

# Automobile Trends: Who (or What) is at the Wheel

AIPSO Residual Market Forum
Providence, RI
April 14, 2015
Download at www.iii.org/presentations

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### **Automobile Trends: Outline**



- 1. Trends in Auto Usage
- 2. Driving Trends
  - Unauthorized Immigrants
  - Uninsured Motorists
  - Insurance Affordability
- 3. Autonomous Vehicles

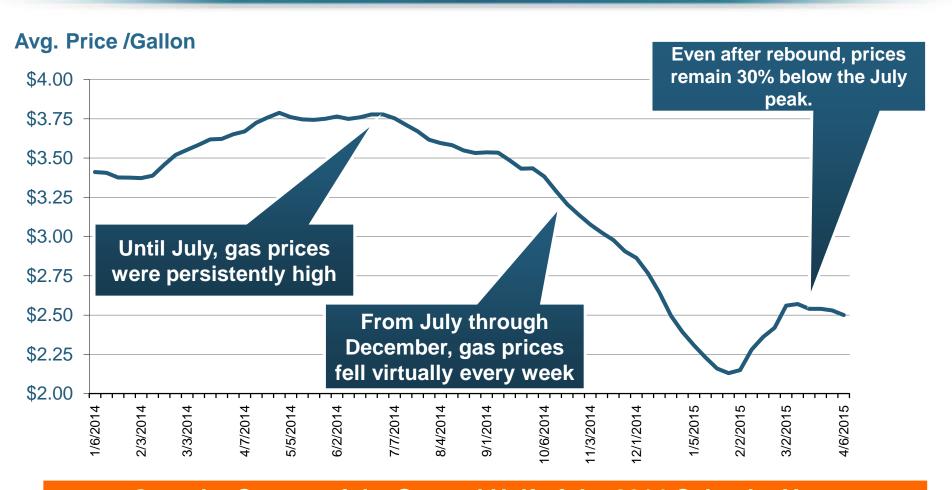


# Trends in Auto Usage

# Shaking off the Recessionary Hangover

### The Price of Gas, 2014-2015



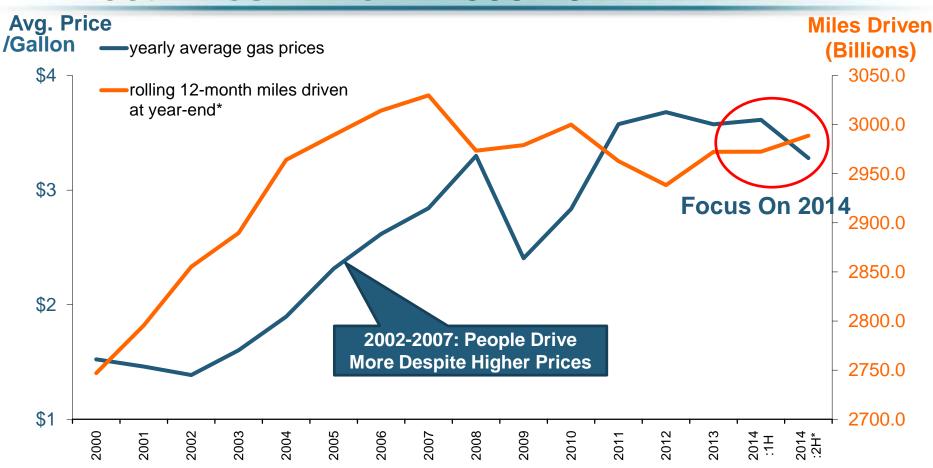


Over the Course of the Second Half of the 2014 Calendar Year, Gas Prices Fell 34%.

Price is Weekly U.S. All Grades All Formulations Retail Gasoline Prices Sources: Federal Energy Administration (http://www.eia.gov/petroleum/gasdiesel/); I.I.I.

# Do Changes in Gas Prices Affect Miles Driven? 2000-2014



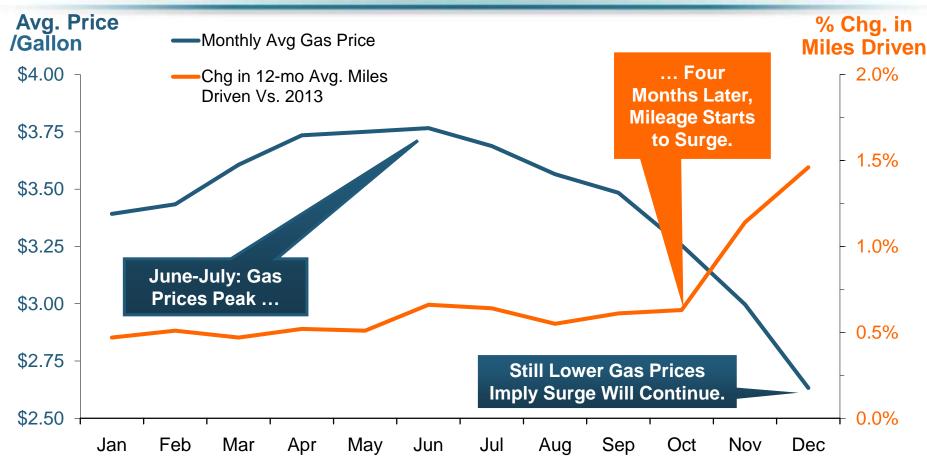


Lots of Factors Affect Miles Driven: State of Economy, Weather, Gas Prices, Etc.

Sources: Federal Energy Administration (http://www.eia.gov/petroleum/gasdiesel/); \*gas prices and miles driven through December Federal Highway Administration (http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.cfm); I.I.I.

# Do Changes in Gas Prices Affect Miles Driven? A Look at 2014



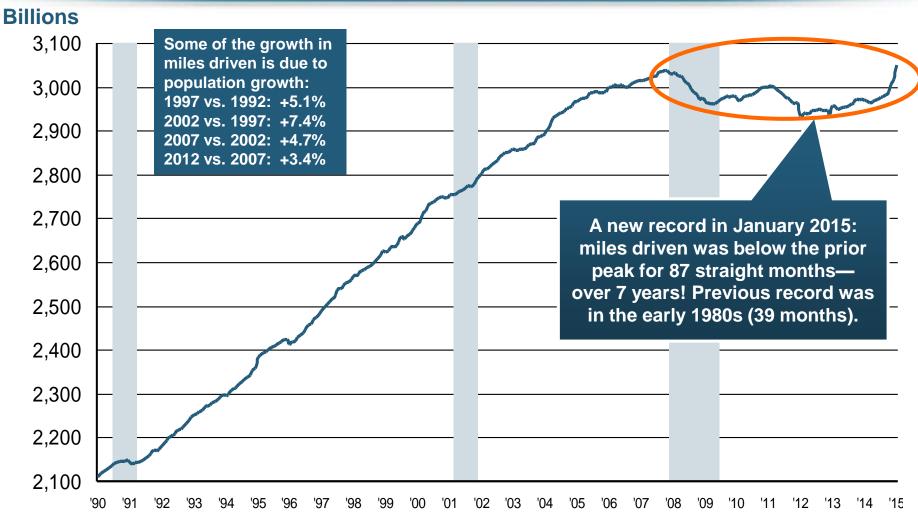


Prior research on the relationship between gas prices and miles driven says that, in the short run, an increase in gas prices produces little change in miles driven. No recent research on the effect of price drops.

Sources: Federal Energy Administration (http://www.eia.gov/petroleum/gasdiesel/); \*gas prices and miles driven through December Federal Highway Administration (http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.cfm); I.I.I.

# Something Unusual is Happening: Miles Driven\*, 1990–2015





<sup>\*</sup>Moving 12-month total. The 2015 figure is through January 2015, the latest available.

Note: Recessions indicated by gray shaded columns.

Sources: Federal Highway Administration (http://www.fhwa.dot.gov/policyinformation/travel\_monitoring/tvt.cfm); National Bureau of Economic Research (recession dates); Insurance Information Institute.

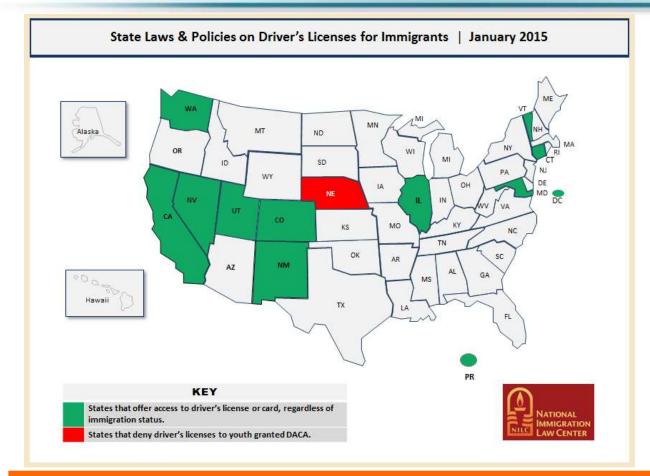


# **Driving Trends**

# Illegal Immigrants, Legal Drivers

### **Unauthorized Immigrants**





- 10 States Allow Illegal Immigrants to Get Licenses, plus DC, Puerto Rico
- Could Always Get Insurance, Usually Non-standard Before

California Became Latest State to Allow Unauthorized Immigrants to Get Driver's Licenses (AB60 – 1/1/15) – And by Far the Largest

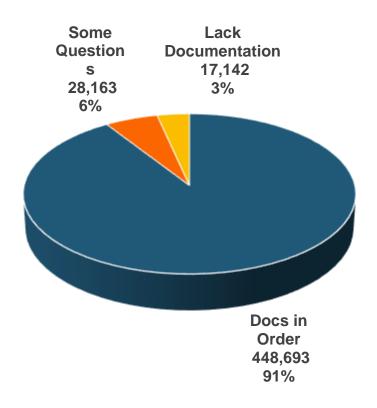
DACA: Deferred Action for Childhood Arrivals (arrived in U.S before age 16, not automatically eligible for license) SOURCE: National Immigration Law Center.

#### California AB60



- In Addition to Standard Driving Tests (Vision/Written/Behind the Wheel), Illegal Immigrants Need:
  - Proof of Identity (Foreign passport/ID card/birth certificate OR tax returns/school documents/marriage license, etc.)
  - Proof of California Residency (Lease/mortgage bills/medical documents, etc.)

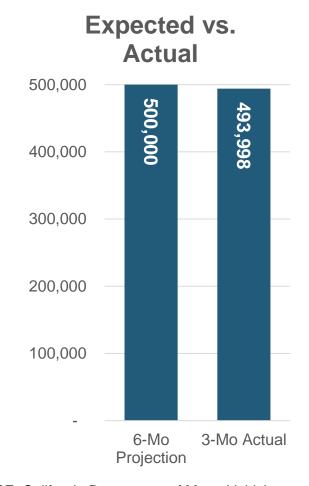
#### **Applicants Through March 27**



#### California AB60



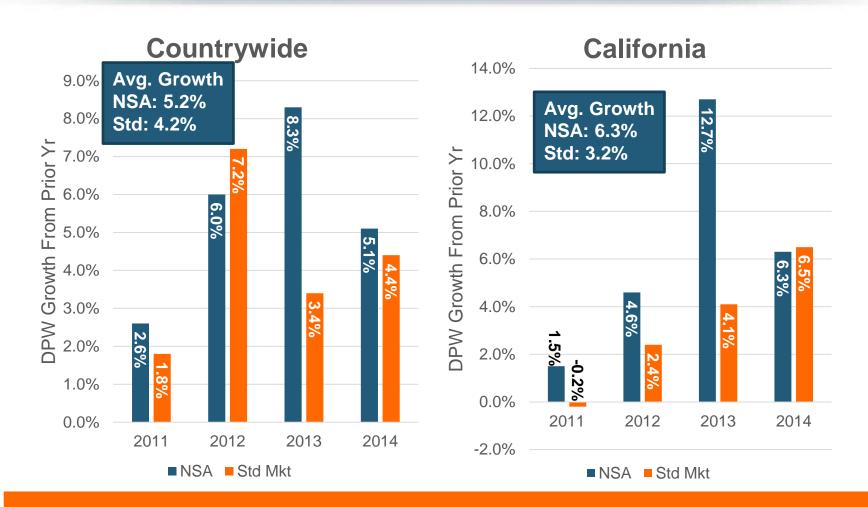
- DMV estimated 1.5 million applicants in 3 years
  - 900 new employees
  - Added Saturday hours
  - 200,000 New Licenses
- Insurance Issues
  - Eligible for Low-Cost Auto (CLCA)
  - Low Limits: \$200-\$500 a Year
  - Takeup Seems Low
  - Standard, Nonstandard Pursuing



SOURCE: California Department of Motor Vehicles.

# Non-standard: A Growing Niche

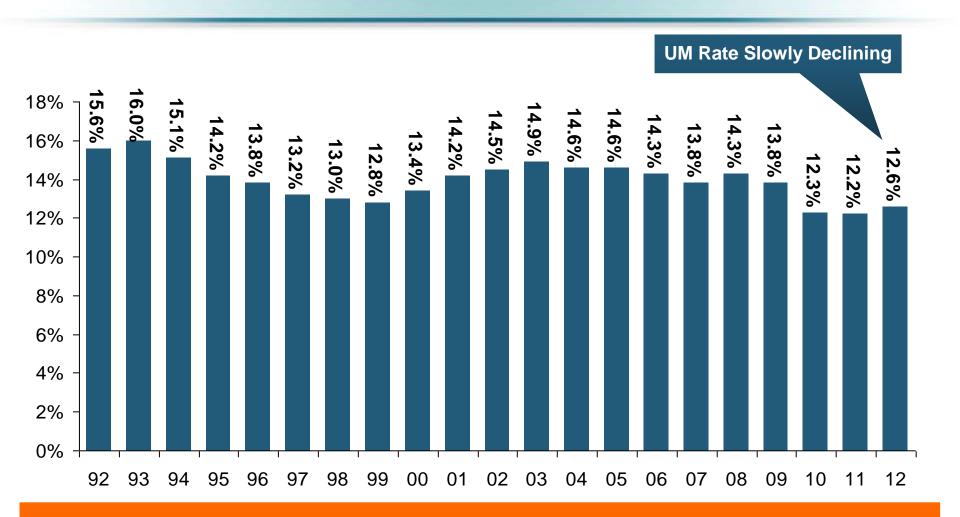




Insurers Have Become More Sophisticated, Can Price Risks More Precisely.

### **Impact on Uninsured Motorists**





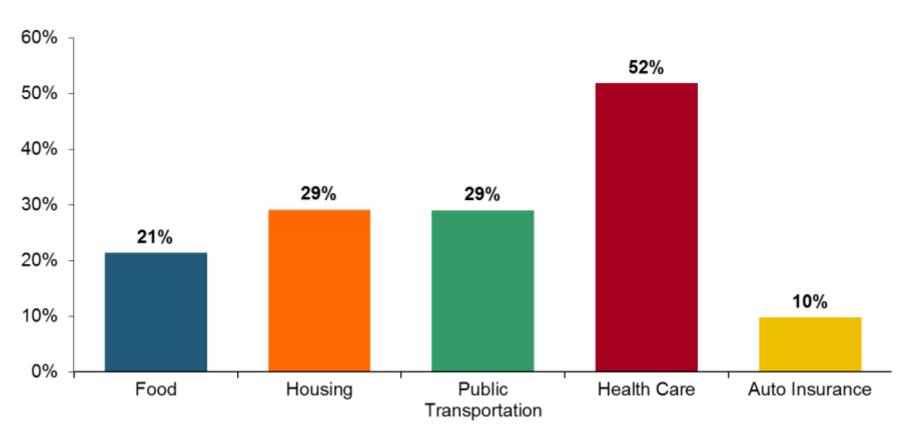
Why? Auto Insurance Is Gradually Becoming More Affordable.



#### **Auto Insurance vs. Other Essentials**

#### Auto insurance expenditures growing more slowly

Percent Growth, 2001-2011



Source: Insurance Information Institute calculation based on data from Bureau of Labor Statistics, Consumer Expenditure Surveys for 2001 and 2011, and National Association of Insurance Commissioners.

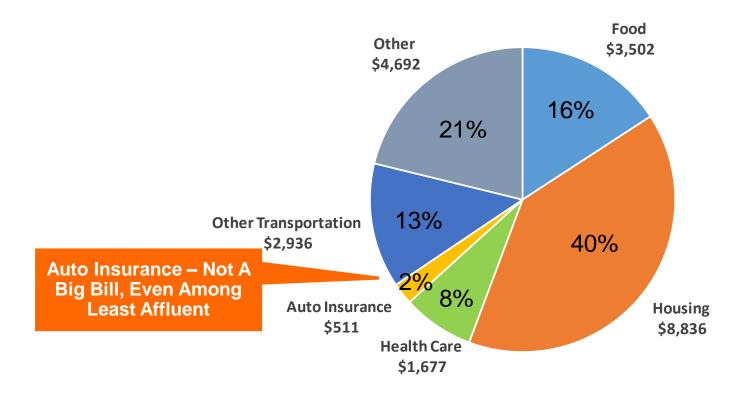
# Spending Pattern in 2012 of Americans in the Lowest-Income Quintile



Income range for this quintile: \$0 to \$19,111

Average annual expenditure range\*: \$21,382 to \$22,926

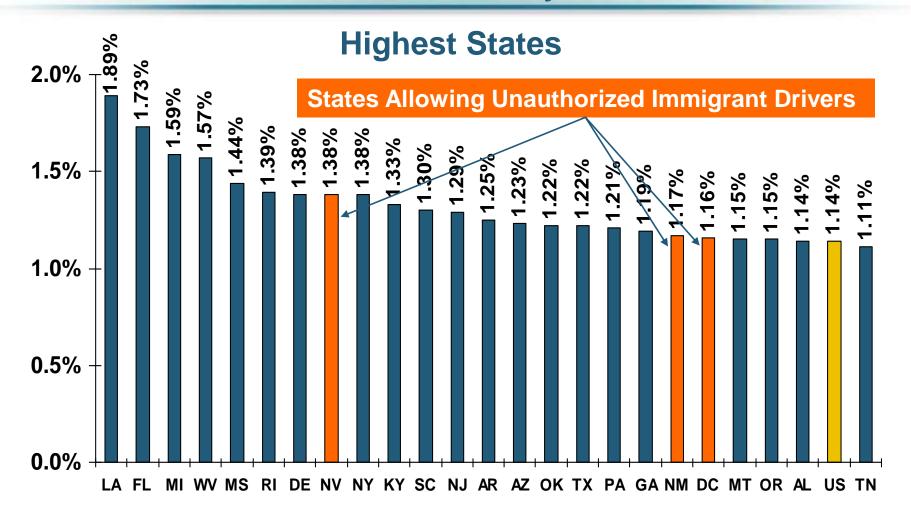
Average annual expenditure for auto insurance\*: \$406 to \$616



<sup>\*</sup>Range computed by adding or subtracting two standard deviations from the mean expenditure.
Source: Insurance Information Institute calculations based on data from Bureau of Labor Statistics, Consumer Expenditure Surveys for 2012.

# Average Expenditure for Pvt. Passenger Auto Insurance as Pct. of Median Family Income\*, 2011

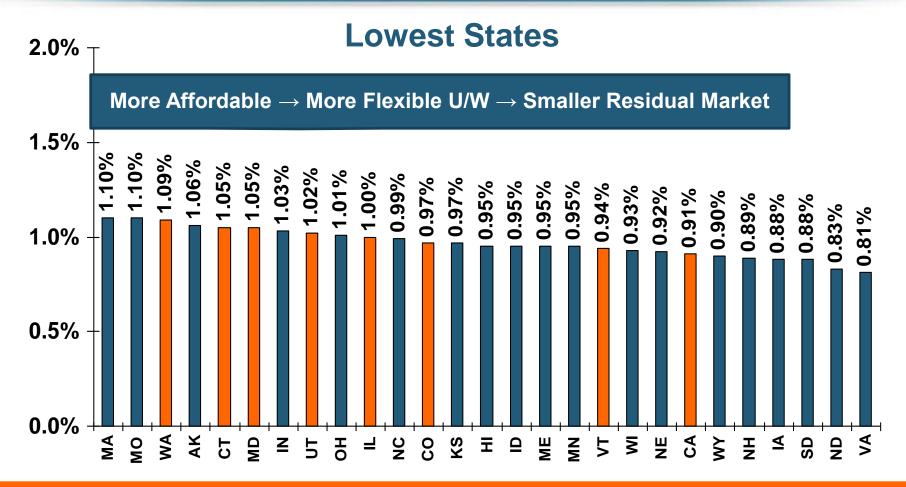




<sup>\*</sup>Average auto insurance expenditure as a percentage of the 2011 median income for a family of four Source: *Auto Insurance Report*, January 20, 2014.

# Average Expenditure for Pvt. Passenger Auto Insurance as Pct. of Median Family Income\*, 2011





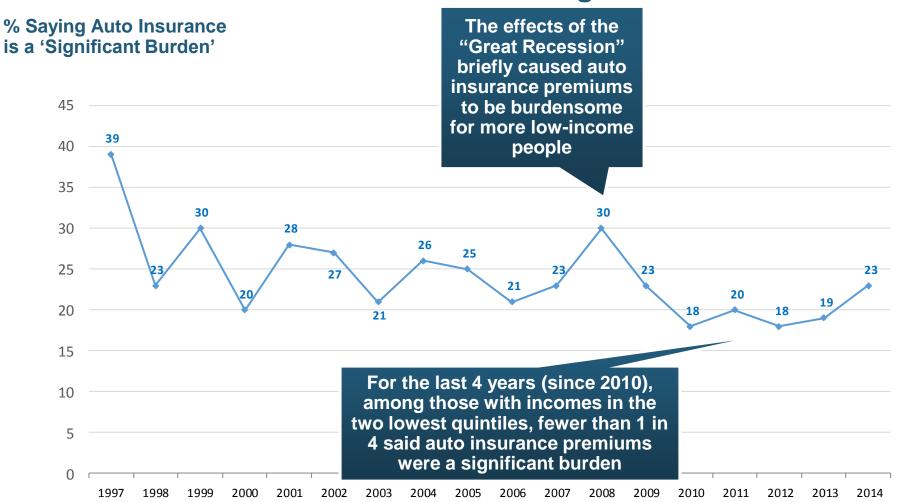
In Most States With Illegal Immigrant Laws, Insurance Costs Trail National Average.

<sup>\*</sup>Average auto insurance expenditure as a percentage of the 2011 median income for a family of four Source: *Auto Insurance Report*, January 20, 2014.

# Auto Insurance Burden Easing, Lower-Income\* Americans Say



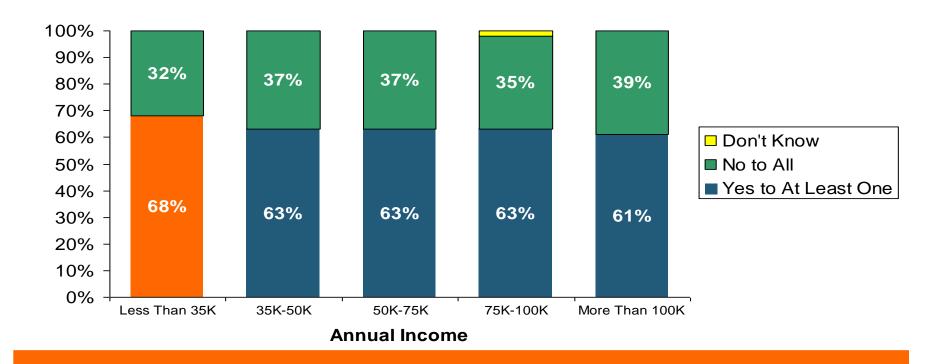
#### Fewer Than 1 in 4 Finds Cost a Significant Burden



## I.I.I. Poll: Shopping for Insurance



Q. When your auto insurance policy was up for renewal did you compare prices at different insurance companies in any of the following ways (Phone, Online, Agent)?

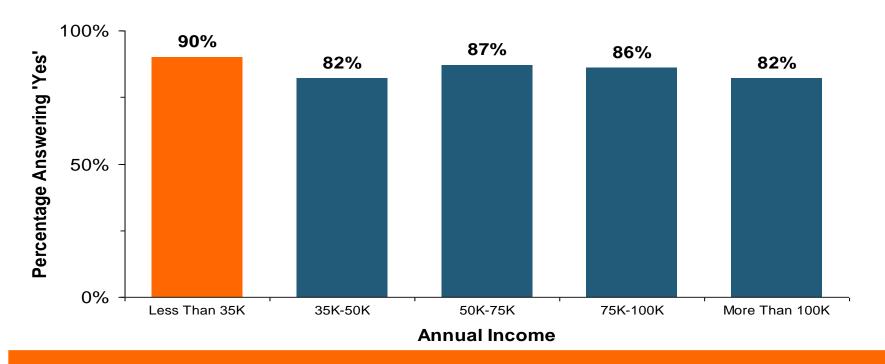


Insurance Has Also Gotten Easier to Shop For.

### I.I.I. Poll: Shopping for Insurance



Q. Do you think you have more choices today among auto insurers than people had 10 years ago?

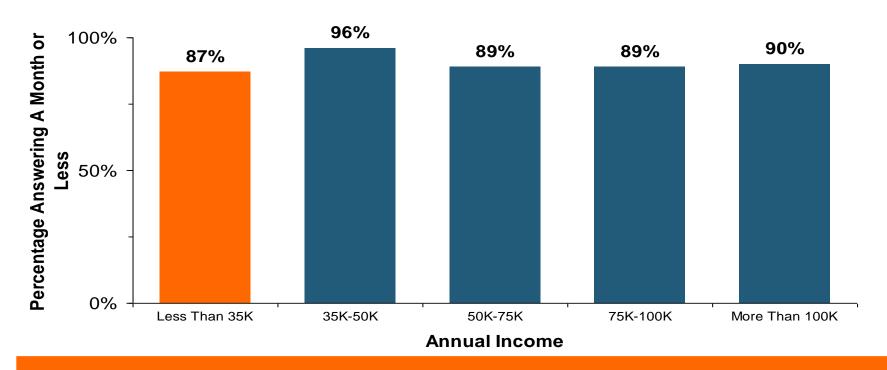


People Say They Have More Choices for Auto Insurance. Lowest-Income Americans Are the Most Likely to Say So.

# I.I.I. Poll: Ads Are Everywhere



Q. How long has it been since you have seen or heard an advertisement for auto insurance?



Insurers Are Spending More on Ads, and the Ads Are Effective, Including Among Lowest-Income Americans.

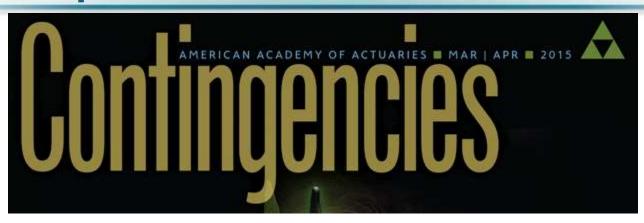


## **Autonomous Vehicles**

They'll Change Insurance - Slowly



### When Computers Take the Wheel . . .





Autonomous vehicles will challenge auto insurers, but they won't obliterate them



# Step 1: Co-pilot



#### In Theory

Crashes Avoided Per Year	All	Injury	Fatal
Forward Collision Warning	1,165,000	66,000	879
Lane Departure Warning	179,000	37,000	7,529
Side Assist View (Blind Spots)	395,000	20,000	393
Adaptive Headlights	142,000	29,000	2,484
Total Unique Crashes	1,866,000	149,000	10,238

#### In Practice

- Forward Collision Warning Working
- Adaptive Headlights Working
- Others: Benefits 'Less Clear'



30% of Fatalities

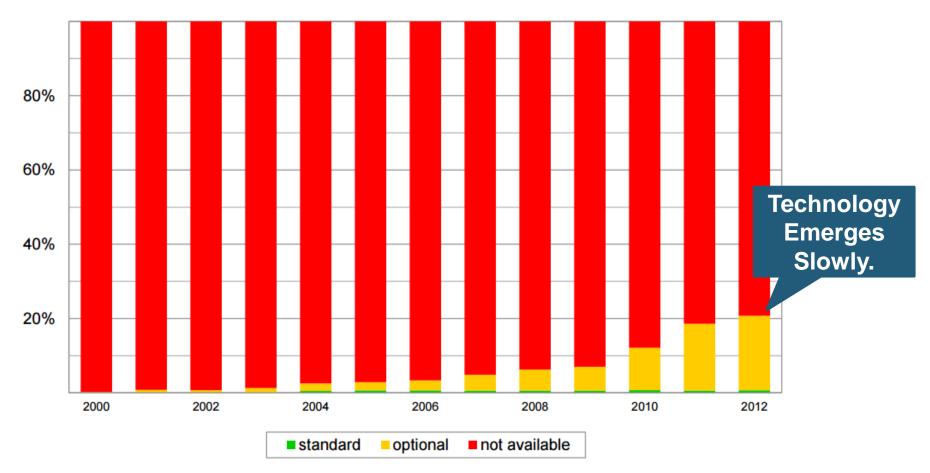
Some of These Features Are Already on Vehicles. Others Are On Their Way Soon.

### Step 1: Co-pilot



#### New vehicle series with forward collision warning

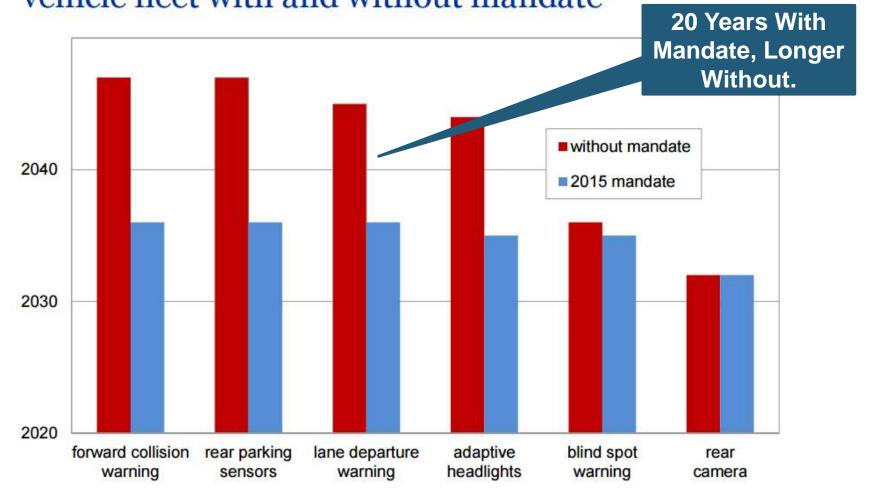
By model year



## Step 1: Co-pilot



Calendar year features reach 95% of registered vehicle fleet with and without mandate



Source: Highway Loss Data Institute, Insurance Institute for Highway Safety.

### INSURANCE INFORMATION INSTITUTE

### Step 2: The 'Dream Vehicle'



Delphi prototype "Roadrunner"

SF to NYC in Nine Days (4/2015)

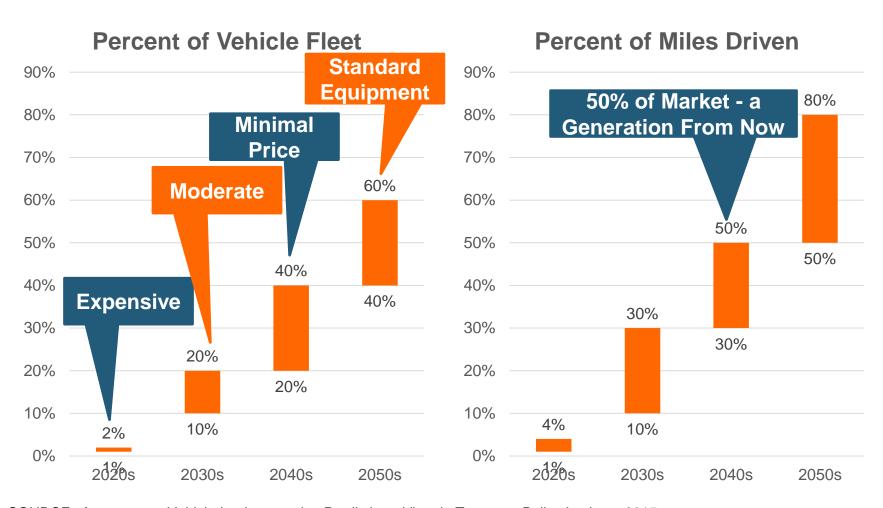
3,400 Miles – All but 50 Autonomous

Issues:
'Unmarked Lanes,
Heavy
Roadworks,'
When Sun Was
Low in Sky

These Are on the Drawing Boards of Almost All Automakers. But the Dream Vehicle Is a Long Ways Away.

### When Will This Happen?

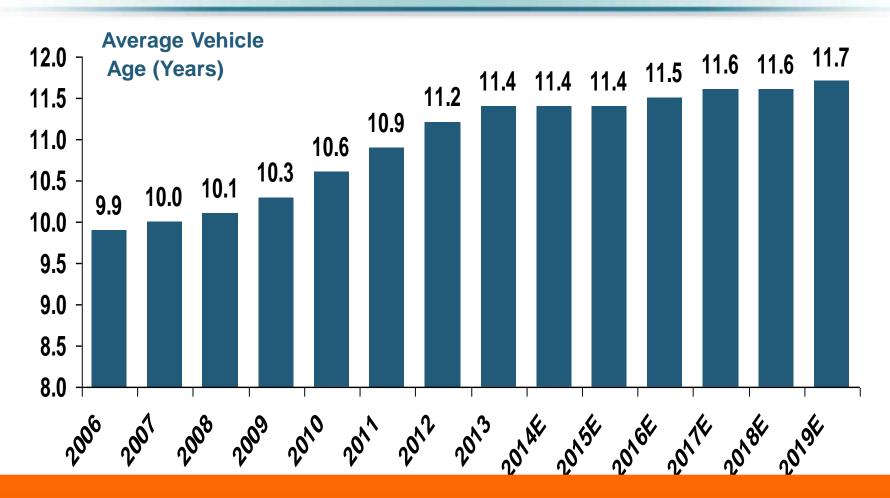




SOURCE: Autonomous Vehicle Implementation Predictions, Victoria Transport Policy Institute, 2015.

# Why Will It Take So Long?



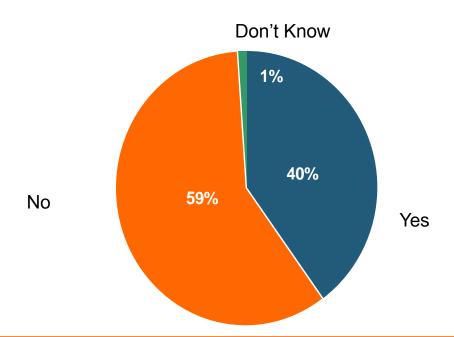


Recession Hangover – People Struggling to Afford Major Purchase; Cars Are Built Better, Last Longer.

# Why Will It Take So Long?



#### Q. Would You Be Willing to Ride in a Driverless Car?

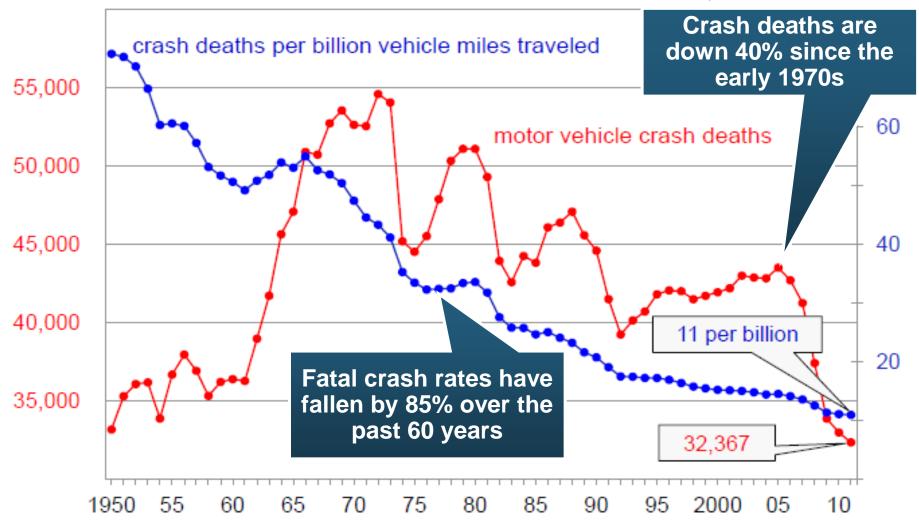


Nearly Three Out of Five People Say They Would Not Ride in a Driverless Car.

# **Enhanced Vehicle and Road Safety Have Made Driving Much Safer**



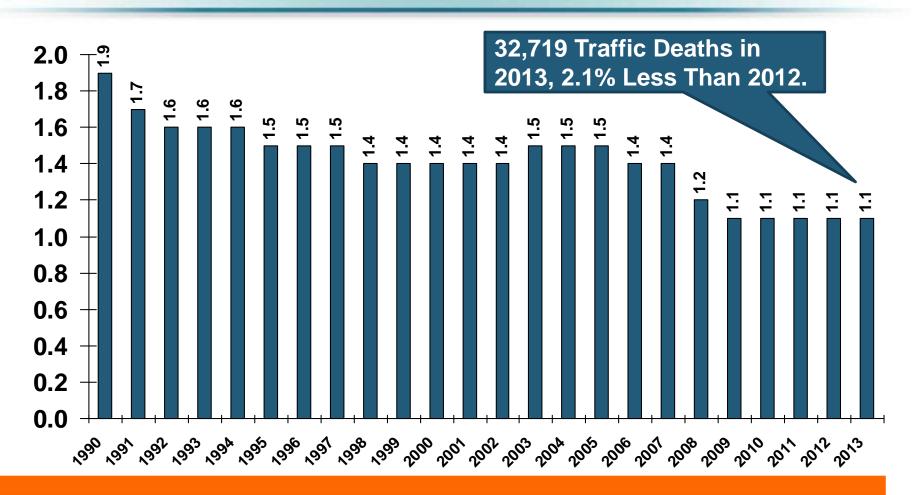
#### Motor Vehicle Crash Deaths and Crash Death Rate, 1950-2012



Source: National Highway Transportation Safety Administration as cited in Insurance Institute for Highway Safety presentation by Adrian Lund, Ph.D., *Drivers and Driver Assistance Systems: How Well Do They Match?*, June 18, 2013; Insurance Information Institute.

# Fatalities per Hundred Million Miles Driven

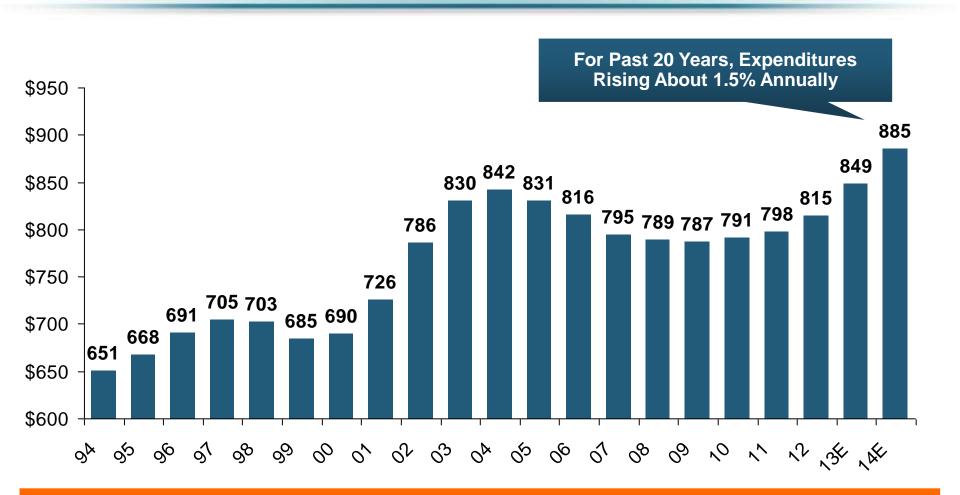




Auto Fatality/Injury Rates Have Been Falling for Decades.

### **But Auto Insurance Expenditures Rise**



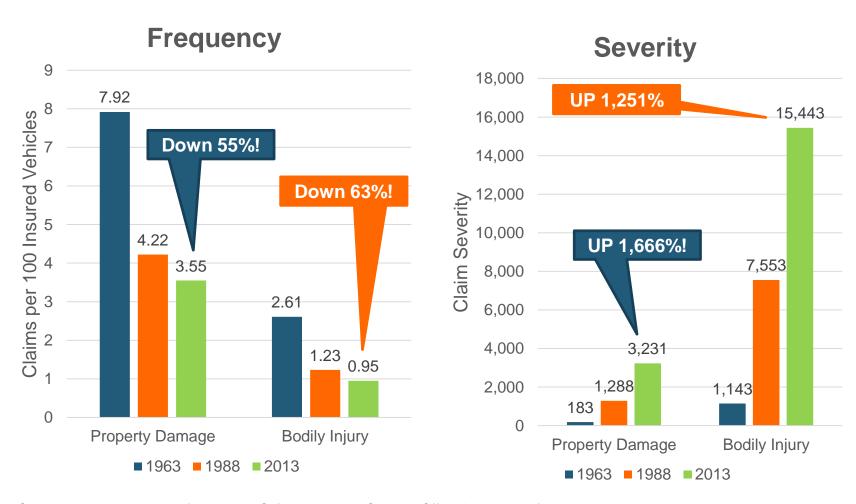


If Cars Are Safer, Why Are Insurance Costs Rising?

<sup>\*</sup> Insurance Information Institute Estimates/Forecasts
Source: NAIC, Insurance Information Institute estimate for 2013-2014 based on Motor Insurance CPI.

# **Auto Insurance: Frequency vs. Severity**



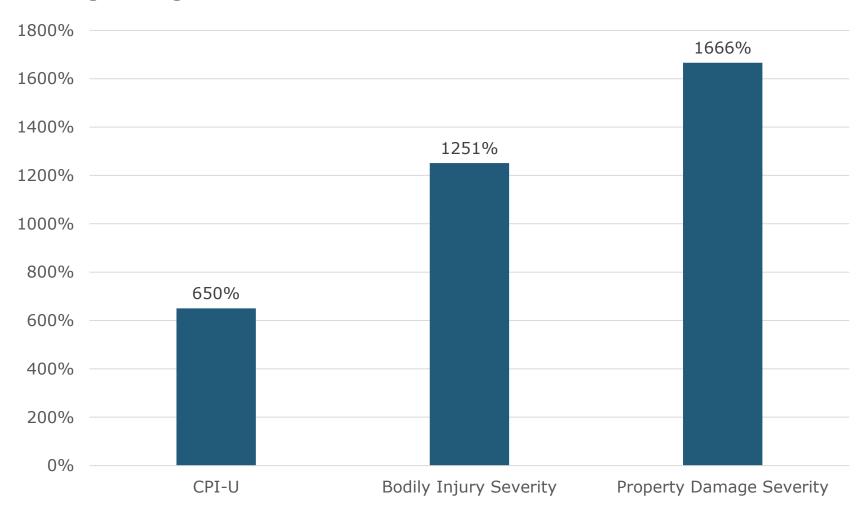


Sources: Insurance Institute for Highway Safety, Insurance Services Office, Insurance Information Institute.

# **Auto Claims Have Grown Faster Than Inflation for 50 Years**



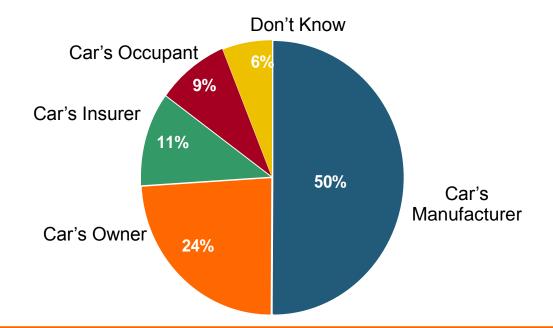
#### Percentage Change, 1963-2013



### I.I.I. Poll: Who Is Responsible?



#### Q. Who should be responsible if an accident occurred involving a driverless car?

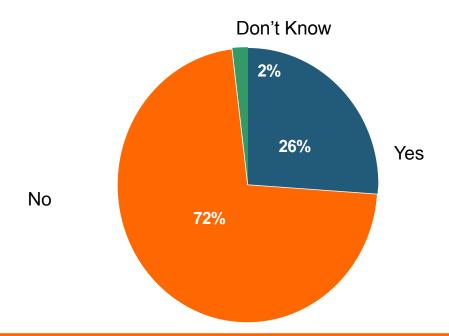


Half of Respondents Think a Driverless Car's Manufacturer Should Bear Responsibility in Case of an Accident.

### I.I.I. Poll: Who Is Responsible?



Q. Would you be willing to pay more for your car to cover the manufacturer's liability in case of an accident?



Only a Quarter of Americans Would Be Willing to Pay More for a Driverless Car to Cover the Manufacturer's Liability in Case of an Accident.

#### The Future of the Car of the Future



- Technology Has Been Making Cars Safer for Decades.
- It takes a Long Time for Technology to Penetrate the Marketplace.
- The Size of Claims Has Grown Faster Than the Frequency of Claims Has Shrunk.
- Auto Insurers Should Be Up to the Challenge.



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