2009 Ratemaking and Product Management Seminar

Implementing Commercial Lines Predictive Models in a Soft Market

Questions, Challenges and Successes

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P&C Market Cycle

Soft Market Characteristics	Hard Market Characteristics
• Rate adequacy falling • Insured's shopping • Increased competition • Strategies focused on policy growth and retention	• Rates are climbing • Demand rising • Capacity is limited • Strategies focused on premium and increases and re-underwriting

Decreasing PROFITS Increasing

Soft Market Challenges

Insurance Company's must address several key questions in a soft market……

How do you grow new business profitably?

- Rates are declining and profit margins shrinking
- Companies are protecting their "good" business

How do you retain your "best" business without giving away too much premium?

- Competition trying to cherry-pick your business
- Who is likely to shop?

How do you balance "right pricing" with competitive pressures?

- Many markets are available
- How will an insured react to an increase?

Market Summary

- In a hard market, underwriting profits are achievable – whether or not predictive models are utilized.

- In a soft market, predictive modeling-enabled companies are able to identify and select the “best” business to write.

Companies that do not use models will end up with less than average risks … at an inadequate rate level. Predictive modeling-enabled companies maximize the likelihood of sustained profitability, despite market fluctuations.

A Case Study - Anthony's Pizza and Gino's Pizza

- The actuarial rate for a pizza shop is $1500
- In a soft market, competition pushes rates down to $1,500, while $2,000 can be charged in a hard market
- There are two risks available : Anthony's Pizza and Gino's Pizza
- Company A engages in predictive modeling, while company B does not
- Using modeling, Company A knows that the actual expected cost of Anthony's and Gino's policies are $1,200 and $1,800, respectively
- Company B can not differentiate between the risks

A Case Study - Anthony’s Pizza and Gino’s Pizza

Hard Market

Predictive Models?	Company	Price	Cost	Profit
YES	A – Writes Anthony’s	$2,000	$1,200	$800
NO	B – Writes Gino’s	$2,000	$1,800	$200
Total		$4,000	$3,000	$1,000

In this example, both companies make money in the hard market ... however, using analytics helps maximize profit margins.

A Case Study - Anthony's Pizza and Gino's Pizza

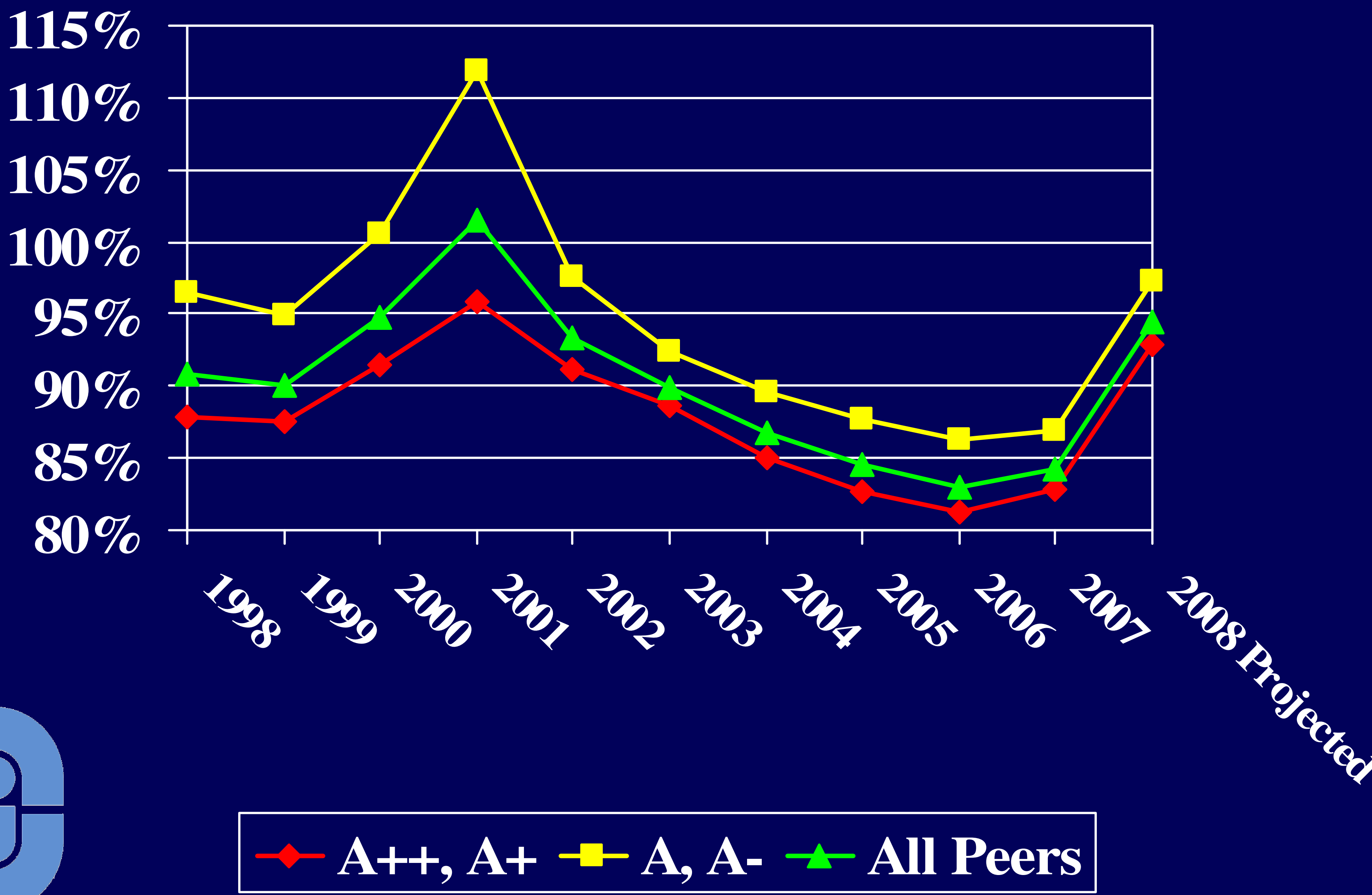
Soft Market

Predictive Models?	Company	Price	Cost	Profit
YES	A – Writes Anthony's	$1,500	$1,200	$300
NO	B – Writes Gino's	$1,500	$1,800	-$300
Total		$3,000	$3,000	$0

Analytics is critical, particularly in a soft market, to selecting risk and maintaining U/W profitability.

Historical Operating Results

Peer Company Results



EFFECT OF MARKET CYCLE ON PROFITABILITY

USER INPUTS

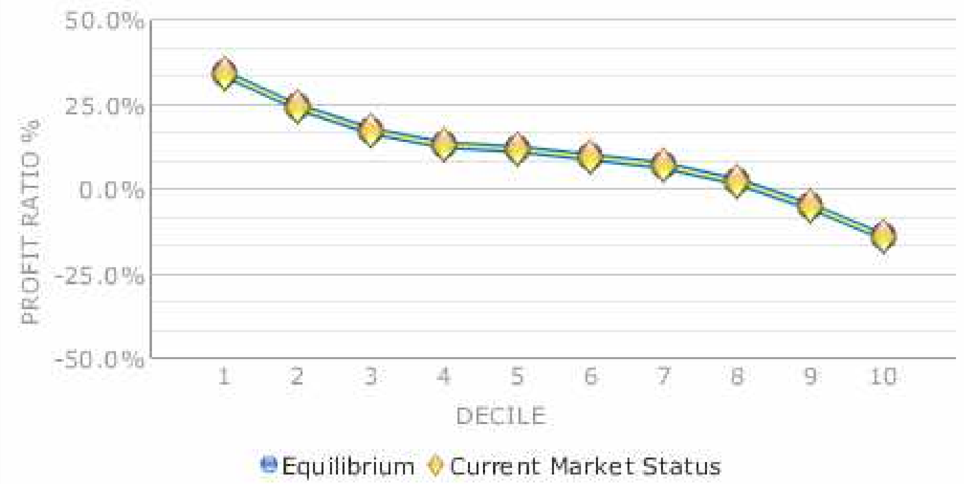
% RATE CHANGE

-25% 25%

SOFT EQ HARD

0%

PROFIT RATIO BY DECILE



OVERALL PROFIT RATIO

	EQUILIBRIUM	CURRENT MARKET STATUS
MODELING	**13.1%**	**13.1%**
NON-MODELING	**6.9%**	**6.9%**
COMBINED	**10.0%**	**10.0%**

OVERALL PROFIT RATIO

Soft Market Strategies

New Business

- Minimize Cost of New Business
- Cross Selling
- Leads

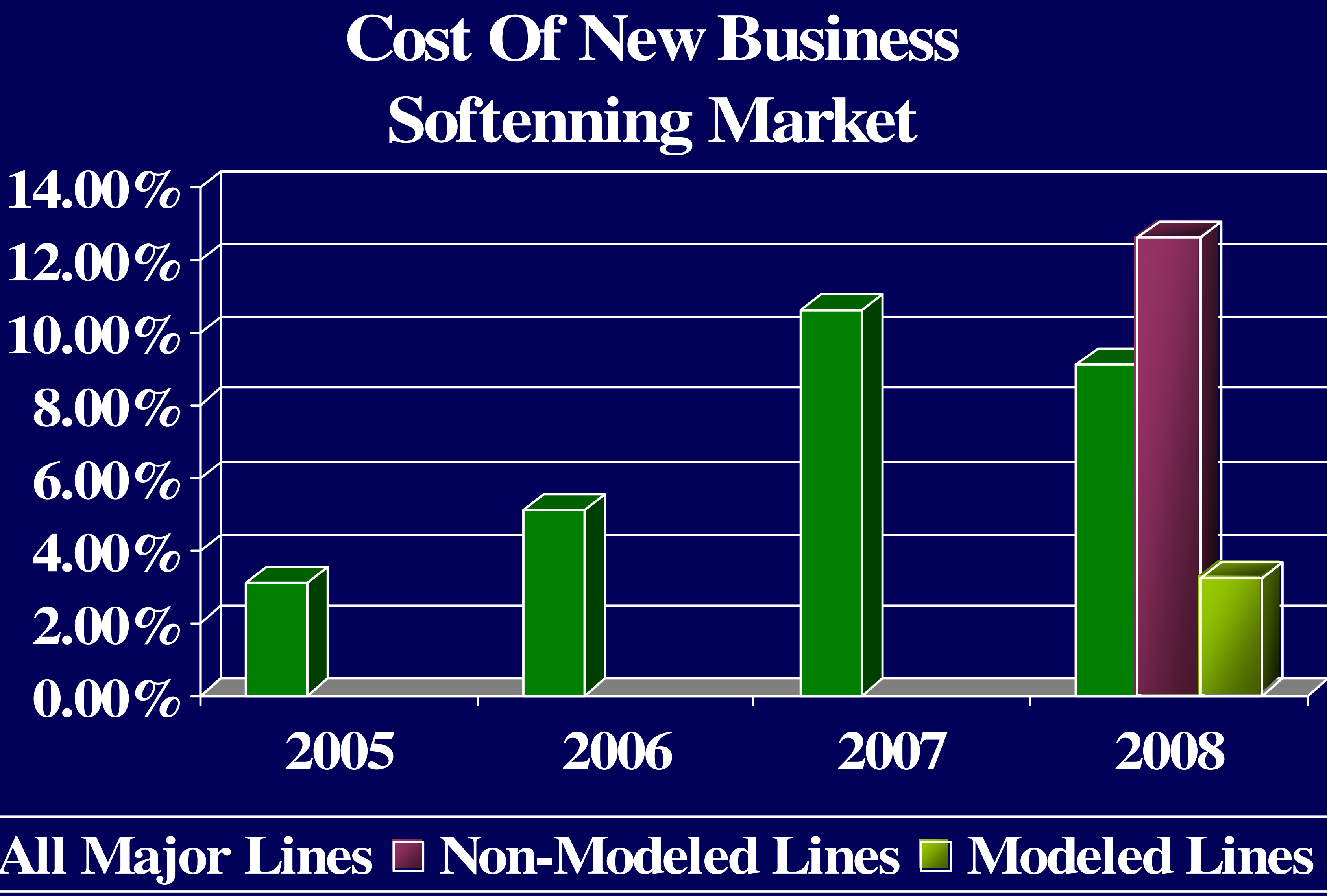
Renewal Business

- Targeted Non-Renewals
- Retention
- Right Price Alignment

Cost of New Business

- **New Business generally generates a higher loss ratio than renewal business**
- This is called “The Cost Of New Business”
- Historically this averages +/- 5%
  - Higher in the soft market
  - Lower in the hard market

Cost of New Business



Cross Selling

- **Agent may already control the account**
- **Insurance Company already familiar with insured**
  - Loss Control
  - Prior Claims
  - Pre-scoring
- **Risk already familiar with Insurance Company**
  - Claims Handling
  - Customer Service

Leads

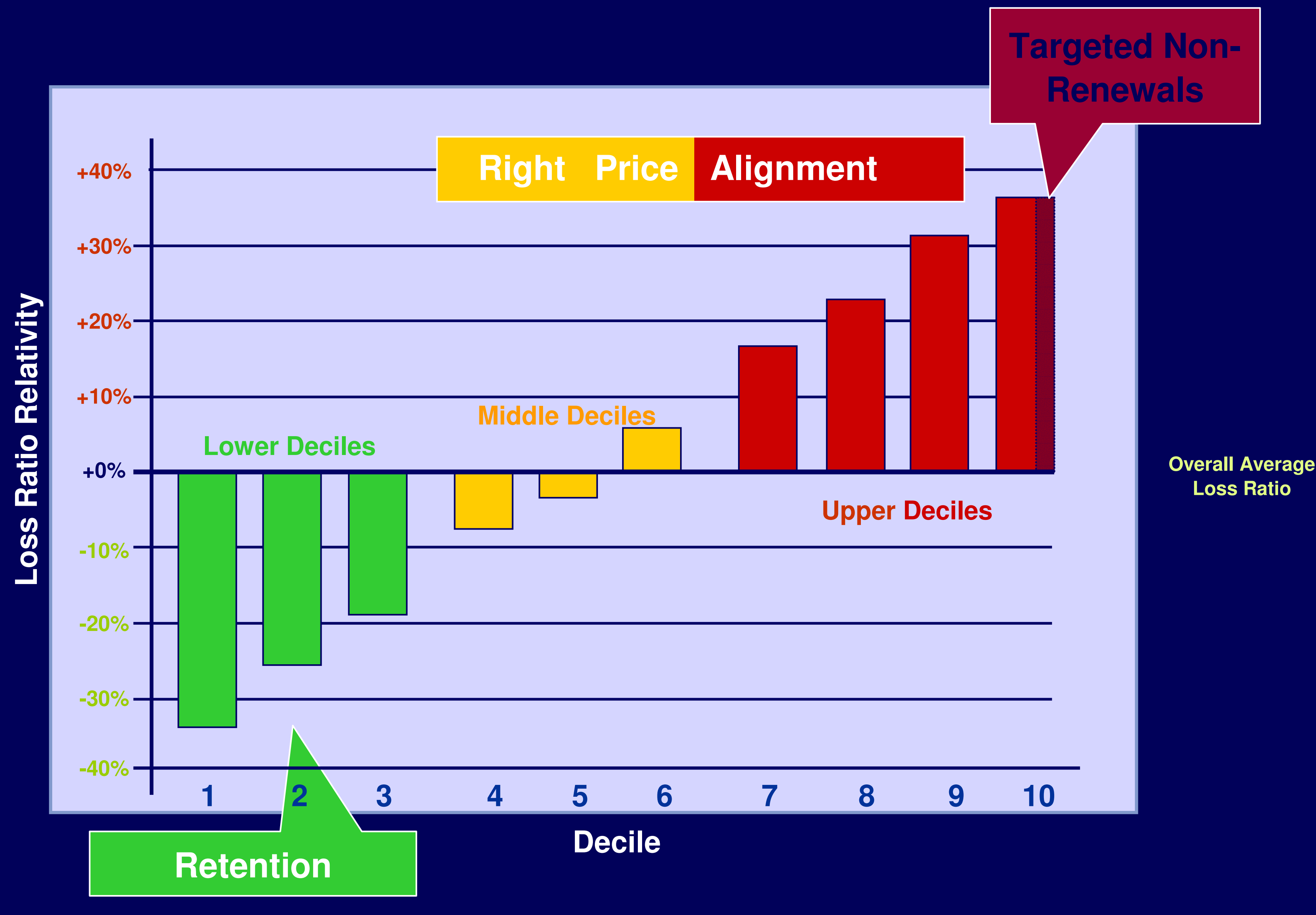
Existing Agents

- Book Scoring
- Lead Listings
- Cross Selling Opportunities

New Agencies

- Book Scoring
- Lead Listings
- Geographic Analysis
- Target Market Appetite

Renewal Strategies



SAMPLE SOFT MARKET STRATEGIES

USER INPUTS

MARKET CONDITIONS Hard <--> Soft

MODELING ON/OFF OFF

MAXIMIZE PROFIT OFF

SUCCESS OF CROSS SELLING AND LEADS

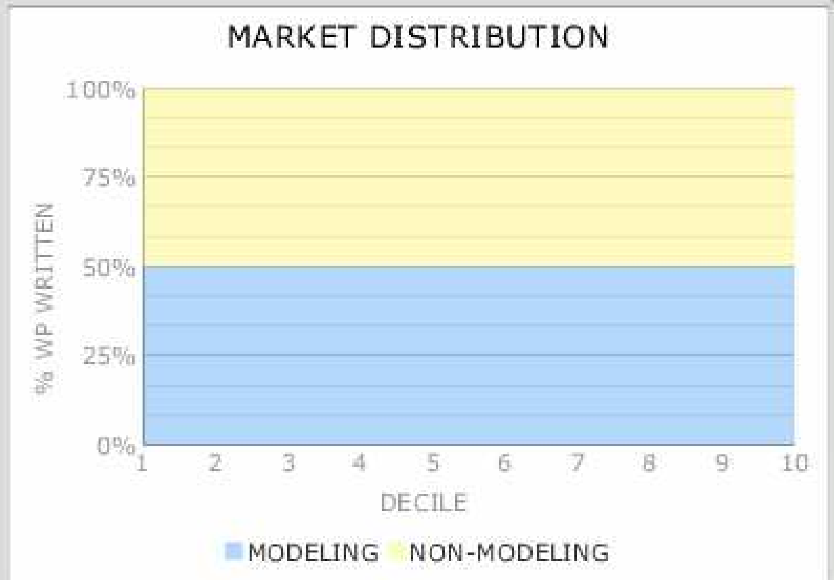
0% 99% **0%**

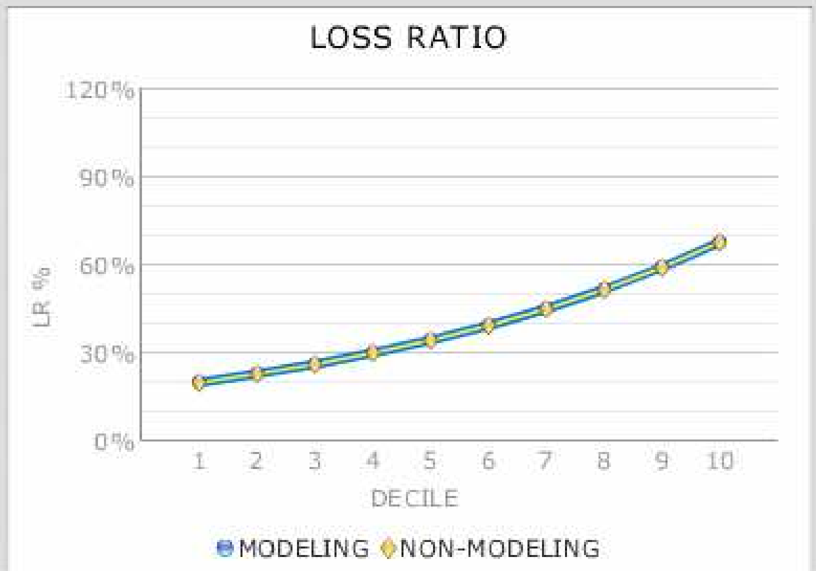
% OF TARGETED NON-RENEWALS

0% 99% **0%**

OVERALL

	WP %	LR %
MODELING	50%	40%
NON-MODELING	50%	40%
TOTAL		40%





Keys to Success – Part I

Clear Vision and Strategy

- Be careful to avoid the strategy paradox

Senior Management Involvement

- Using analytics will be a major change in the way you navigate the market cycle

Multi-Functional Team

- Actuaries, Underwriters, Marketers, IT, etc

Keys to Success – Part II

Business Rules

- Need to support vision & strategies

System Integration

- Tied to Policy Systems (straight through processing)
- Ease of Use, Security, Data Retrieval

Regional/Line Buy-in

- Significant training initiative must be undertaken

Keys to Success – Part III

Management Reports

- Is the model performing as expected?
- Are business rules accomplishing goals?
- Is the field using properly?

And Don’t Forget … A Working Model

- “Human judges are not merely worse than optimal regression equations; they are worse than almost any regression equation.”

The Actuary's Role

The Actuary's role is evolving…

- ***From a resource creating statistical models***
- ***To a missionary of predictive analytics - shifting organizations culturally and philosophically***