



Things That Make You More Likely to Be in an Accident

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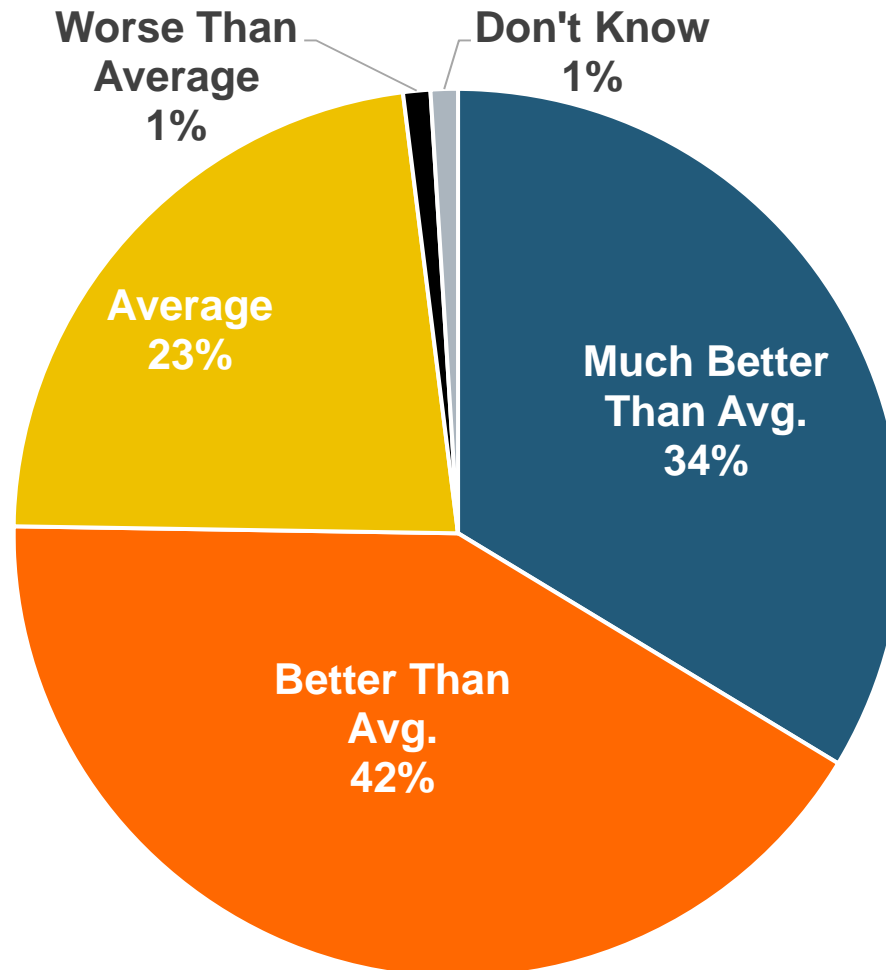


Some Facts About Non-Driving Factors

Why Insurers Don't Rely Solely on Driving Record

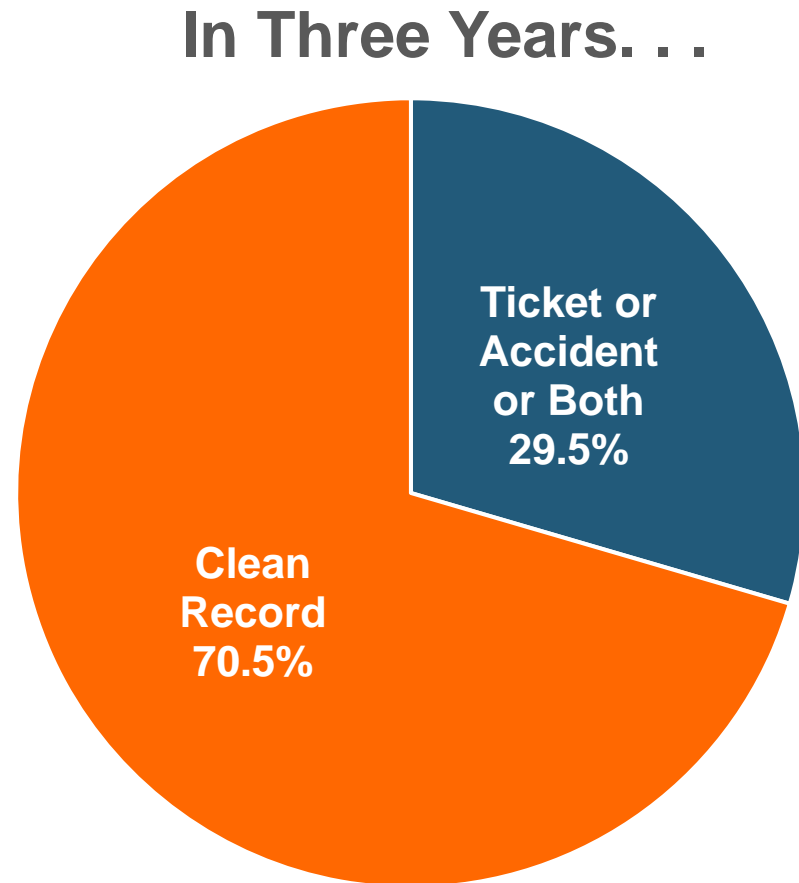
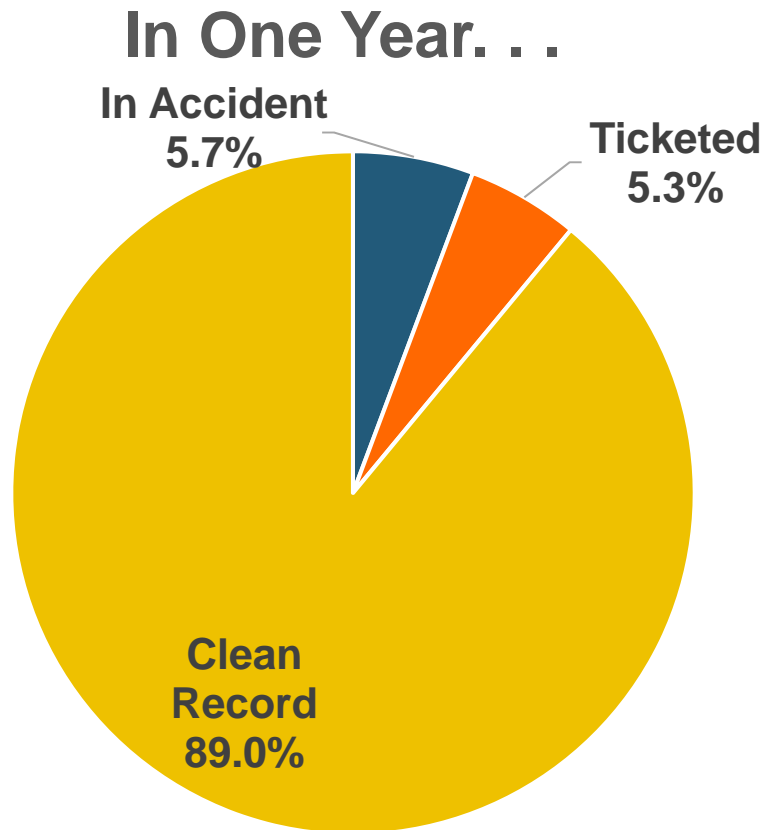
Most People Don't Know Their Risk Profile

Do You Consider Yourself a Better-Than-Average Driver?



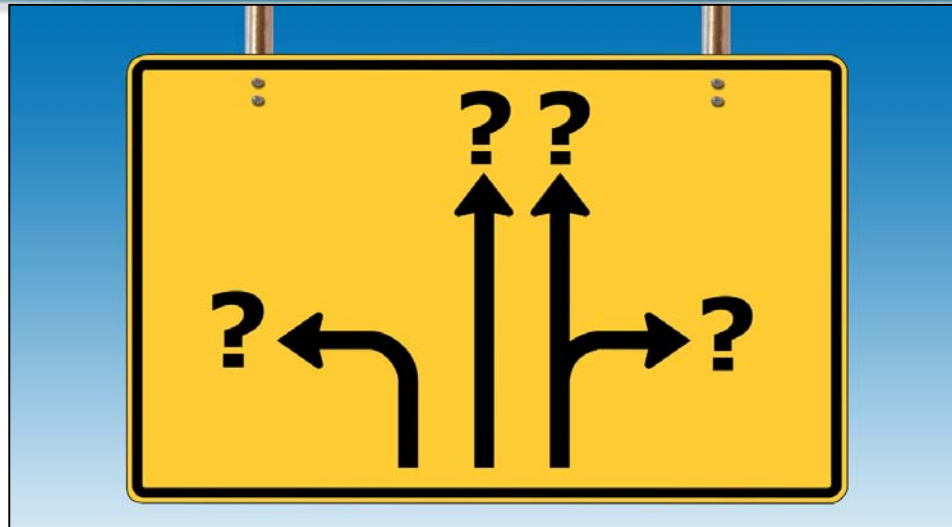
SOURCE: "Auto Insurance Telematics: Consumer Expectations and Opinions," Insurance Research Council, 2015.

Most Drivers Have Clean Driving Records



Three-year calculation makes conservative assumption that no ticketed driver in a year is in an accident that year.
SOURCES: Insurance Information Institute calculation using data for 2012 from ISO, a Verisk Analytics company, and Langton and Durose, *Police Behavior During Traffic and Street Stops*, 2011, Department of Justice, p. 7.

How to Differentiate Among Drivers?



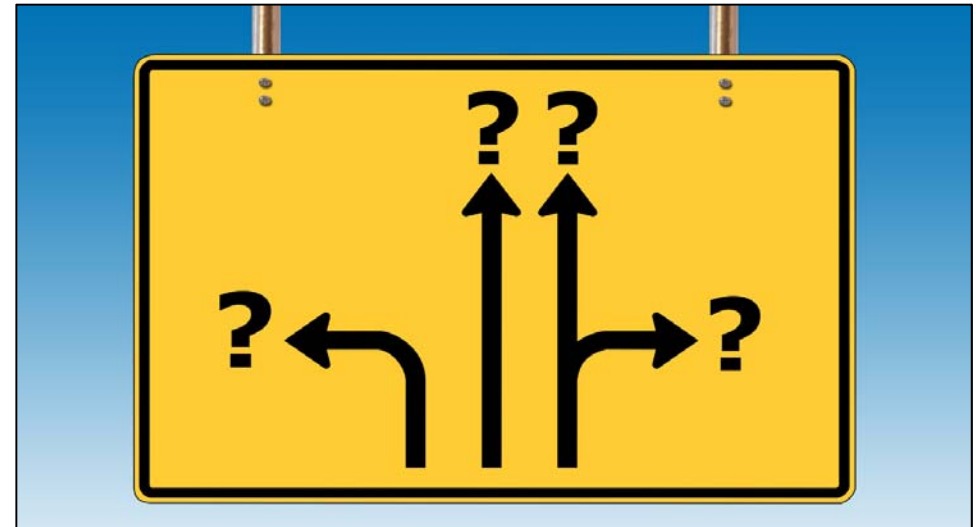
■ Underwriting: 'Gut' vs. Data

- ◆ Underwriters Got a Sense for Which Risks Were Better
- ◆ Imperfect System
 - Subjective
 - Potential for Bias
 - Adverse Selection (I Know Something You Don't)

How to Differentiate Among Drivers?

■ Actuarial Risk Classification

- ◆ Uses Rating Variables to Create Risk Profile
 - Verifiable
 - Predictive
 - Age vs. Miles Driven



■ Fairer for Insurer and Policyholder

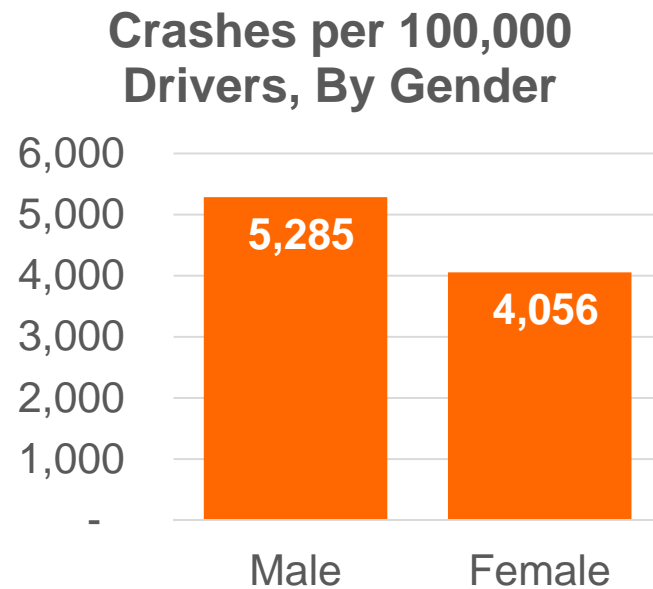
- ◆ Objective – Uses Data to Predict
- ◆ Rate Follows Risk

Early Factors Were Non-Driving

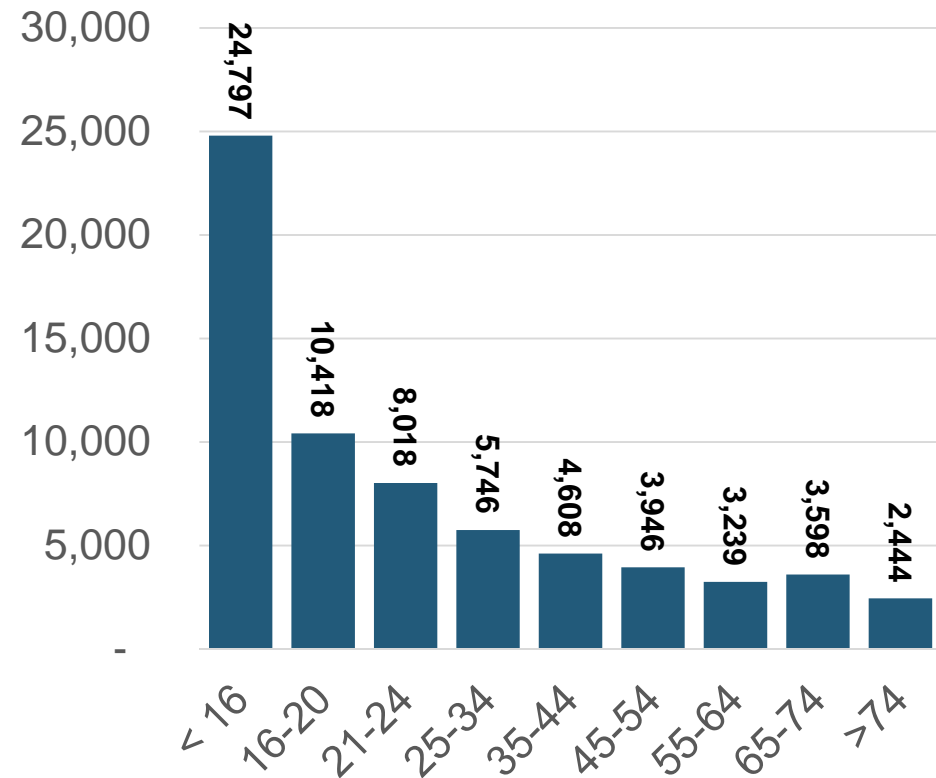
■ Age

■ Gender

■ Territory/State



Crashes per 100,000 Drivers, By Age



SOURCES: U.S. Department of Transportation, National Highway Traffic Safety Administration, Federal Highway Administration.

Rating Plans Have Grown Complex



Year	Estimated Number of Rating Classifications	Estimated Rating Possibilities	Licensed Motor Vehicles in the US	Ratio of Rating Possibilities to Motor Vehicles
1960	9	2,688,000	74,000,000	0.04
1990	16	3,145,728,000	189,000,000	16.6
2013	20	2,264,924,160,000	250,000,000	9059

New Variables Include

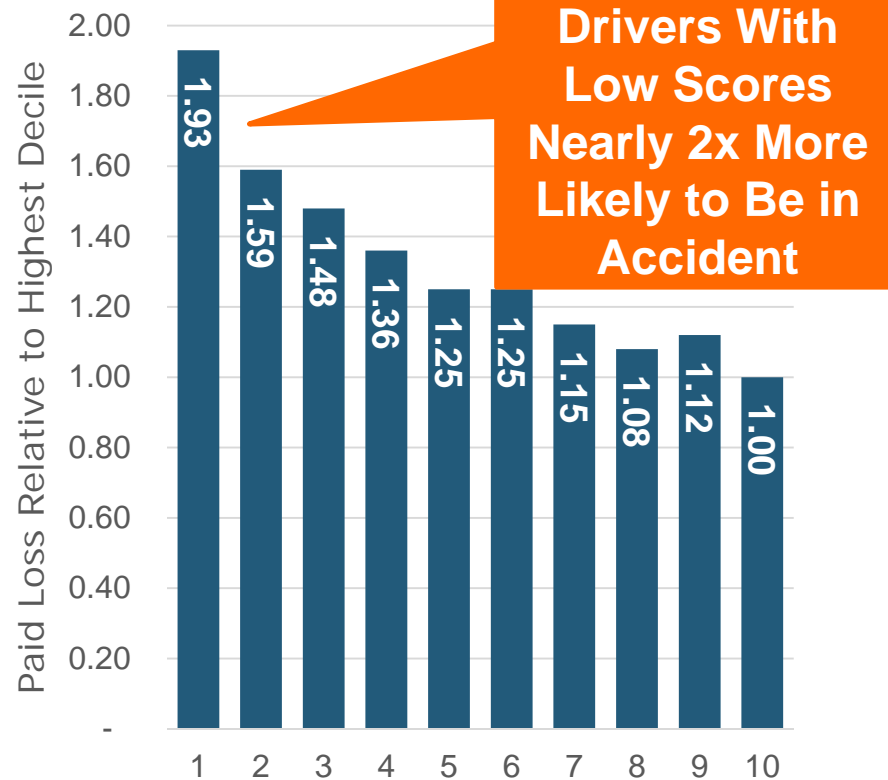
- Credit Scores
- Payment Method
- Tenure With Prior Company
- Homeowners Losses

There Are No Two Identical Risks. Everybody Pays A Different Premium

Calculations by Jeffrey Kucera, FCAS

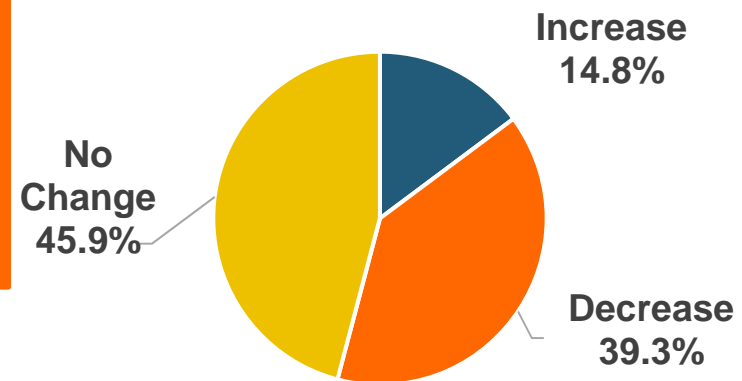
State of the Art: Credit Scores

Paid Loss by Insurance Score, Collision Coverage



Relativity Controlled for Ethnicity, Neighborhood Income.
 SOURCE: Federal Trade Commission, Credit-Based Insurance Scores: Impacts on Consumers of Automobile Insurance, July 2007, Table 6.

Impact of Credit Scores on Consumers



SOURCE: Arkansas State Insurance Department, Use and Impact of Credit in Personal Lines Insurance Premiums Pursuant to Ark. Code Ann. § 23-67-415, 2015, p. 4.

Common Variables

- Payment History
- Bankruptcy
- Amt of Credit Used
- Number, Type of Account
- Length of Credit History

The Future: Telematics

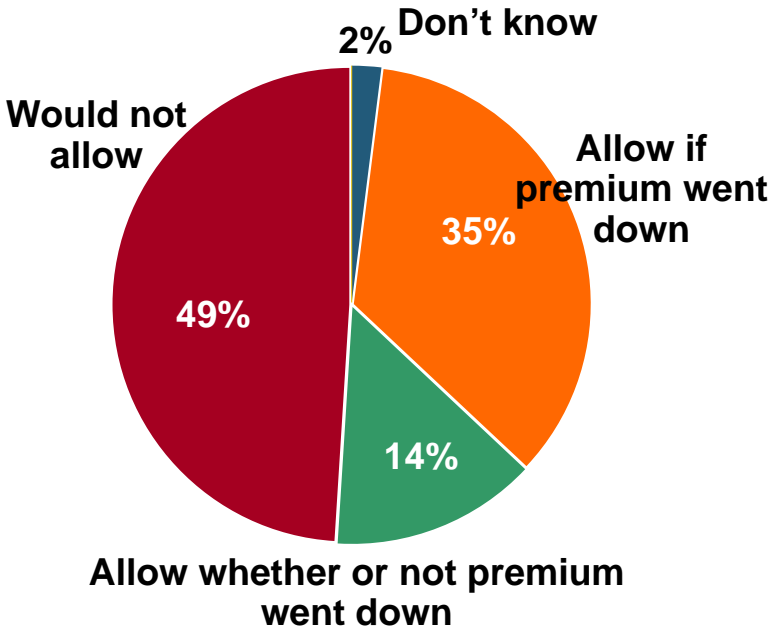
Driver-Specific
Information => Driver-
Specific Premium

- Monitor Drivers As They Drive
 - ◆ Snapshot (\$2.6B in 2014 premium)
 - ◆ Many (most?) insurers offer
 - ◆ Not CA, NC
- Monitoring Devices
 - ◆ 'Dongle'
 - ◆ Smartphone
 - ◆ OnStar etc.



Telematics: Growth Potential

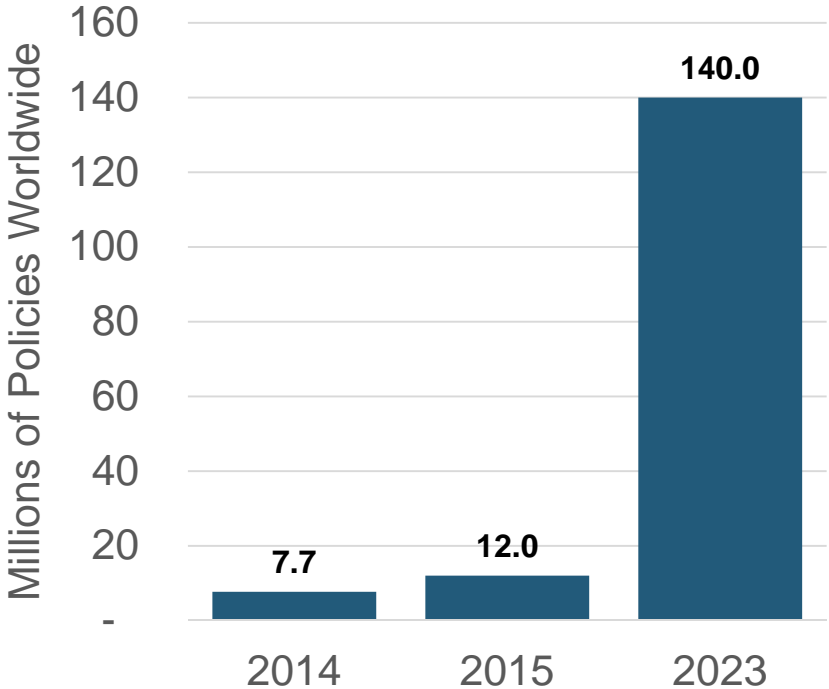
Q. Would You Allow Insurer to Collect Driving Information to Set Premium?¹



¹Asked of those who auto insurance.

Source: Insurance Information Institute Annual *Pulse* Survey, May 2016.

Policy Projections



Source: IHS Automotive.

Market is Poised to Grow, But Some Reluctance Remains.

Summary

- Some Drivers Are Better Than Others
- Classify Drivers by Risk Profile is Important Insurance Job
- Classification is Difficult, Sometimes Controversial
- Telematics Allows Classification by Driving Skill That Has Never Been Seen Before

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***Thank you for your time
and your attention!***

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