The Impact of Development of Autonomous Vehicles on the Insurance Industry

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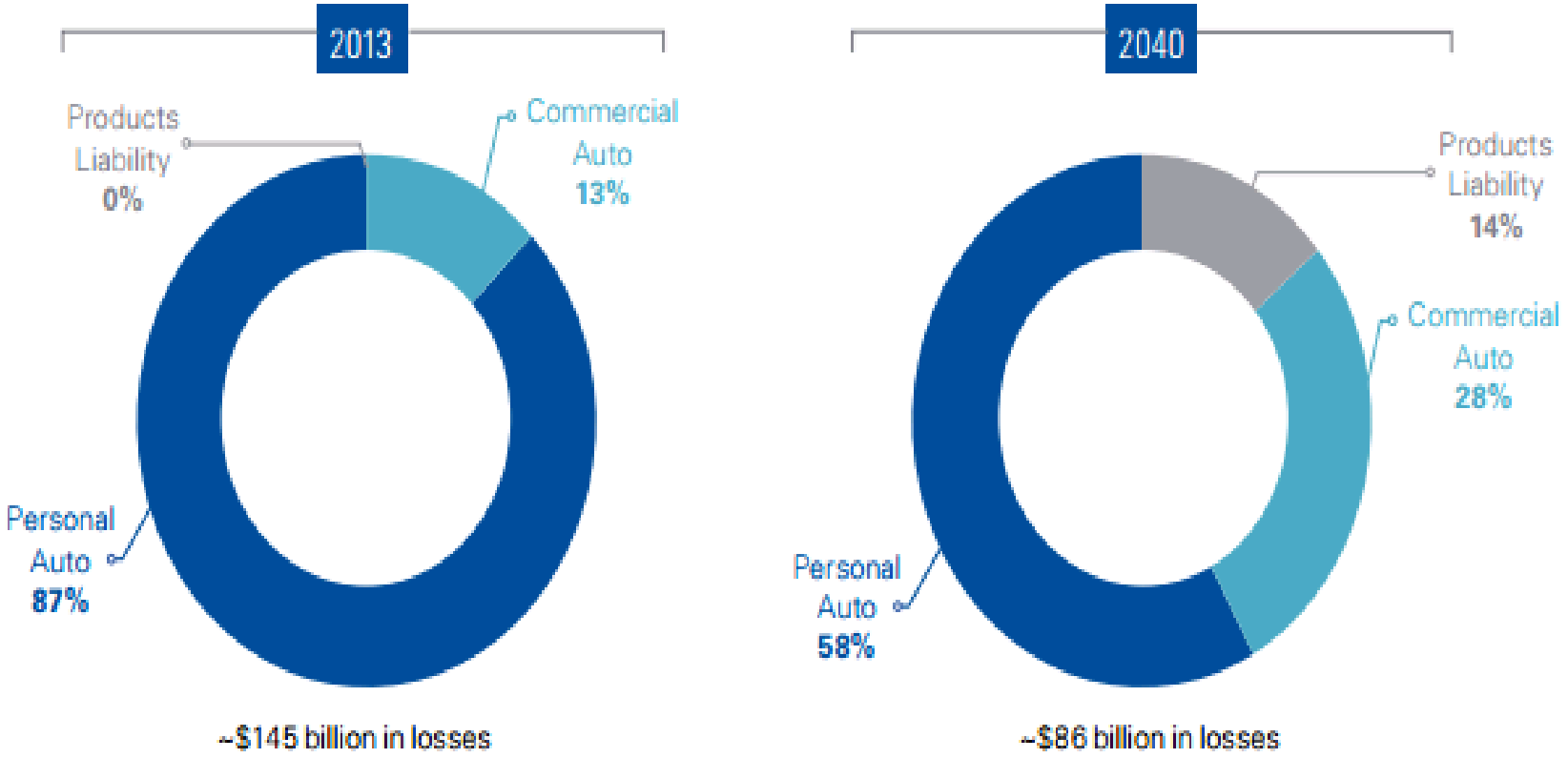
Auto Insurance

- The industry collected about $195 billion in 2014
- KPMG report says that the $200 billion-per-year industry might struggle to make ends meet in a driverless future. "Our belief is that the disruption to insurance carriers will be profound," says the report.

Loss splits between products liability, personal auto, and commercial auto



Why Now?

- Technology Enablement
- Consumer Adoption
- Regulatory Permission

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Technology Enablement: Three Pathways

- OEM: Incremental Adoption of Technology
- High Tech Companies: leapfrog traditional manufacturers to fully self-driving cars
- Connected Car: vehicle to vehicle and vehicle to infrastructure communication

Incremental Adoption

- Traditional manufacturers have committed pipelines of new vehicles, with each release making accessible more sophisticated autonomous capabilities
- Volvo, Mercedes-Benz, BMW: introduced traffic jam assist in 2014
- Honda Motor is releasing automated safety features on its entry level vehicle Civic LX sedan and $20,440 price point

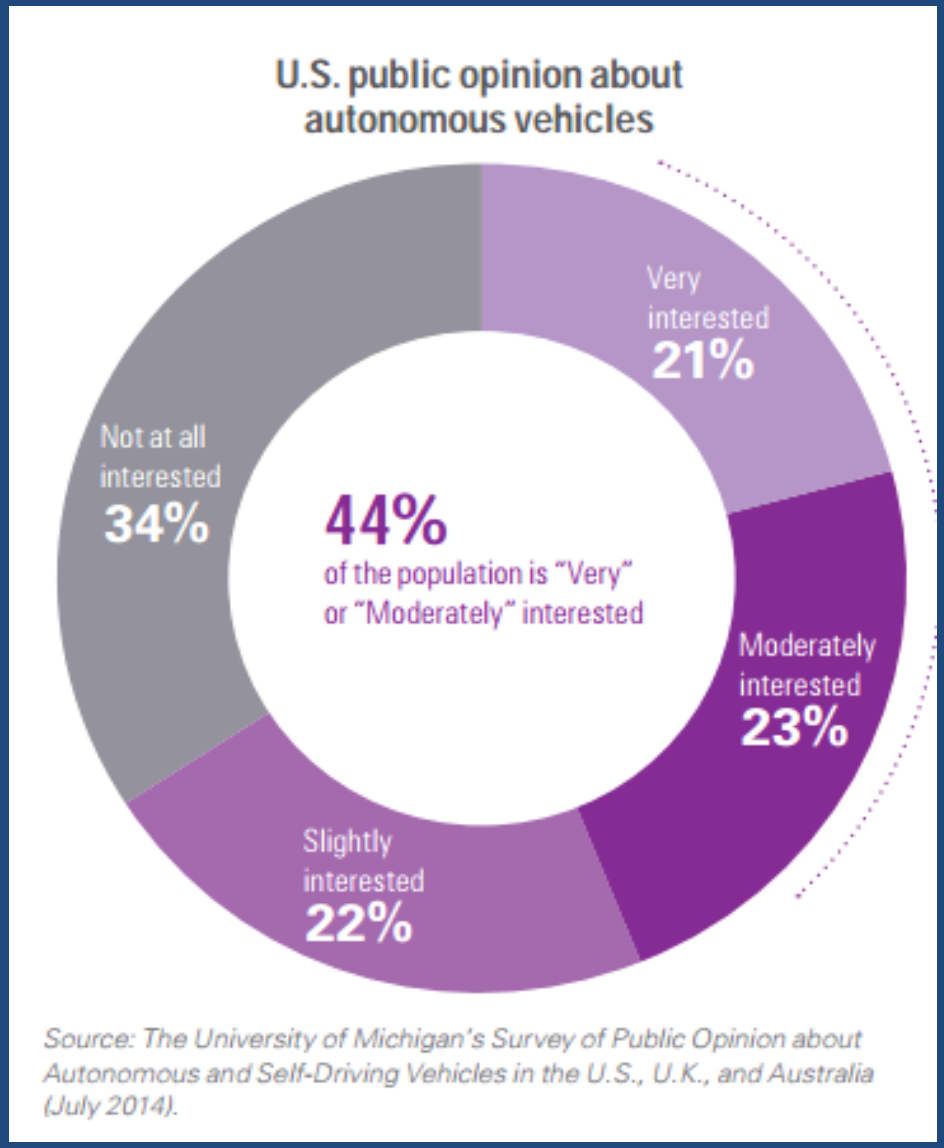
Incremental Adoption

- Nissan: Unveiled self-parking prototype in 2016, set to introduce self-parking vehicles for sale to consumers in 2018
- Cadillac: Super cruise control in 2017
- Ford: Traffic jam assist in 2017

Tech Companies

- Google Car has driven 1.4 million miles, first at fault accident on February 14, 2016
- Apple: Titan electric car project
- GM: Created venture capital firm, March 2016 purchased Cruise Automation
- Ford: Announced the creation of Ford Smart Mobility

Consumer Adoption



What's Happening Now: Regulations

- NHTSA: proposed rulemaking in August 2014 suggests federal mandate for all new vehicles to include V2V capabilities by 2022
- NHTSA: Announces autonomous driving system can be considered "driver" for regulatory purposes

Accident Frequency

- 30,000 to 40,000 people are killed on the roads each year in the U.S. alone
- 11 million road accidents in the U.S. in 2009
- 90% of accidents are caused by driver error
- Autonomous technology projected to decrease accident frequency by 80% by the year 2040

Accident Frequency

- Vehicles equipped with crash prevention technology have a 7 to 15% lower claim frequency under property damage liability coverage
- Level of automation may become a core dimension of driving risk

Accident Frequency

- A study by the Insurance Institute for Highway Safety (IIHS) has found that improvements in design and safety technology have led to a lower fatality rate in accidents involving late model cars.
- The likelihood of a driver dying in a crash of a late model vehicle fell by more than a third over three years, and nine car models had zero fatalities per million registered vehicles.

Lower Losses = Lower Premiums

- When losses drop, competition will drive insurance companies to drop price to stay competitive
- Consumers will demand lower premiums to reflect fewer accidents
- Potential for irrational pricing behavior by well-capitalized or troubled companies attempting to maintain premium volume or market share

Lower Losses = Lower Premiums

- Donald Light, head of the North America property and casualty practice for Celent: Premiums consumers pay could drop as much as 60 percent in 15 years as self-driving cars hit the road

Autonomous Cars Can Save the U.S. Economy $1.3 Trillion Per Year

- Accident costs: $488 billion
- Productivity gain: $507 billion
- Fuel loss from congestion: $11 billion
- Productivity savings from congestion: $138 billion
- Fuel cost savings: $158 billion

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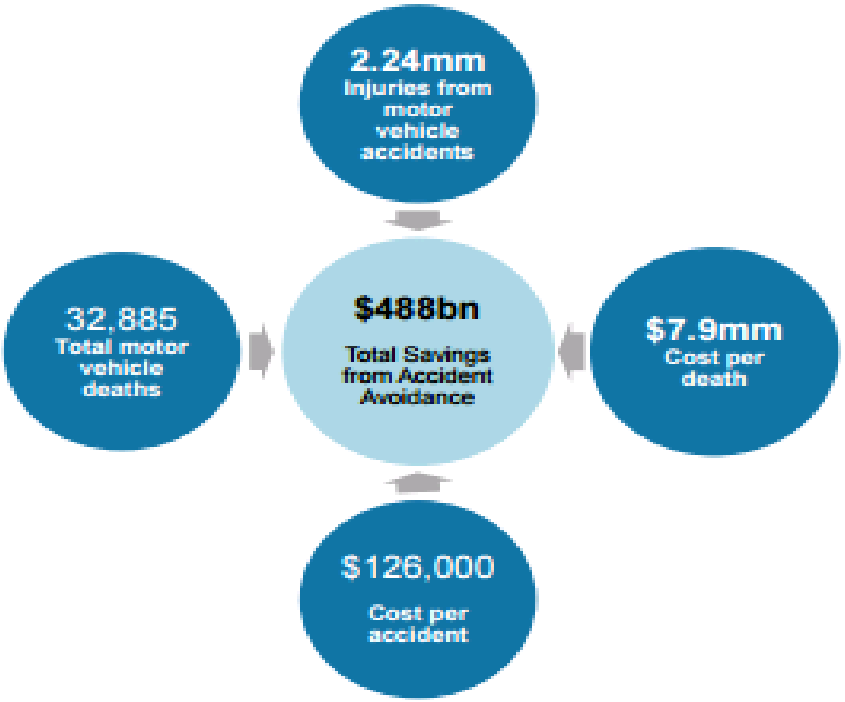
Accident Savings

Exhibit 40

Cost of Motor Vehicles-related Fatal and Non-fatal Injuries

US data

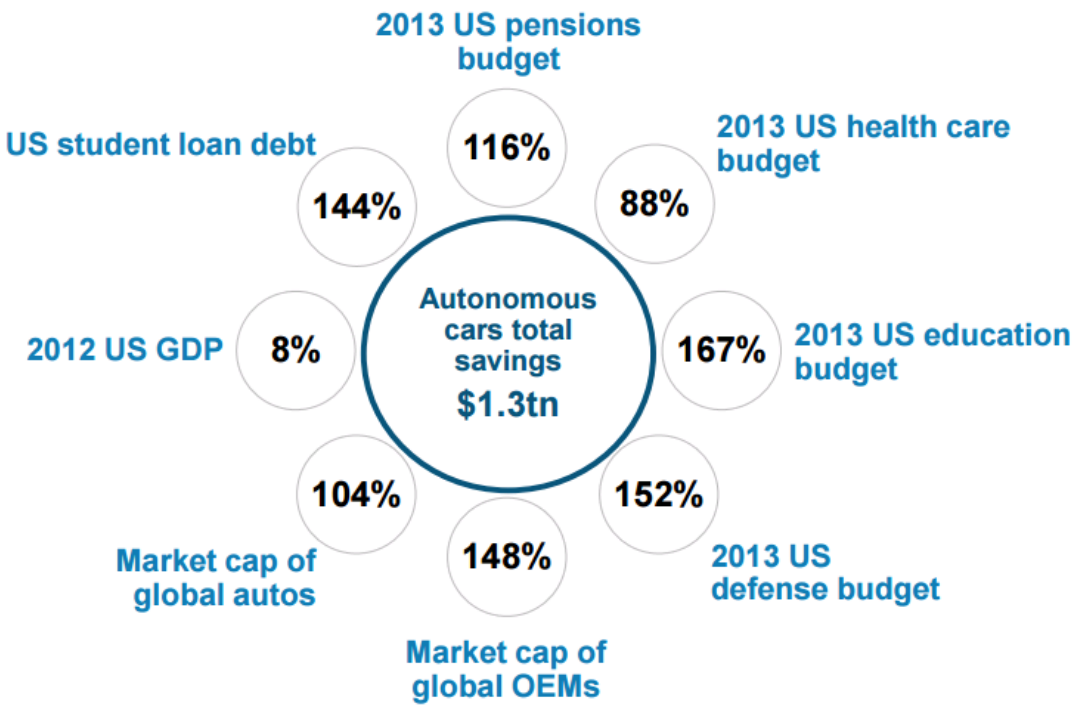


Source: US Department of Transportation, National Highway Traffic Safety Administration, Federal Highway Administration, EPA, FDA, AAA, Morgan Stanley Research

Savings Comparison

Exhibit 9

Medical, Fuel Costs and Productivity Gains Drive Significant Savings



Source: US Department of Transportation, National Highway Traffic Safety Administration, Federal Highway Administration, EPA, FDA, AAA, Census, Texas Traffic Institute, usgovernmentspending.com, Thomson Reuters, Morgan Stanley Research

Impact on Insurance

- Regulation: State by state
- Liability: shift to manufacturer/no fault
- Repair Cost: increased due to expensive components
- Decrease in U.S. car stock: mobility and ride share
- New Products: data driven and leverage of expertise in risk analysis