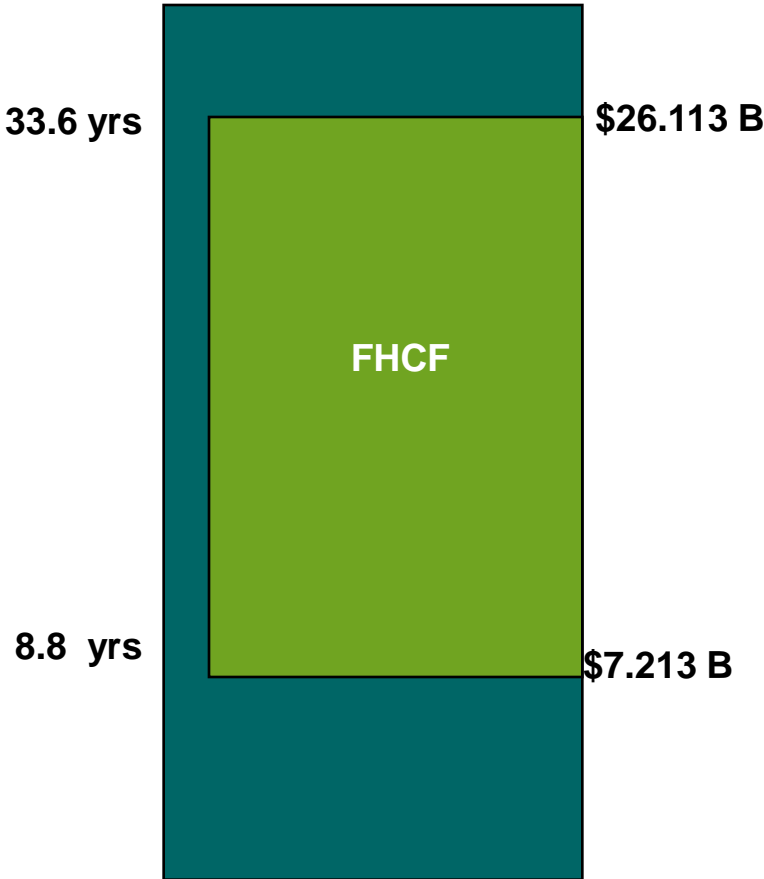
## Temporary Increased Coverage Limit Options (TICL)

### *TICL Special Features*

- **Optional coverage placed above mandatory FHCF layer**
- **Options available in \$1 billion industry increments**
- **2013 maximum option is industry \$2 billion limit**
- **Maximum decreases by \$2 billion per year and expires after 2013**
  - \$2 billion maximum for 2013
  - \$0 billion maximum for 2014

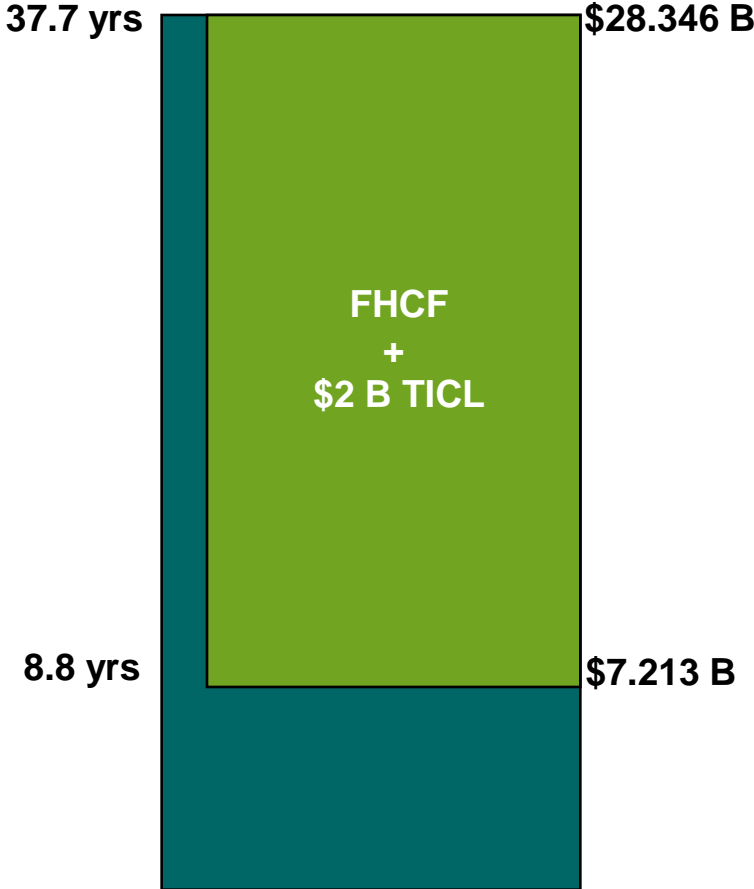
# 2013 RATEMAKING FORMULA REPORT

## TICL Coverage for 2013



**Mandatory FHCF Layer**

89.908% of \$18.908 B xs \$7.213 B



**Mandatory Layer Plus \$2 Billion TICL Option**

89.908% of \$21.133 B xs \$7.213 B

# 2013 RATEMAKING FORMULA REPORT

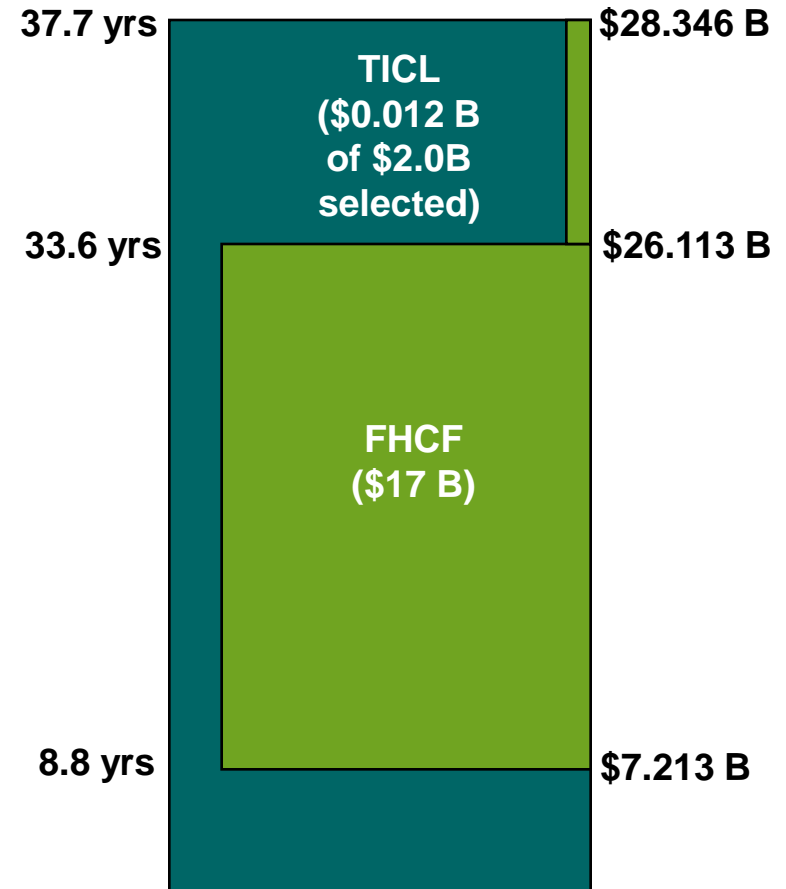
## TICL Purchased for 2013 (as of 03/18/2013)

### Company Selections

TICL 2013 Selection	# of Companies	% of FHCF 2012 Premium
\$ 0 B	155	99.3%
\$ 1 B	2	0.2%
\$ 2 B	5	0.5%
Total	162	100.0%

Note: TICL selection subject to change up to 06/01/2013.

% of premium based on prior year premium.



# 2013 RATEMAKING FORMULA REPORT

## Temporary Increased Coverage Limits (TICL)

### TICL Pricing and Coverage

- **Per statute, priced like the FHCF layer, except with a loading:**
  - 400% for 2011, 500% for 2012, 600% for 2013
- **TICL payout multiple added to the FHCF payout multiple and multiplied by FHCF reimbursement premium to calculate insurer's share of FHCF + TICL limit**
- **No change to retention multiples**
- **Premium adjustment factors for selected TICL limit are multiplied by mandatory FHCF rates to calculate FHCF + TICL rates**

# 2013 RATEMAKING FORMULA REPORT

## Temporary Increased Coverage Limits (TICL)

(1)	(2)	(3)	(4)						
Mandatory FHCf Limit	Mandatory Coverage Provided	Mandatory FHCf Premium	FHCf Rate on Line	FHCf Payout Multiple					
\$17,000,000,000	\$17.000B xs \$7.213B*	\$1,343,361,133	7.90%	12.6548					
(5)	(6)	(7)	(8)	(9)	(10)	(11)			
TICL Limit	TICL Coverage Provided	TICL Premium	TICL Rate on Line	TICL Payout Multiple+	FHCf + TICL Premium	FHCf + TICL Payout Multiple	FHCf + TICL Prem Adj Factor*		
\$1,000,000,000	\$18.000B xs \$7.213B	\$189,187,733	18.919%	0.7444	\$1,532,548,865	13.3992	1.1408		
\$2,000,000,000	\$19.000B xs \$7.213B	\$367,575,417	18.379%	1.4888	\$1,710,936,550	14.1436	1.2736		

+ Multiply by mandatory FHCf Reimbursement premium to get TICL Limit

\* Multiply published FHCf mandatory rates by the premium adjustment factor for the selected TICL limit level (actual factors include additional decimal places)



## 5. Other Topics of Interest



# 2013 RATEMAKING FORMULA REPORT

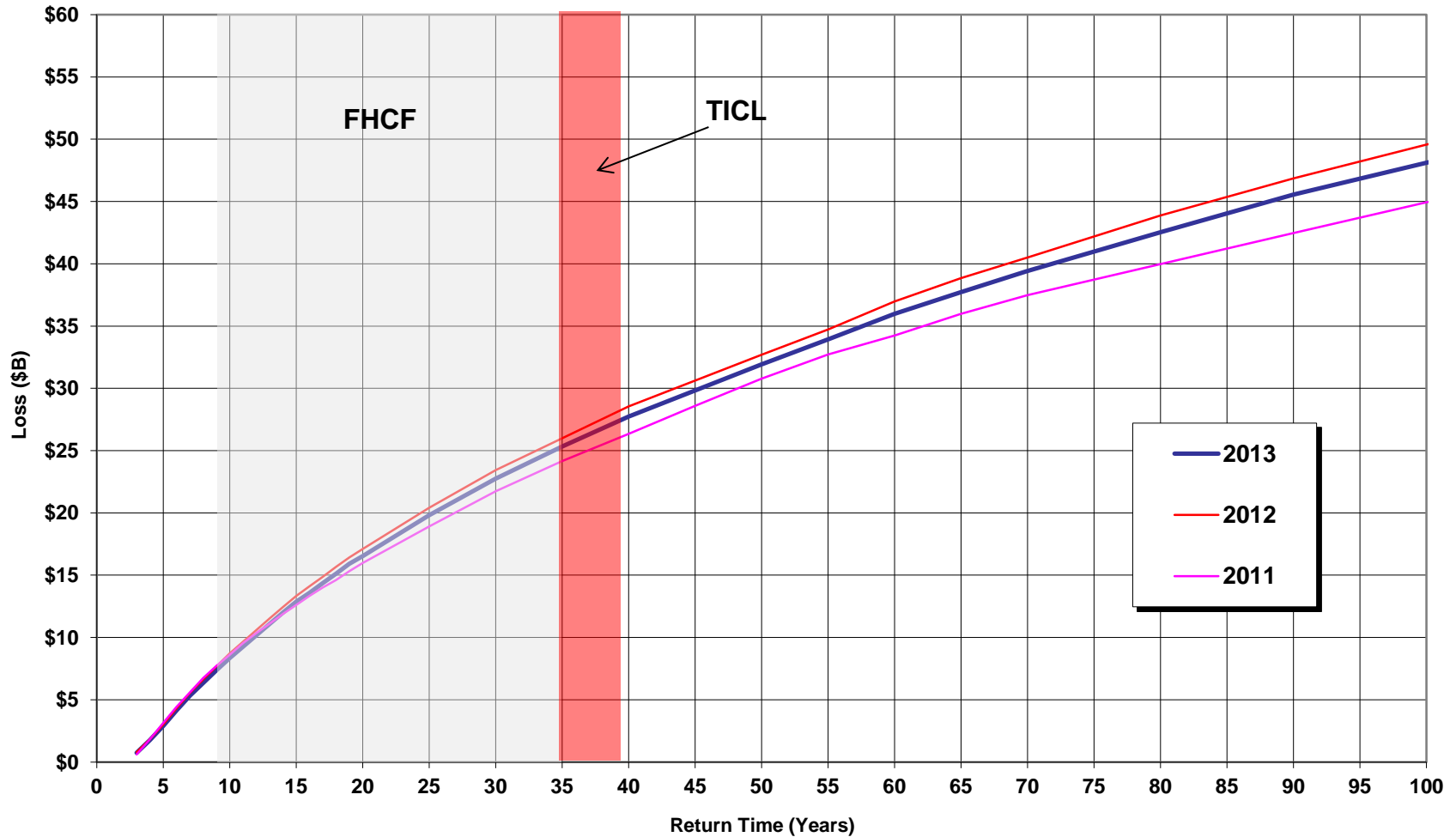
## Modeled Losses (\$ Billions)

	<u>2012</u>	<u>2013</u>	<u>% Change</u>
Modeled Exposure	\$2,118	\$2,075	-2.0%
Gross Losses	\$3.639	\$3.517	-3.4%
FHCF Layer Losses	\$1.006	\$0.982	-2.4%
Loss Cost per \$1,000	0.4750	0.4734	-0.3%

# 2013 RATEMAKING FORMULA REPORT

## Modeled Losses

Gross Single Event Severity Distribution  
(100% Coverage, no LAE)



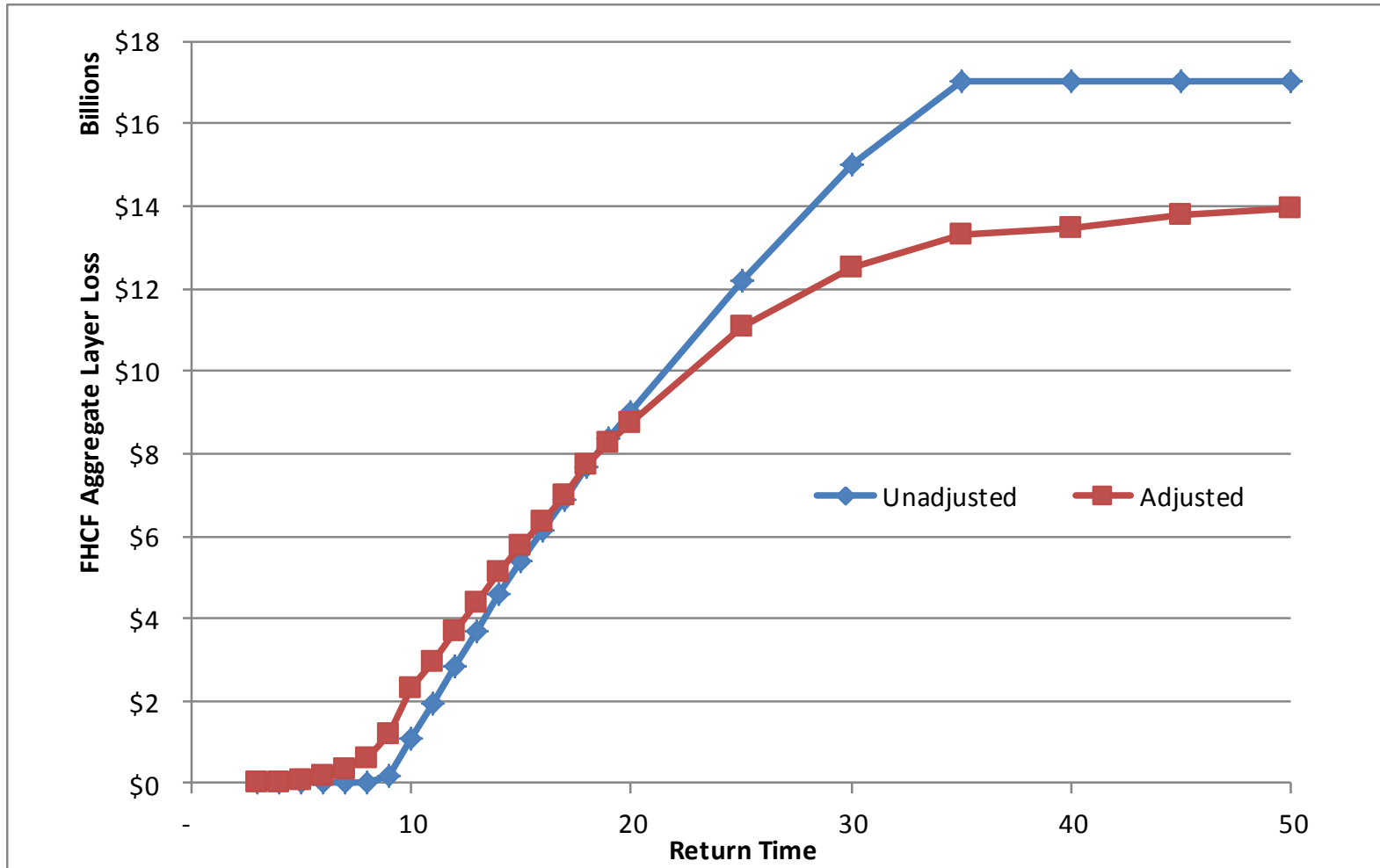
# 2013 RATEMAKING FORMULA REPORT

## Loadings and Factors

<b>Adjustment</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Adj. to Gross Losses	4.2%	4.2%	4.2%
Post-model	5.0%	5.0%	5.0%
Retention + Limit	1.6%	1.6%	-0.7%
Investment Income	-4.5%	0.0%	0.0%
Operating Expense	\$7,771,000	\$7,771,000	\$7,640,000
Mitigation	\$10,000,000	\$0	\$0
Multiple Deductible Reimbursement	\$38,187	\$0	\$0
Pre Event Note Expense	\$37,833,318	\$14,139,834	\$43,331,028
Financial Product Expense	\$0	\$0	\$0

# 2013 RATEMAKING FORMULA REPORT

## Retention Limit Adjustment 2013 Update



# 2013 RATEMAKING FORMULA REPORT

## Expense for Pre-event Notes

Florida Hurricane Catastrophe Fund  
 2013 Ratemaking Formula Report  
 Pre-Event Note Expense Loading  
 Contract Term : 06/01/2013 to 5/31/2014

	<b>2013A Projected Debt Service</b>
1 Debt Service	47,331,028
2 Interest Earnings	10,000,000
Liquidity Costs (ex default	
3 loading) (1)-(2)	37,331,028
4 Total Market Value	2,000,000,000
5 Exp. Default Loading %	0.3%
6 Exp. Default Cost (4)*(5)	6,000,000
Total Projected Liquidity	
7 Facility Cost (3)+(6)	43,331,028

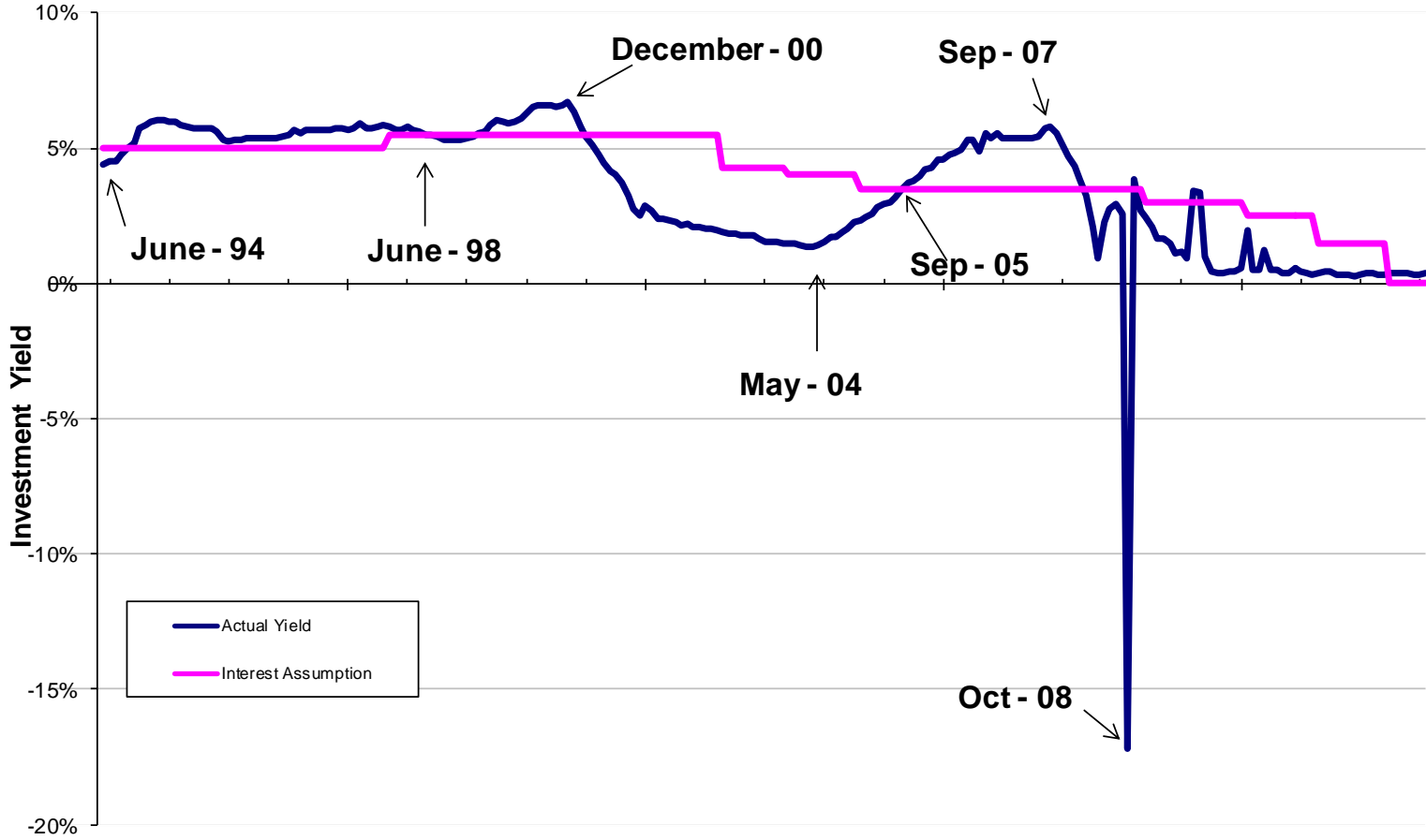
### Notes

- This method uses values projected by the FHCF's Financial Advisor, Raymond James - Kapil Bhatia (1/30/13) plus a judgemental loading for potential asset loss.

# 2013 RATEMAKING FORMULA REPORT

## FHCF Investment Returns

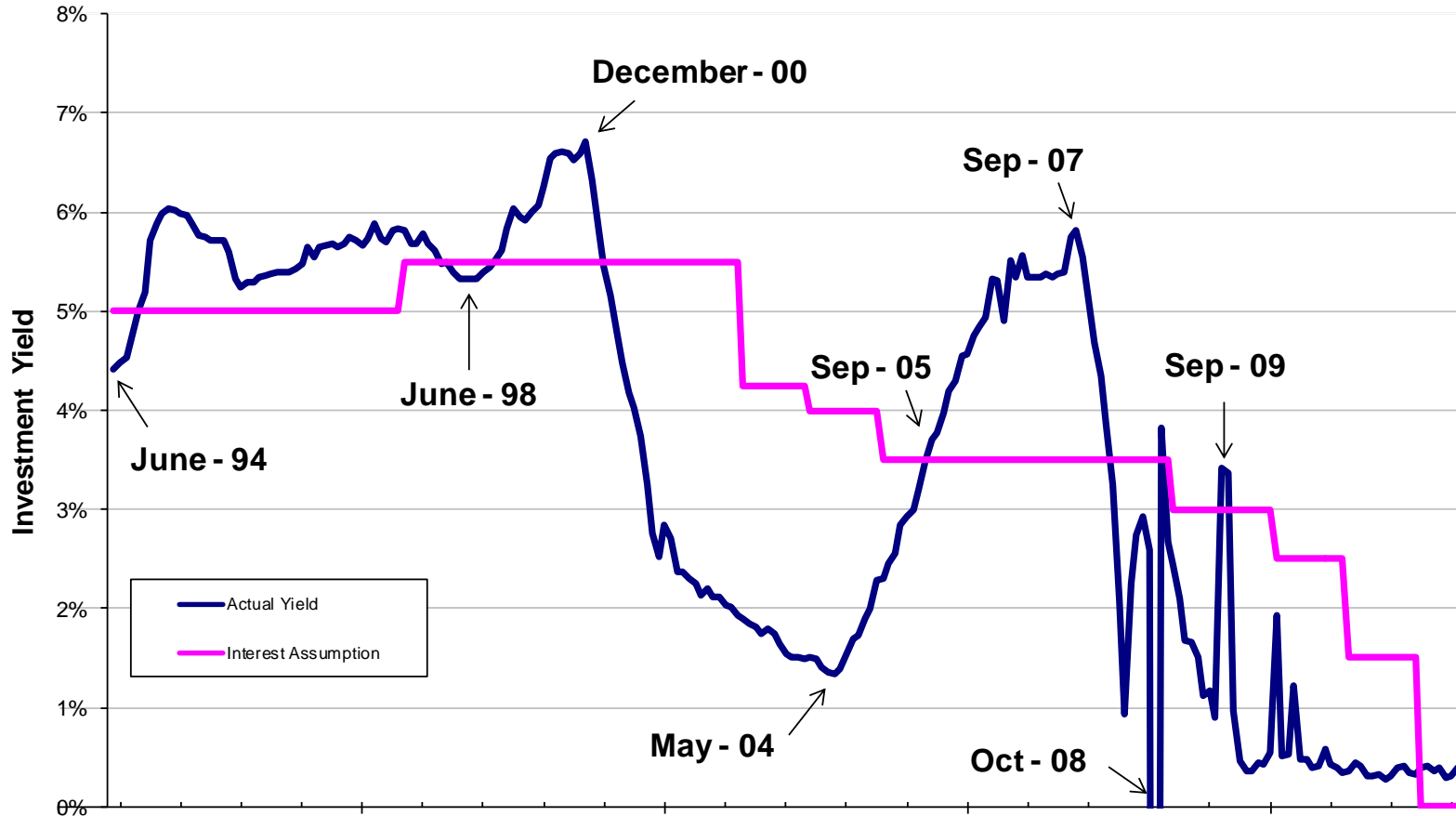
### Monthly FHCF Investment Returns



# 2013 RATEMAKING FORMULA REPORT

## FHCF Investment Returns

### Monthly FHCF Investment Returns



# 2013 RATEMAKING FORMULA REPORT

## Mitigation Rating Factors

- **FHCF member companies are required to adjust primary rates for mitigation**
- **Hurricane models show significant differentiation in risk for exposures with these features**
- **Classifications first used with FHCF rates in 2009**
  - Capped at +/-10% in 2009
  - Capped at +/-20% in 2010 to 2012
  - Recommend : Increase Cap to +/-30% in 2013



# 2013 RATEMAKING FORMULA REPORT

## Mitigation Rating Factors

**Florida Hurricane Catastrophe Fund 2013 Ratemaking  
Change in 2012 FHCF Premium Due to Increasing  
Mitigation Factor Cap  
Based on 2012 Rates and Reported Exposure Data**

Change in Premium	20% to 30% Cap Change		20% to 40% Cap Change	
	Company Count	% of Premium	Company Count	% of Premium
-30% to -25%	0	0.0%	0	0.0%
-25% to -20%	0	0.0%	1	0.1%
-20% to -15%	0	0.0%	5	4.5%
-15% to -10%	4	0.2%	7	2.1%
-10% to -5%	17	8.8%	14	7.0%
-5% to 5%	112	85.9%	79	45.9%
5% to 10%	28	5.1%	35	36.8%
10% to 15%	0	0.0%	17	3.5%
15% to 20%	0	0.0%	3	0.0%
20% to 25%	0	0.0%	0	0.0%
25% to 30%	0	0.0%	0	0.0%
30% to 35%	0	0.0%	0	0.0%
<b>Total</b>	<b>161</b>	<b>100%</b>	<b>161</b>	<b>100%</b>

# 2013 RATEMAKING FORMULA REPORT

## Expanded Rating Classification

**To Calculate the Final FHCF Rate for a risk:**

*Preliminary factor = (year built factor) x (roof shape factor) x (opening protection factor)*

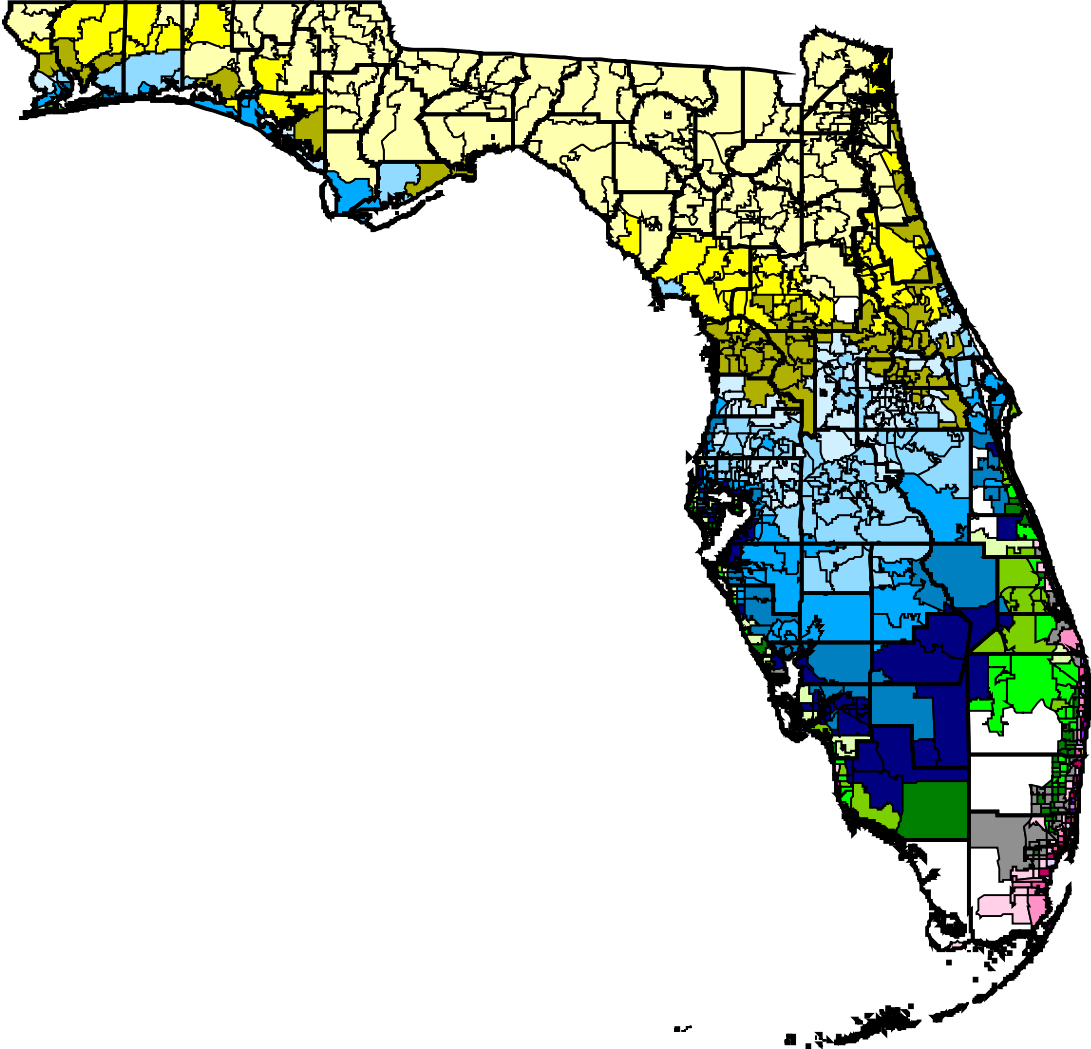
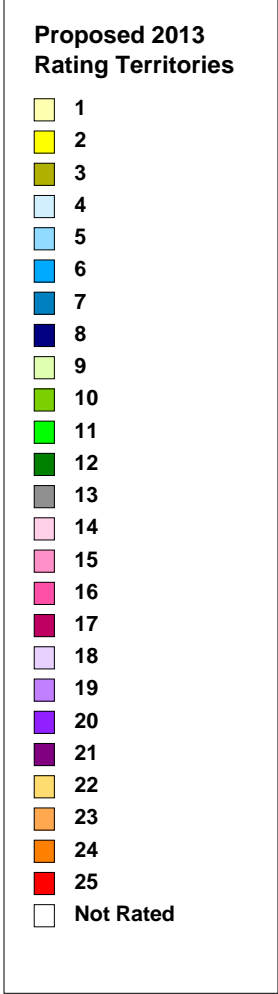
*Capped factor = 1.3 if the preliminary factor exceeds 1.3; or  
0.7 if the preliminary factor is less than 0.7; or  
the preliminary factor in all other cases.*

*Final rate = (Base rate) x (Capped factor) x (On balance factor)*

Rating Factor	Description	Type of Business				
		Commercial	Residential	Mobile Home	Tenants	Condos
<b>Year Built</b>	<b>2002 or later</b>	0.6546	0.7121	1.0000	0.6037	0.6476
	<b>1995-2001</b>	0.7024	0.8028	1.0000	0.7236	0.7543
	<b>1994 or Earlier</b>	1.1303	1.1716	1.0000	1.2280	1.1812
	<b>Unknown or Mobile Home</b>	1.0165	1.0661	1.0000	1.0800	1.0565
<b>Roof Shape</b>	<b>Hip, Mansard, or Pyramid</b>	0.8459	0.8551	1.0000	0.7487	0.7724
	<b>Gable, Other or Unknown</b>	1.0321	1.0936	1.0000	1.0370	1.0364
<b>Opening Protection</b>	<b>Structure Opening Protection</b>	0.8567	0.8379	1.0000	0.6923	0.7801
	<b>No Structure Opening Protection</b>	1.0477	1.0877	1.0000	1.0490	1.0990
<b>On Balance Factor</b>		0.9653	0.9897	1.0000	0.9599	0.9793

# 2013 RATEMAKING FORMULA REPORT

## Proposed 2013 Rating Territories



# 2013 RATEMAKING FORMULA REPORT

## % Rate Changes for 2013

### % Change in Rates

Maximum Decrease                    -34.26%  
 Maximum Increase                    87.65%

Threshold From                    To	Count of ZIP Codes	Percentage of Zip Codes in Group	Residential Exposure (in 000's)	Percentage of Res Exposure in Group	Residential Exposure Risk Counts (Houses)	Percentage of Risk Counts in Group
Greater Than -40%	0	0.00%	-	0.00%	-	0.00%
-40% -25%	31	2.11%	31,382,069	2.09%	68,846	1.83%
-25% -15%	18	1.23%	22,282,430	1.48%	55,964	1.49%
-15% 0%	479	32.67%	566,761,612	37.67%	1,398,927	37.21%
0% 15%	651	44.41%	604,285,581	40.16%	1,542,268	41.02%
15% 45%	199	13.57%	172,676,593	11.48%	440,567	11.72%
45% 65%	86	5.87%	107,281,531	7.13%	252,777	6.72%
Greater Than 65%	1	0.07%	24,187	0.00%	86	0.00%
<b>New ZIP Codes in 2013</b>	<b>1,465</b>	<b>99.93%</b>	<b>1,504,694,003</b>	<b>100.00%</b>	<b>3,759,435</b>	<b>100.00%</b>
	1	0.07%	-	0.00%	-	0.00%
	<b>1,466</b>	<b>100.00%</b>	<b>1,504,694,003</b>	<b>100.00%</b>	<b>3,759,435</b>	<b>100.00%</b>

Residential, masonry, 2% deductible risks



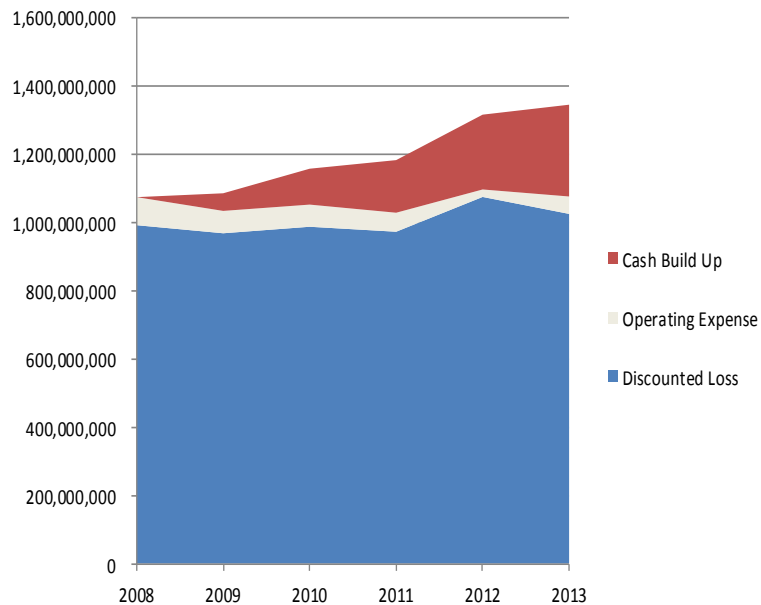
## 7. Recap

# 2013 RATEMAKING FORMULA REPORT

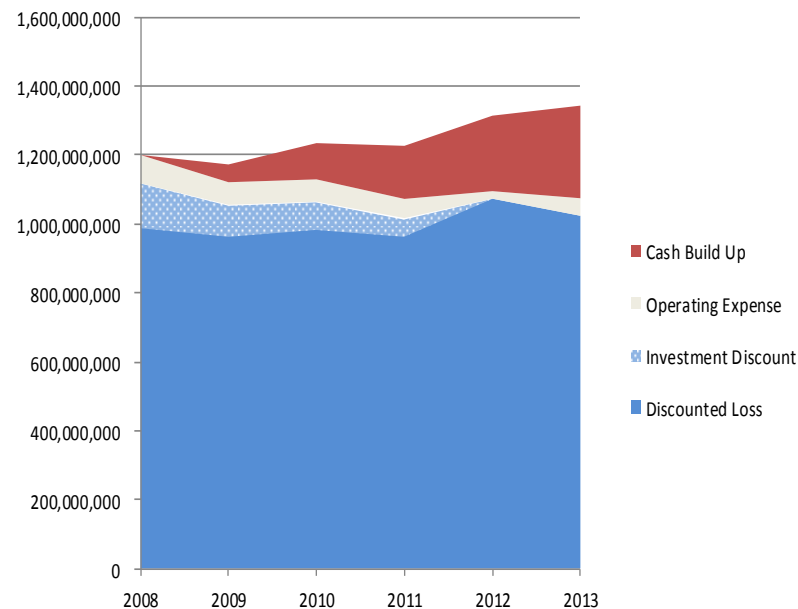
## History of Component Indications

	2008	2009	2010	2011	2012	2013
Discounted Loss	990,619,049	967,000,146	986,038,487	971,475,818	1,073,304,022	1,023,717,879
Operating Expense	82,136,065	65,463,190	64,889,850	55,642,505	21,910,834	50,971,028
Cash Build Up	0	51,623,167	105,092,834	154,067,748	219,042,971	268,672,227
Modeled Premiums	1,072,755,114	1,084,086,503	1,156,021,171	1,181,186,071	1,314,257,827	1,343,361,134
Investment Discount	127,479,463	88,670,499	78,563,624	45,594,759	0	0
Modeled Undiscounted Premiums	1,200,234,577	1,172,757,002	1,234,584,795	1,226,780,830	1,314,257,827	1,343,361,134

### Modeled Premiums



### Modeled Undiscounted Premiums



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<b>Total Rate Change</b>	<b>2.18%</b>	<b>6.43%</b>

\* Cash Build-up Factor for 2012 was 20%; for 2013 it is 25%



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## Overall Indications

### Rate On Line Changes

LIMIT (FHCF + TICL)			FHCF + TICL Layer		
			2012	2013	Change
\$17,000,000,000	Mandatory	Actual 2012	7.42%	7.90%	6.43%
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\$2,000,000,000	TICL	Modeled	15.69%	18.38%	17.13%

Note: Projected 2013 TICL limit purchased is 0.7% of maximum available.



## 8. Questions

# 2013 RATEMAKING FORMULA REPORT

## Questions

