The New NCCI ELFs

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WC-5 Large Account Issues

Agenda

- Main changes in methodology
- Impact on new ELFs
- Key drivers of the changes

Methodology Changes*

- Data adjustment techniques
- State specific loss distributions
- Injury type groupings
- Fitting methodology
- Modeling occurrences

*For further details see my slides from last year's Ratemaking Seminar.

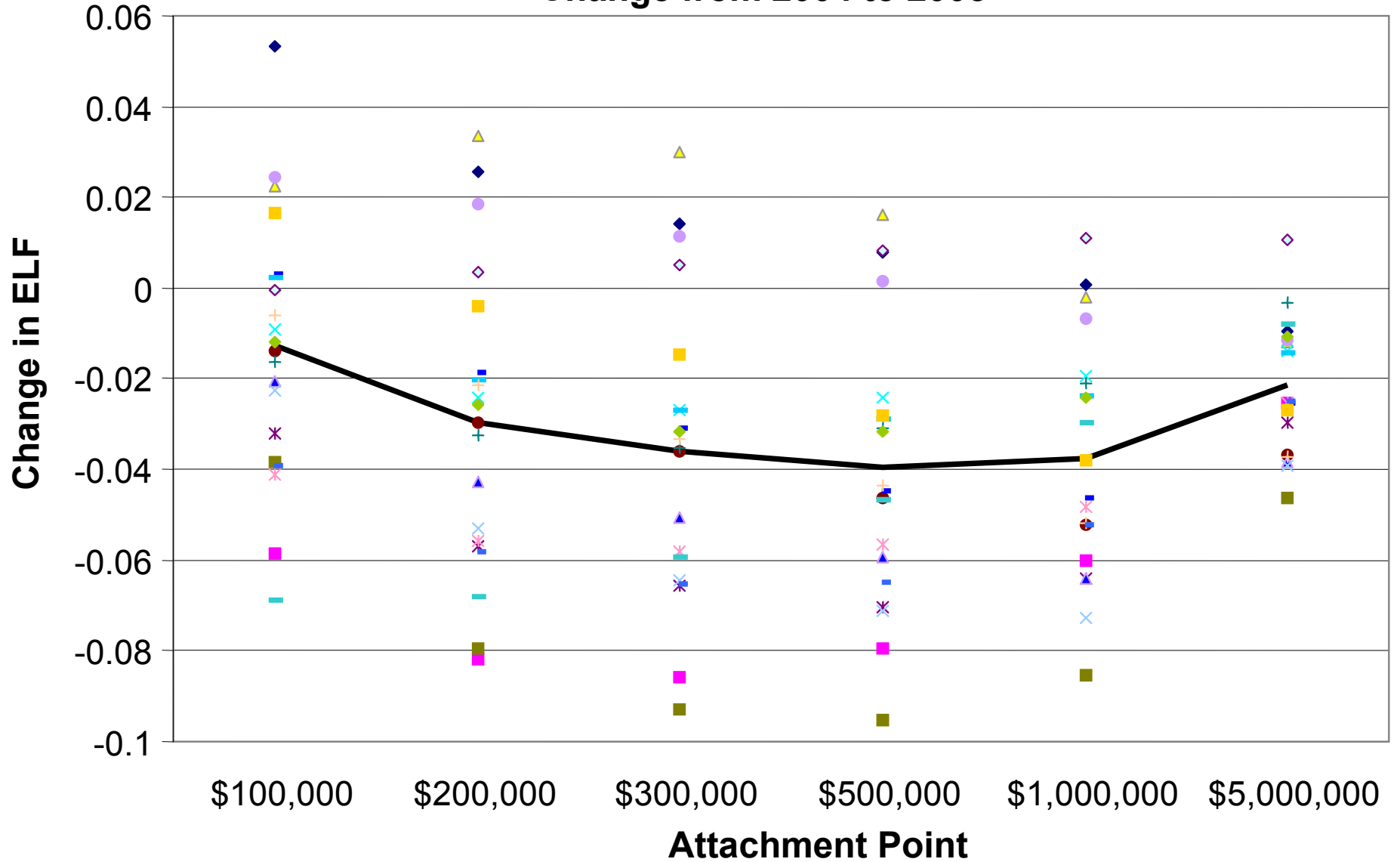# Published Excess Ratios for 20 States

Change from 2004 to 2005

	Minimum	Maximum	Average Difference
$100,000	(0.069)	0.053	(0.013)
$200,000	(0.082)	0.034	(0.030)
$300,000	(0.093)	0.030	(0.036)
$500,000	(0.095)	0.016	(0.039)
$1,000,000	(0.085)	0.011	(0.038)
$5,000,000	(0.046)	0.010	(0.021)

Percentage Change from 2004 to 2005

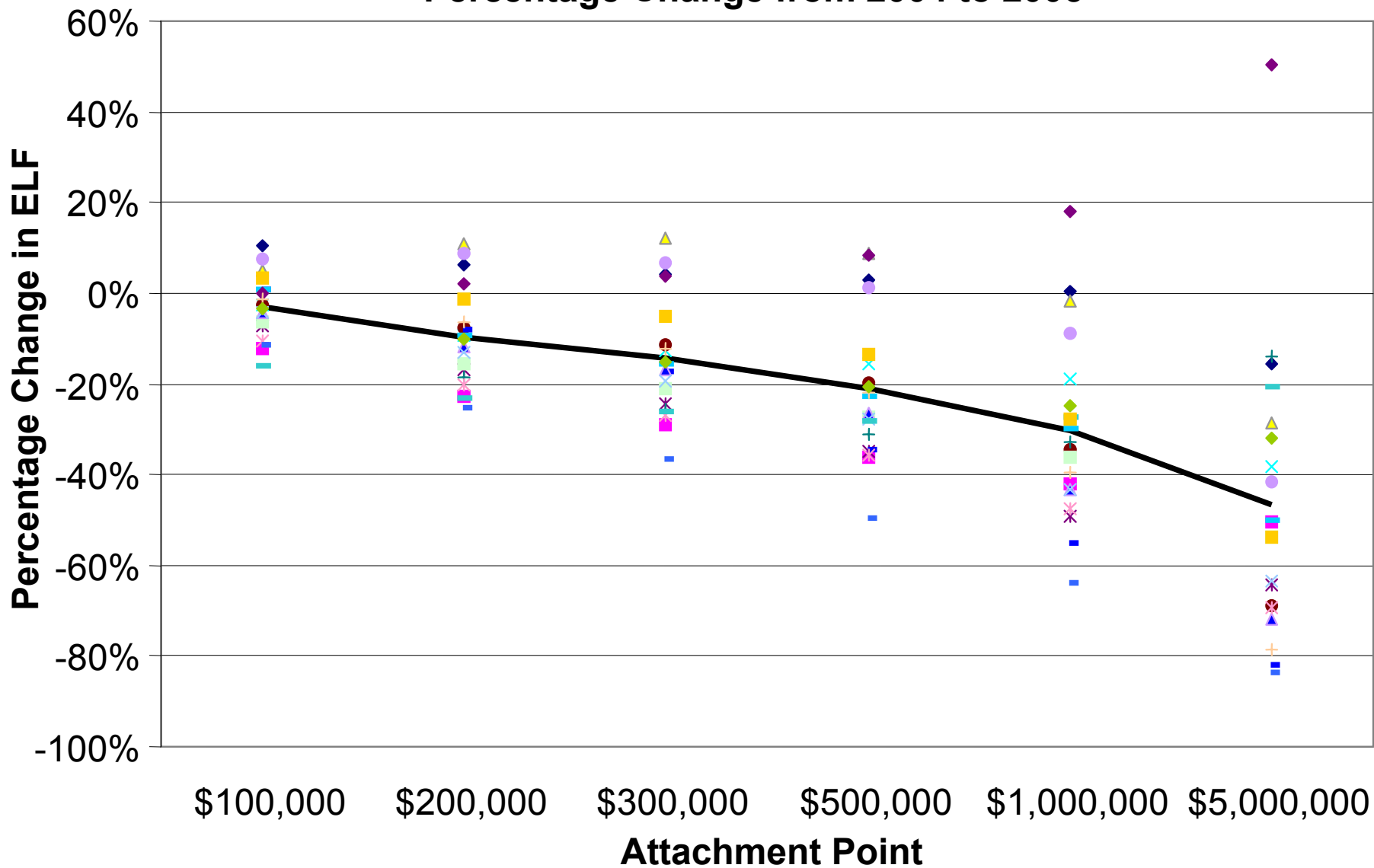|	Minimum	Maximum	Average Difference
$100,000	-16%	11%	-3%
$200,000	-25%	11%	-10%
$300,000	-36%	12%	-14%
$500,000	-49%	9%	-21%
$1,000,000	-63%	18%	-30%
$5,000,000	-84%	45%	-47%

Published Excess Ratios for 20 States
Change from 2004 to 2005

Published Excess Ratios for 20 States
Percentage Change from 2004 to 2005

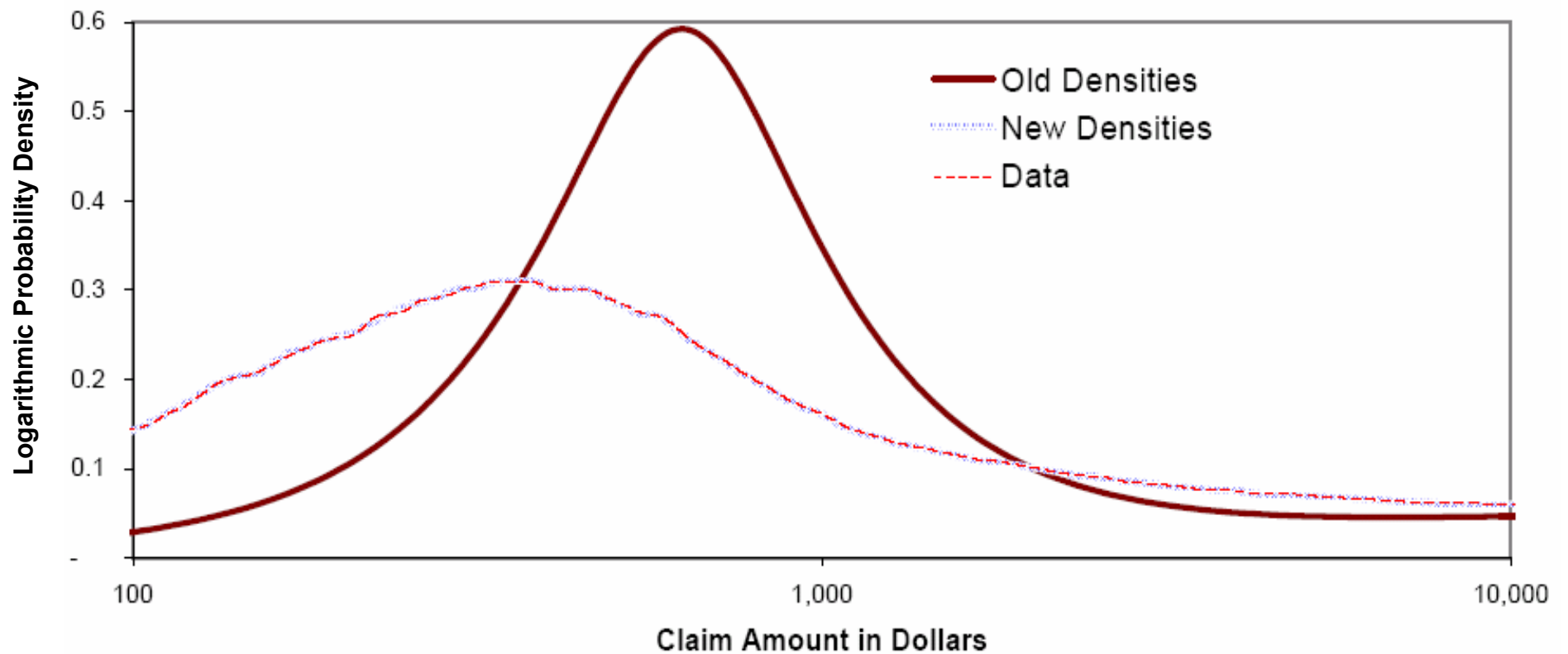# Reasons for Changes in ELFs

- New data (fit of new vs. old loss distributions)

- Tail assumptions

- Distributional assumptions

- Development assumptions

- Loss distributions not adjusted to reflect CAT exposure (Separate CAT filing)
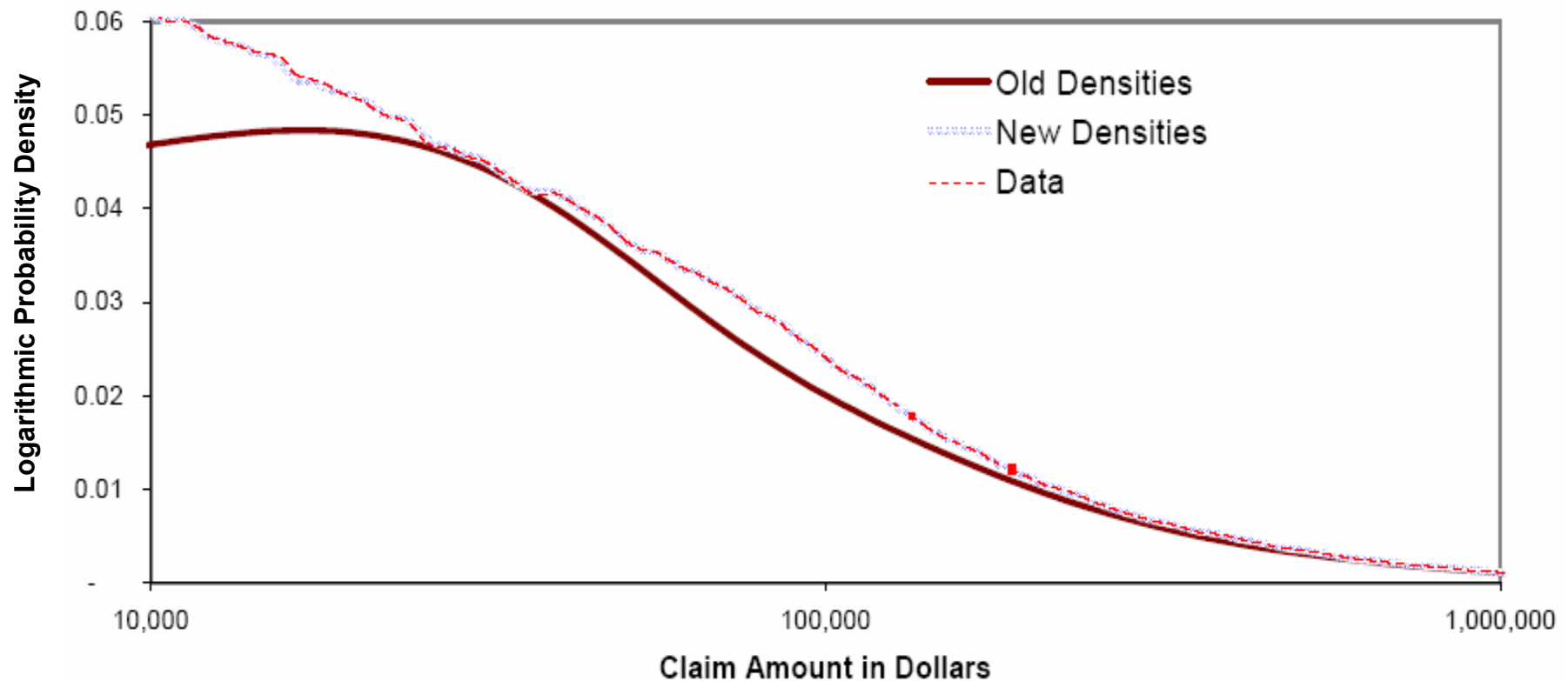
Data

- **New Data**
  - Developed, dispersed
  - 3rd, 4th, 5th report for F, PT
  - 5th report for PP, TT, med only
  - PY 97, 98, 99
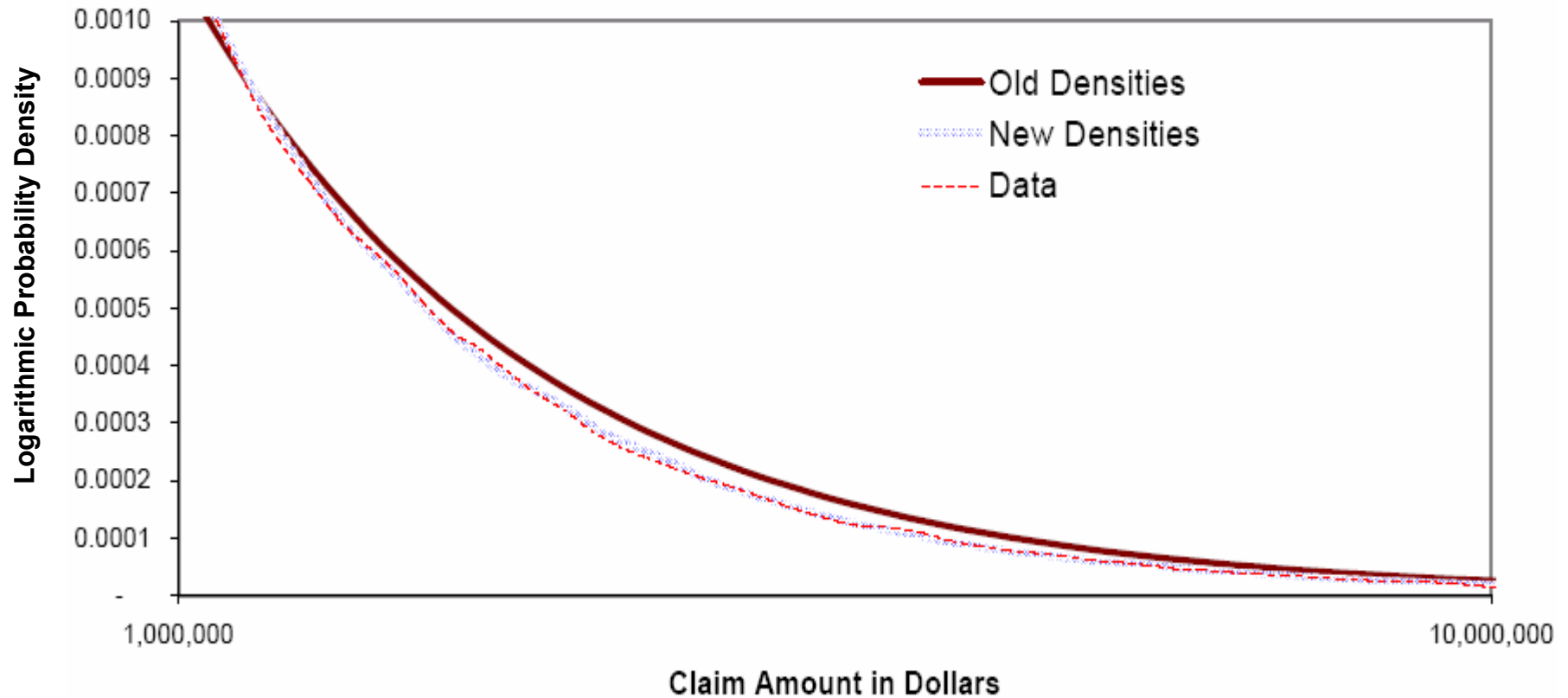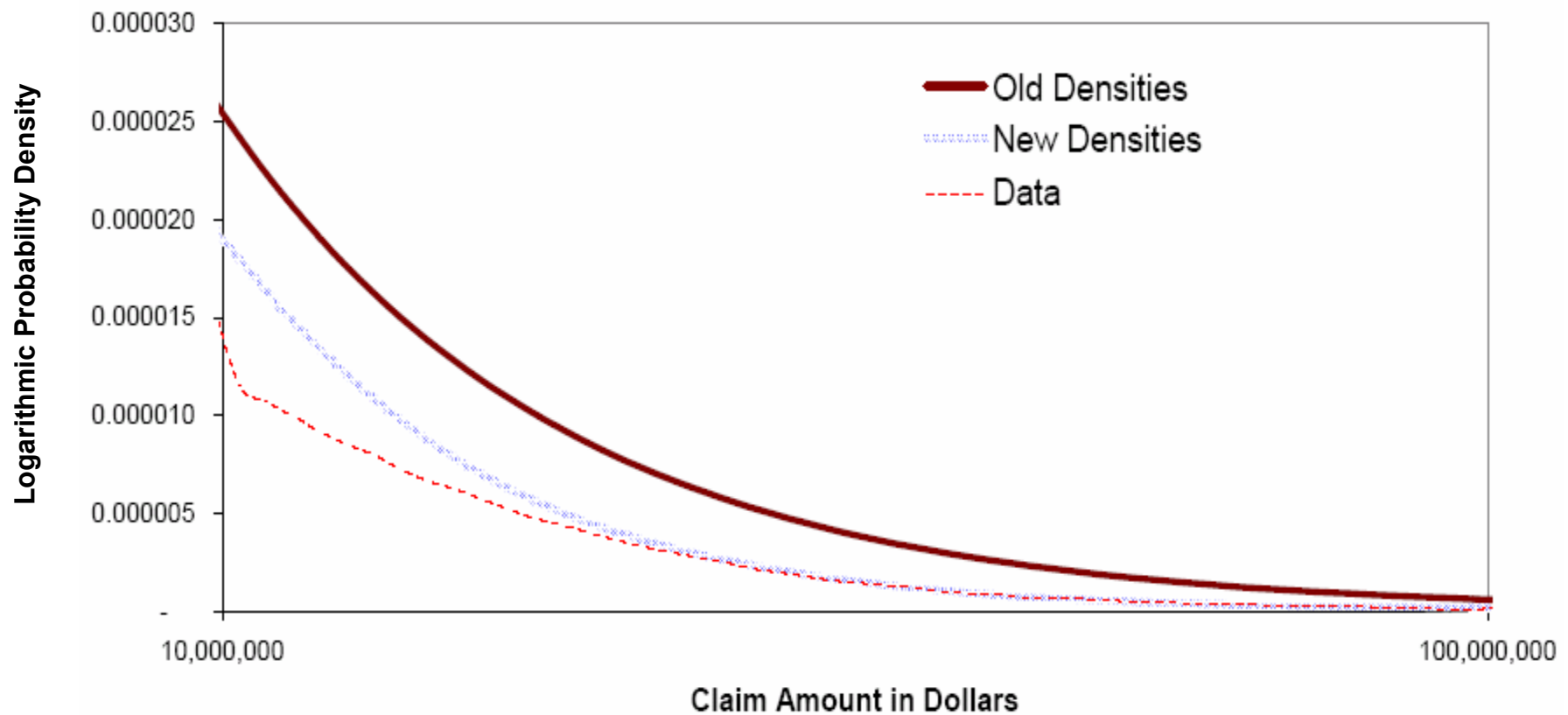- **Old Data**
  - 5th report
  - Pre-reform

Comparison of Countrywide Distributions

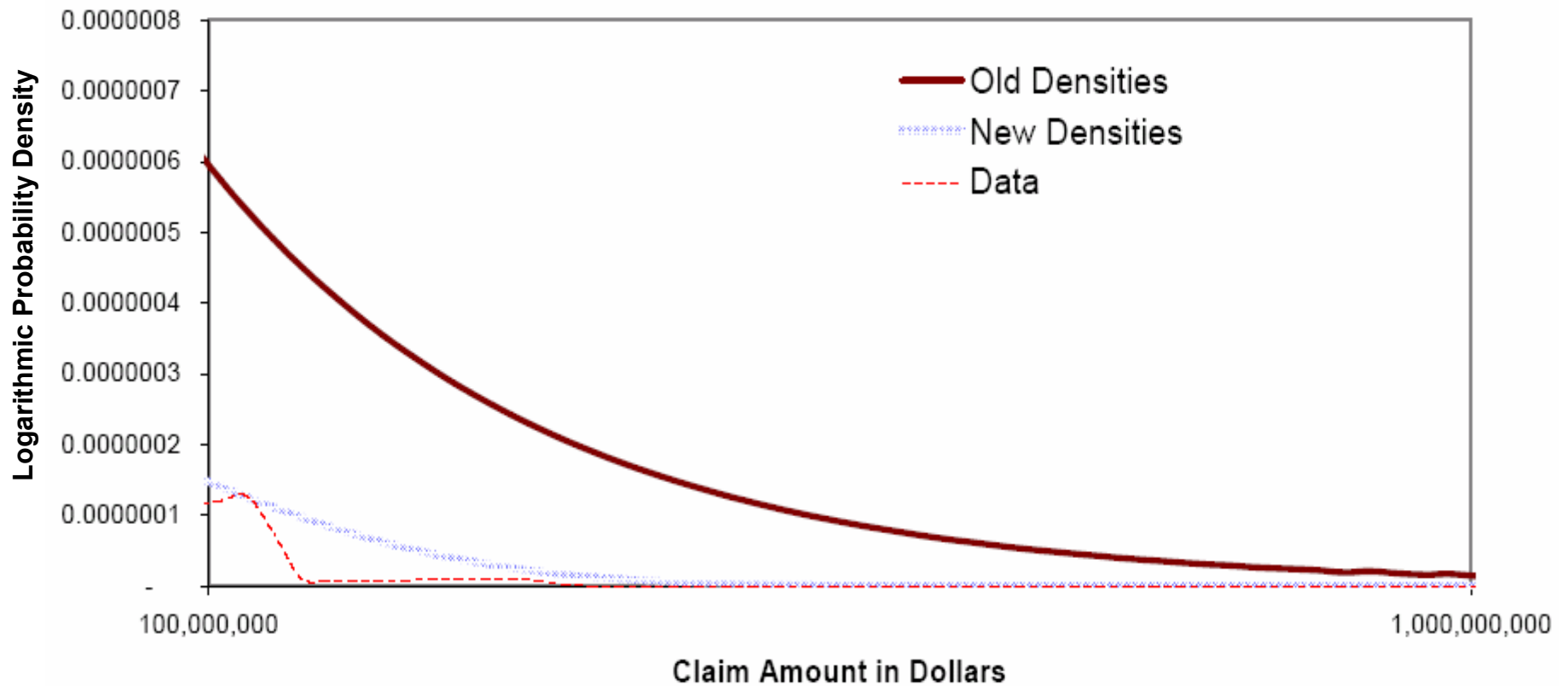# Comparison of Countrywide Distributions

Comparison of Countrywide Distributions

Comparison of Countrywide Distributions

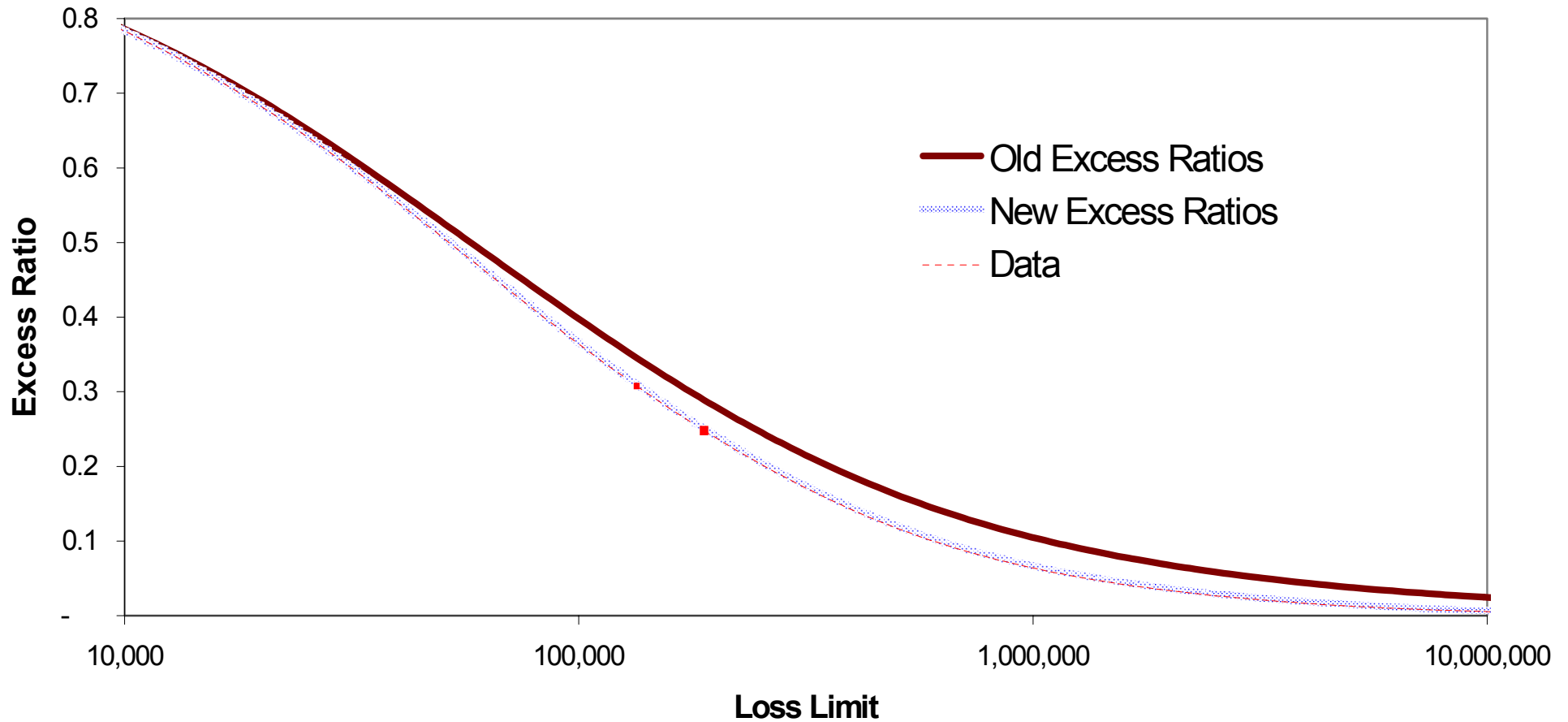# Comparison of Countrywide Distributions

Reasons for Improved Fit

- Empirical distribution used for small claims

- Mixed exponential fit to tail

Loss Development

- Each open claim developed stochastically

- Resulting in 173 versions of the claim at ultimate

- This smoothes the data considerably
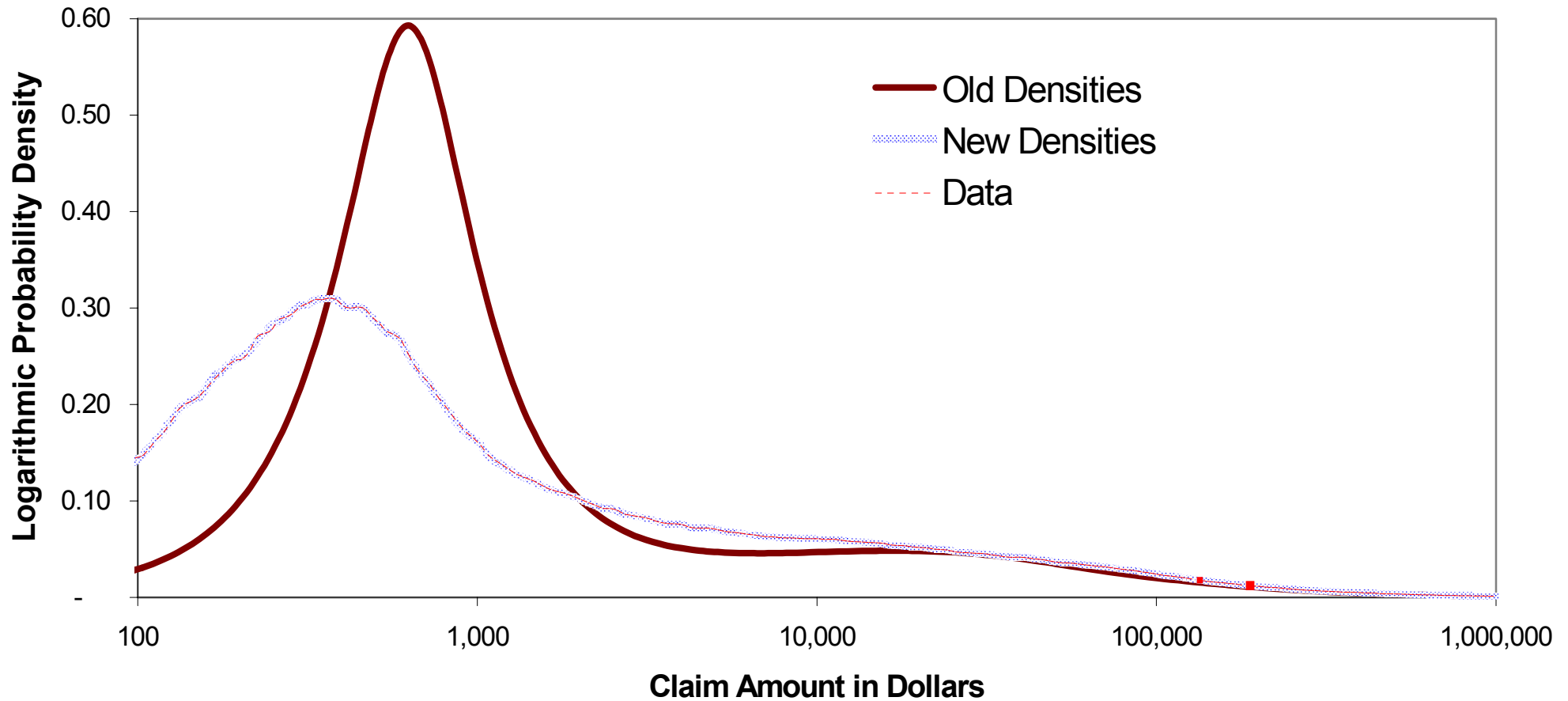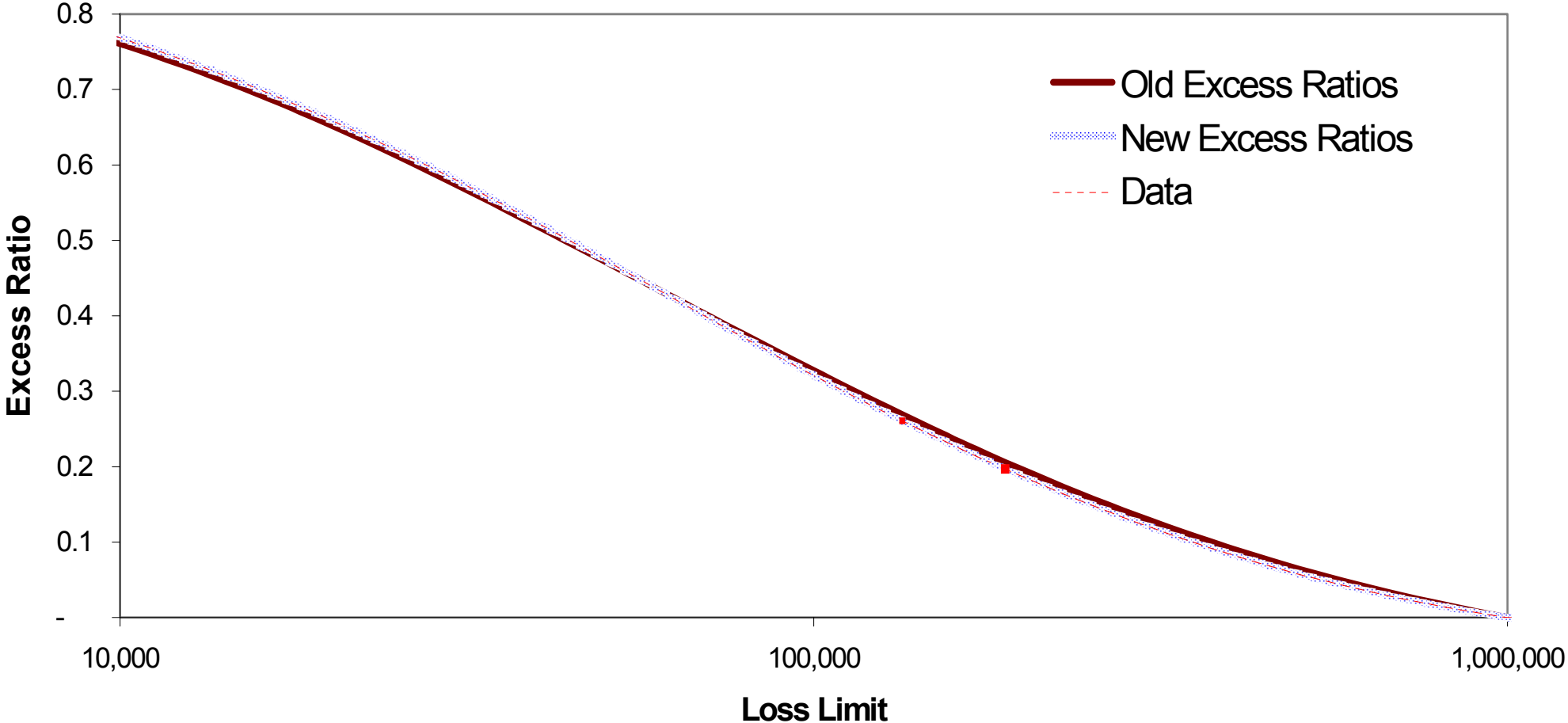
Comparison of Countrywide Excess Ratios

Impact of the Tail

- Portion of change in ELFs due to tail assumptions

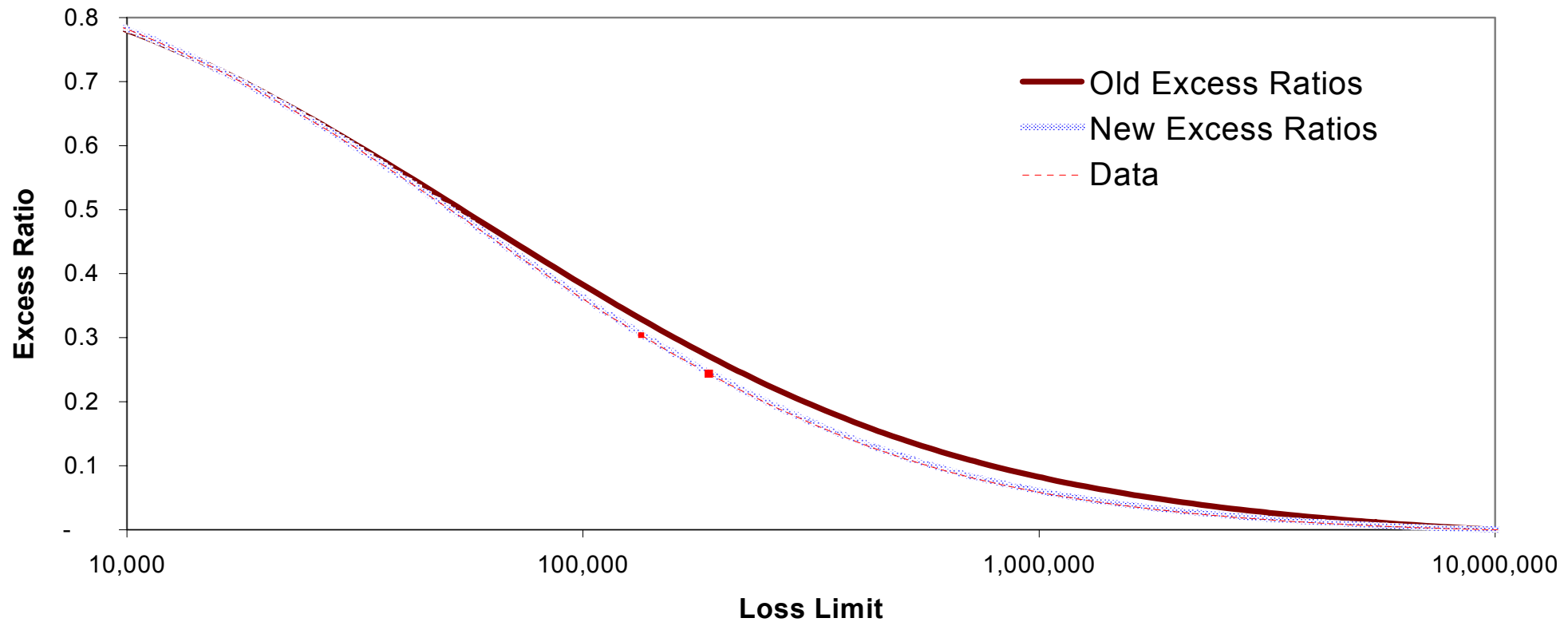- We truncated at $1M and looked at the conditional densities

Comparison of Countrywide Truncated Densities

Excess Ratios of Countrywide Truncated Densities

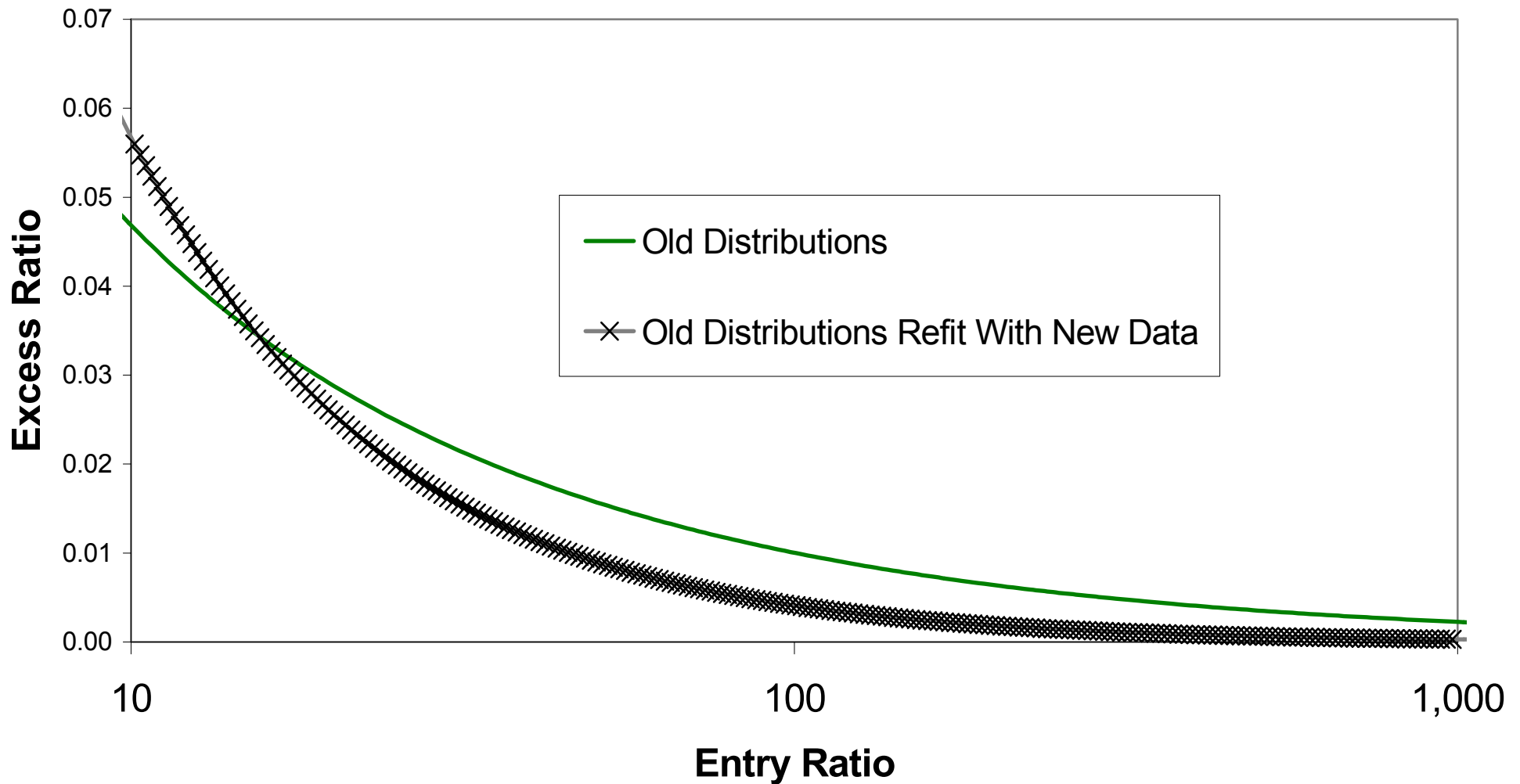# Excess Ratios of Truncated Densities Truncated at $10M

Impact of the Tail

Difference between Prior ELFs and Current ELFs

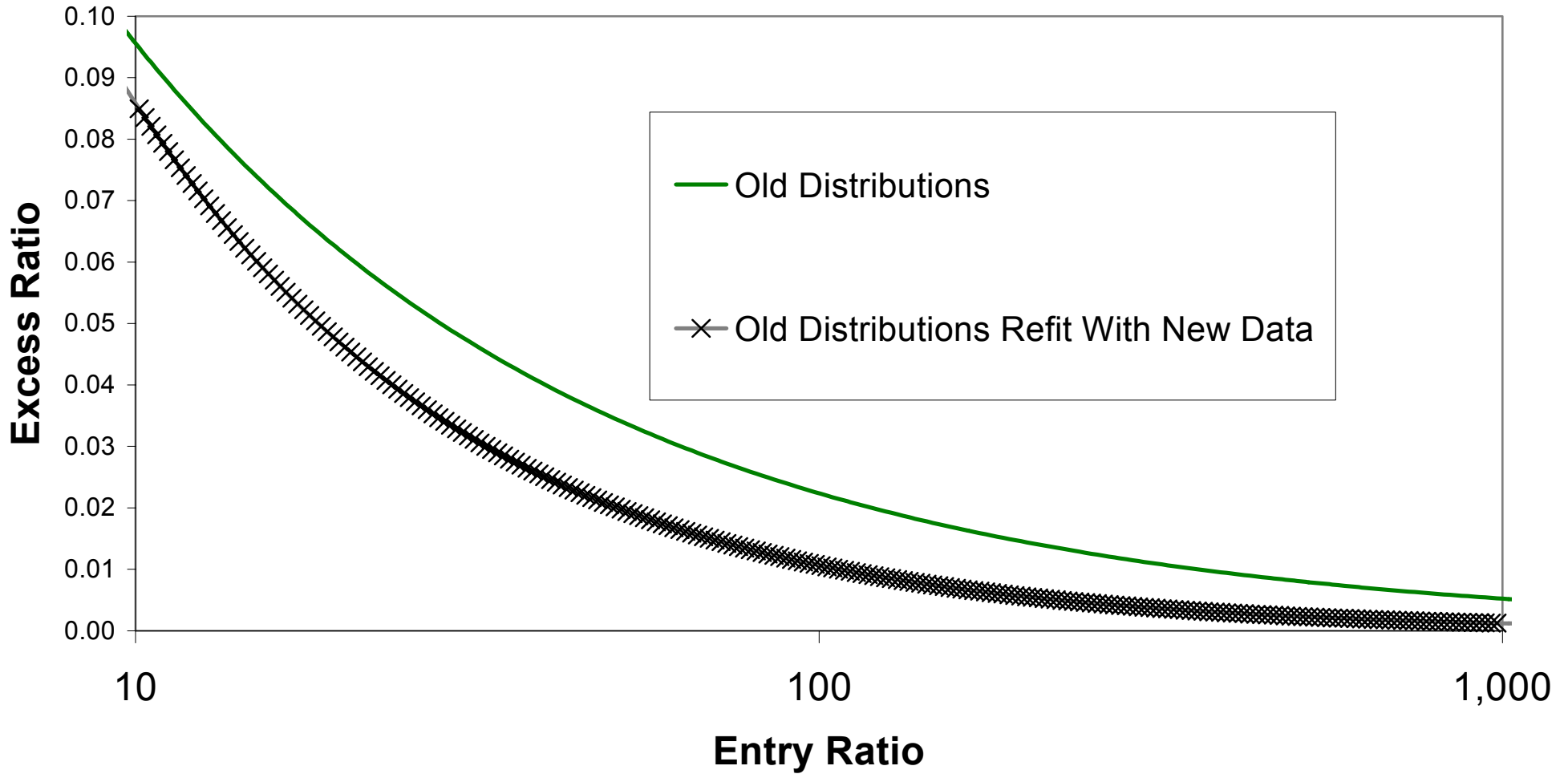|	Loss Limit		
	$100,000	**$500,000**	**$1,000,000**
Uncensored	0.031	0.042	0.038
Censored at $10 Million	0.020	0.026	0.022
Censored at $1 Million	0.006	0.006	0.000

Distributional Assumptions

- Old distributions were transformed betas

- New distributions are empirical with mixed exponential tail

- Impact of choice of distribution on ELFs

- We refit old distributions to the new data

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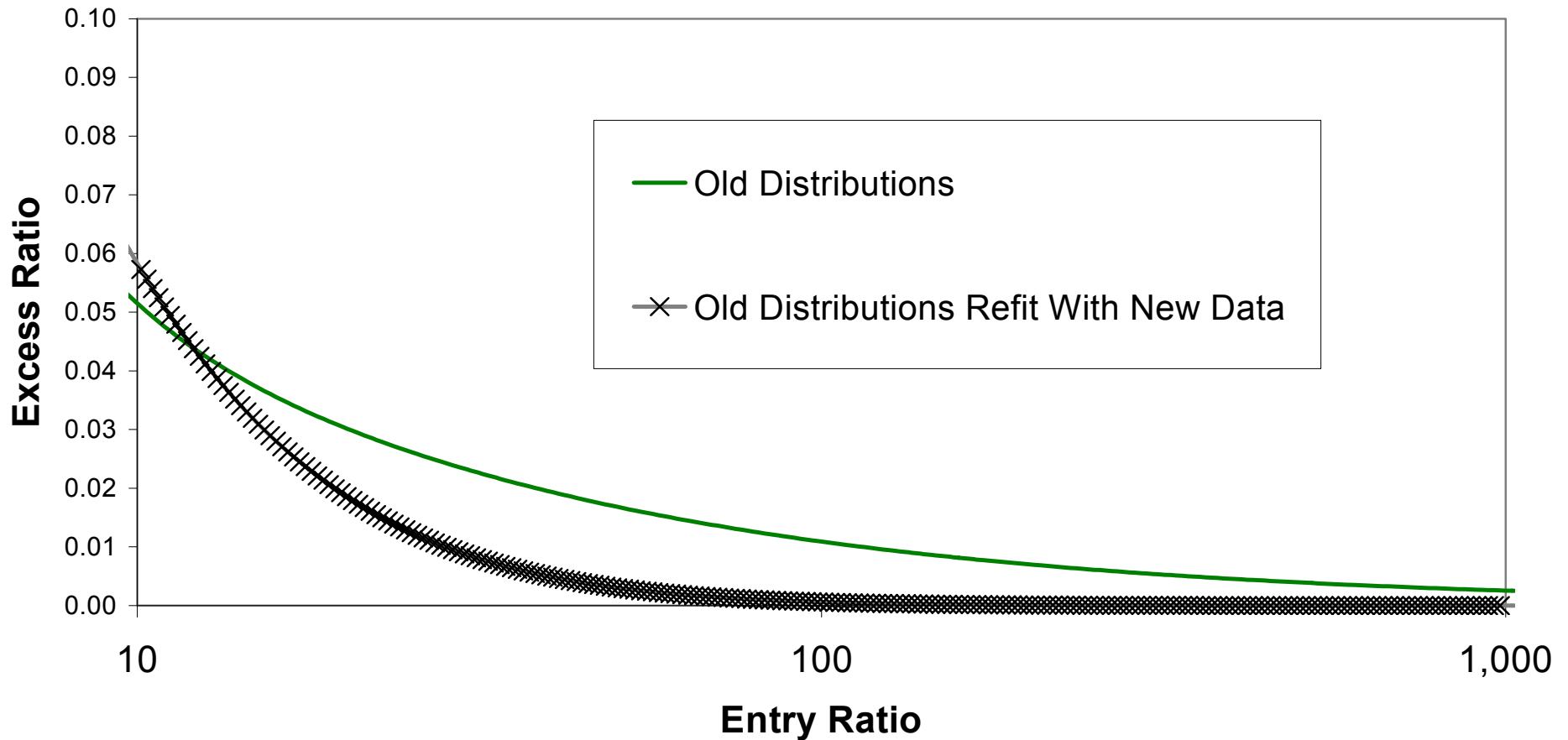# Countrywide Excess Ratios for Fatal Claims

Countrywide Excess Ratios for PT Claims

Countrywide Excess Ratios for PP Claims

Change in Dispersion CV

- Inverse Gamma used for distribution of LDFs as before.
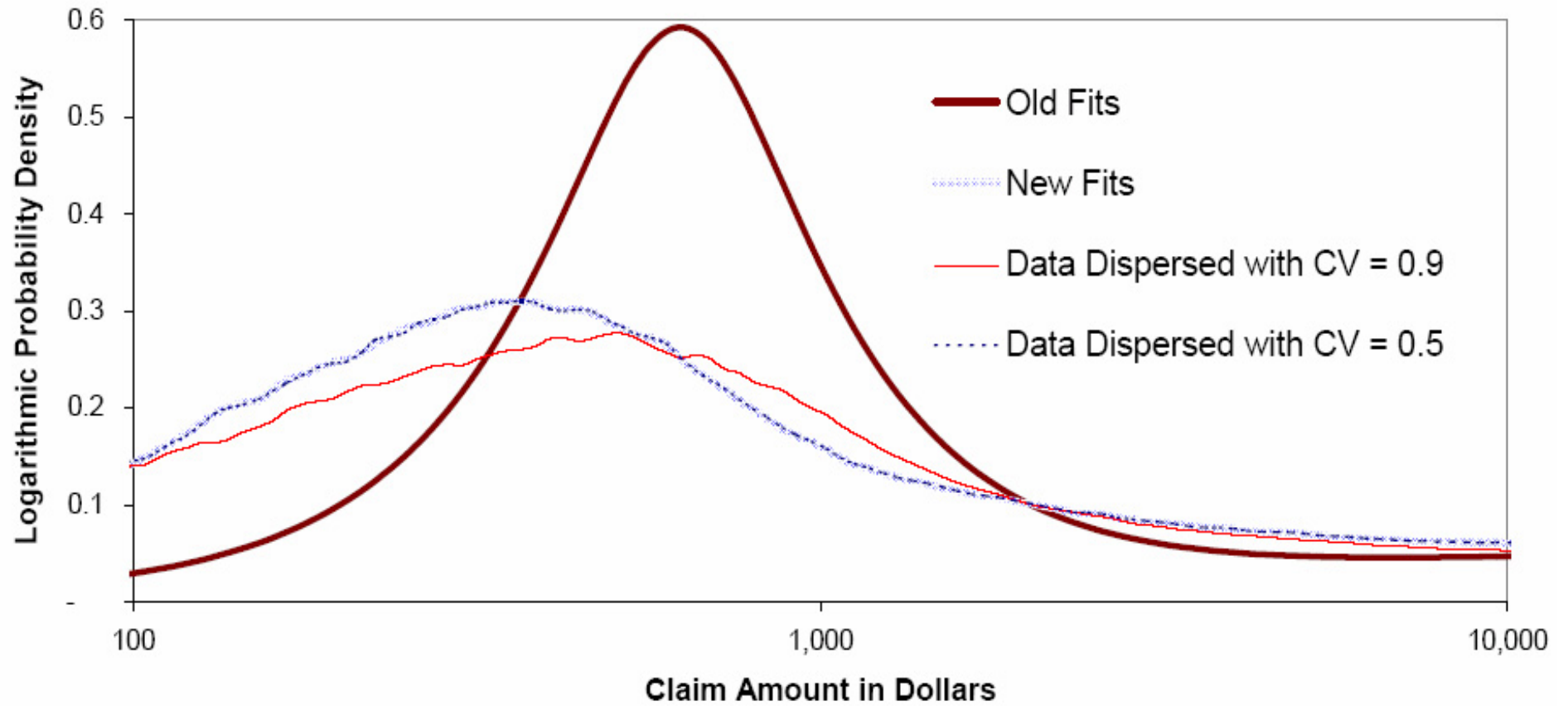
- CV has been lowered from 0.9 to 0.5.

Impact on ELFs

- **Noticeable but partial explanation of general decline in ELFs**
- **Less relevant at the highest loss limits.**

Current Excess Ratios as a Percentage of Prior Excess Ratios

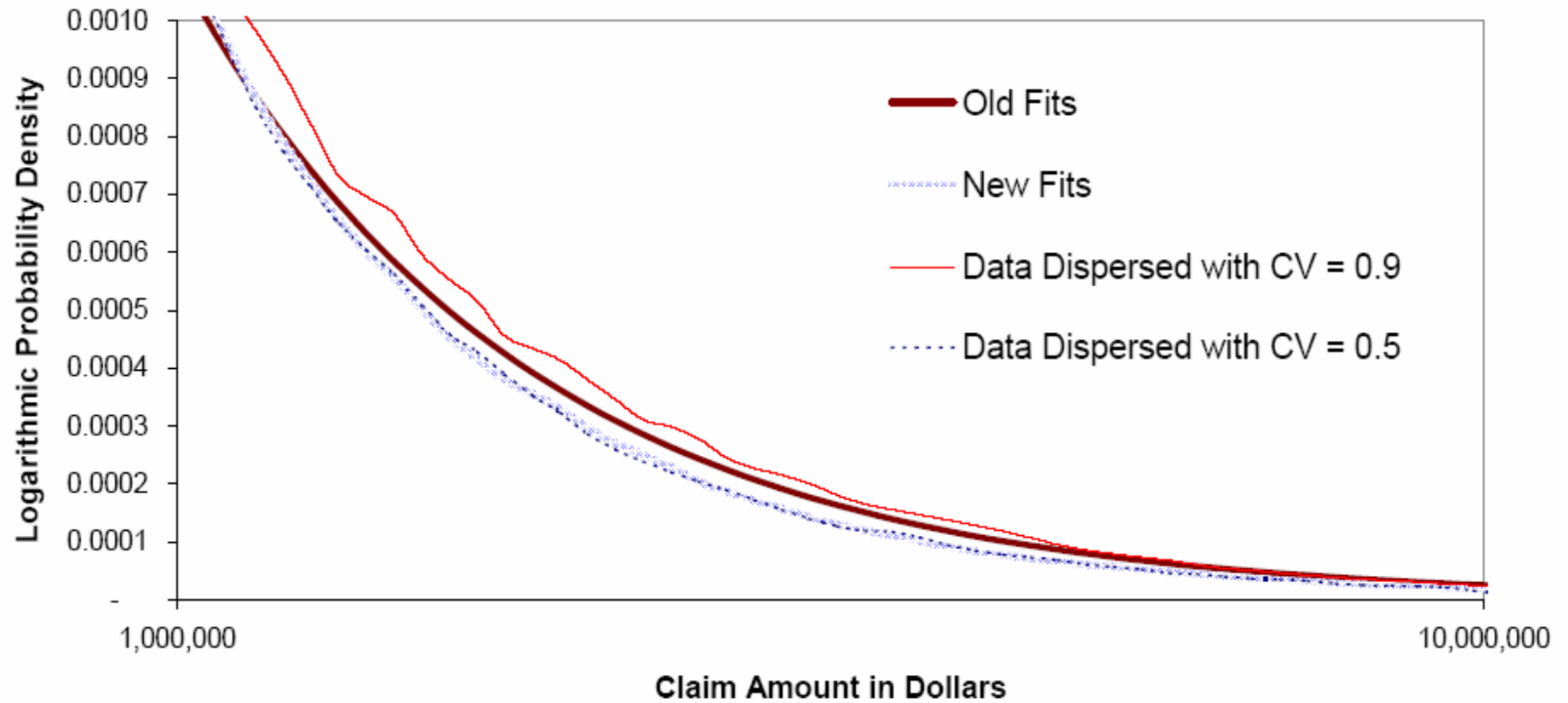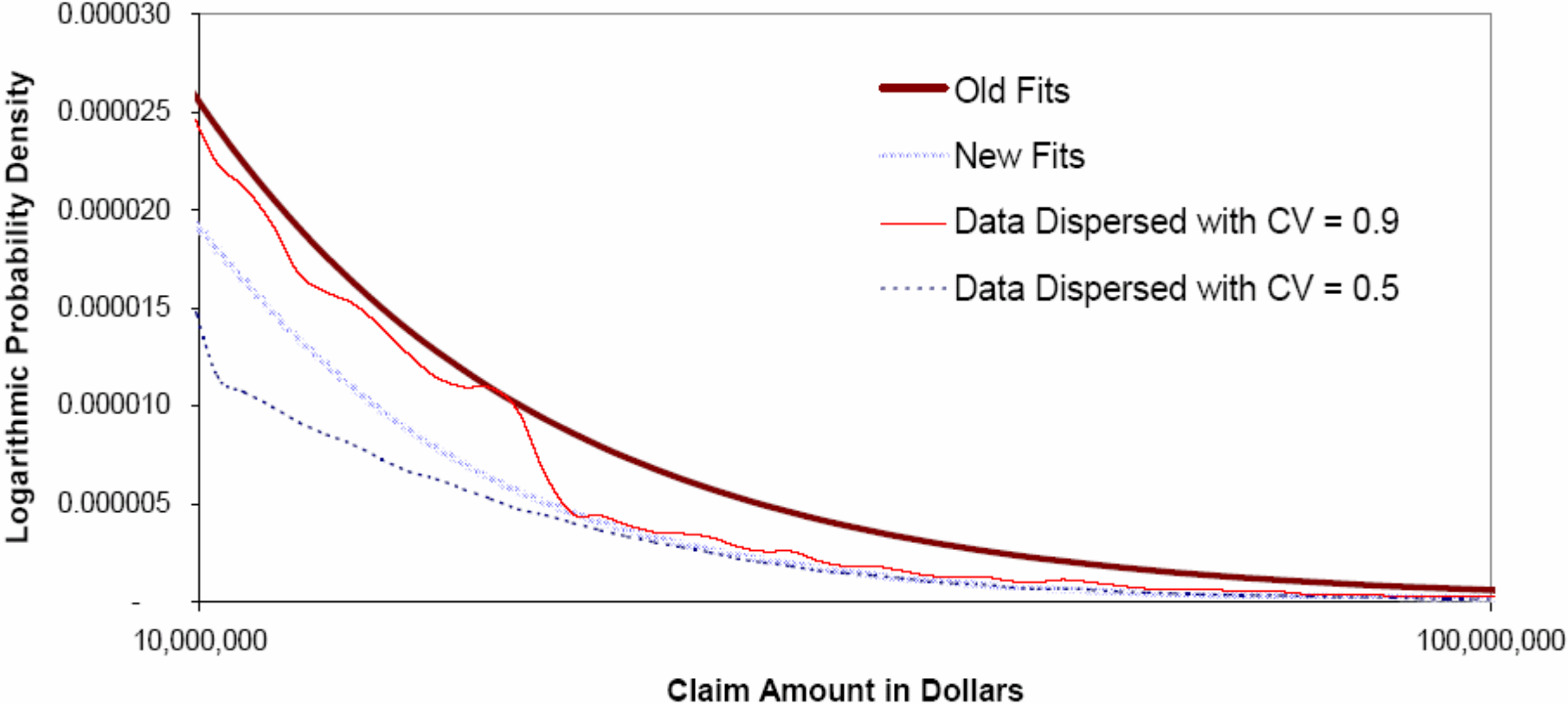| Loss Limit	Dispersion CV	
	0.5	0.9
0	100%	100%
1,000,000	68%	82%
5,000,000	41%	56%
10,000,000	28%	43%

Comparison of Old and New Loss Distributions

Comparison of Old and New Loss Distributions

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