#### INSURANCE

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Specifically... Personal auto insurance

# Personal auto is extremely competitive

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<b>2015 Personal Automobile</b>	Insurance
<b>Underwriting Results</b>	

Company	Personal Auto Net Written Premiums 2015	Annual %Change	Personal Auto Combined Ratio %	2014	Change in Combined Ratio
GEICO	23,378	11.5	98.0	94.3	3.7
Allstate	20,662	5.1	99.9	96.9	3.0
Progressive	17,703	5.6	93.5	93.3	0.2
Travelers	3,534	8.4	94.7	97.2	(2.5)
Hartford	2,721	2.3	99.4	98.4	1.0
Infinity	1,373		95.6	96.0	(0.4)
Kemper	1,031	30.6	104.5	99.0	5.5
Hanover	900	1.8	99.3	100.6	(1.3)
Chubb	701	(5.3)	98.5	96.8	1.7
Cincinnati Financial	524	7.2	110.0	105.1	4.9
Horace Mann	398	4.7	102.4	99.0	3.4
norace mann	370		102.7	77.0	3.4
Group Total	49,547	5.5%	97.3	95.9	1.4

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- 2. List of claims (subset of #1)
  - Cost of claim, type of claim (personal injury, physical damage to car, etc.), whether or not the claimant is represented by an attorney, date of accident, date the accident was reported

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- HYPOTHESIS: We will be able to predict claims activity with the available features, which will lead to more accurate pricing

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- HYPOTHESIS: We will be able to predict which claims will be represented by an attorney. This will allow for a more efficient allocation of resources, and possibly avoid the representation for some claims – bringing costs down.

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- PROBLEM: Rate changes lose their impact if many policyholders switch to a new company. Using logistic regression, predict the probability that a given policyholder will renew in different rate increase scenarios
- OUTCOME: More effective rate increases