Cost Drivers and Affordability in Personal Automobile Insurance

American Academy of Actuaries
Automobile Insurance Committee

2026 CAS Spring Meeting

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Learning Objectives

1. Establish the impact of insurance affordability on the personal auto insurance market and in other aspects of society.
2. Define existing metrics for affordability and describe recent changes to personal auto insurance affordability in the United States, as well as underlying factors affecting auto insurance loss costs such as inflation in parts and medical expenses, vehicle technology, legal and fraud dynamics, safety technology, policy interventions, and tariffs.
3. Describe potential ways to mitigate the impacts of reduced affordability in auto insurance in the United States.

Speakers

- Susan Kent, MAAA, FCAS—Vice President, Casualty Practice Council
- Margo Mackenzie, MAAA, FCAS—Vice Chairperson, Casualty Practice Council
- Jared Smollik, MAAA, FCAS—Outgoing Chairperson, Automobile Insurance Committee

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Agenda

1. Introductory remarks on affordability in auto insurance
2. Defining affordability (for auto insurance)
3. Changes in affordability in the U.S. during recent years
4. Factors driving changes to auto insurance costs
5. Further considerations and recommendations

Why Are We Talking About Auto Insurance Affordability?

Effects on individuals

- Unlike some other expenditures, auto insurance is often compulsory
- Affordability pressures can shift coverage choices
- Affordability pressures can raise the uninsured/underinsured motorist (UM/UIM) rates
- Reduced mobility and economic opportunities
- Legal penalties for noncompliance

Why Are We Talking About Auto Insurance Affordability?

Effects on the insurance system

- Higher churn and less stability
- Growth of non-standard and minimum-limits policies
- Cost shifting and feedback loops, especially regarding uninsured and underinsured motorists

Why Are We Talking About Auto Insurance Affordability?

Effects on economy

- Workforce participation
- Geographic inequities
- Friction in labor markets

Why Are We Talking About Auto Insurance Affordability?

Effects on public policy

- Increased regulatory scrutiny
- Policy focus on fraud and enforcement of insurance requirements *(see also AAA 2024 Issue Brief on Insurance Fraud)*
- Policy focus on rating variables and transparency
- State-sponsored no-cost and low-cost auto insurance programs for income-eligible individuals aimed at decreasing the number of uninsured motorists

Sources:
https://insurance.maryland.gov/Consumer/Appeals%20and%20Grievances%20Reports/Affordability-of-Private-Passenger-Automobile-Insurance-2025-Workgroup-Report.pdf
https://actuary.org/wp-content/uploads/2024/10/casualty-brief-insurance-fraud.pdf

Defining Affordability

Existing Metrics

- Insurance Research Council (IRC)
  - Share-of-income
  - $\text{affordability index} = \frac{\text{average insurance expenditures}}{\text{median household income}}$
  - Alternative: focus on mandated coverage by using minimum liability limits expenditures in the numerator
- Federal Insurance Office (FIO), Department of the Treasury
  - Focus on underserved communities ("Affected Persons")
    - Low- and moderate-income (LMI) communities
    - Majority-minority communities
  - Similar calculation, but sets 2% as a benchmark/threshold

Sources:
https://insurance-research.org/sites/default/files/2025-08/2025%20-%20Personal%20Auto%20Insurance%20Affordability%2C%20Countrywide%20Trends%20and%20State%20Comparisons.pdf
https://home.treasury.gov/system/files/311/FINAL%20Auto%20Affordability%20Study_web.pdf

Affordability Landscape

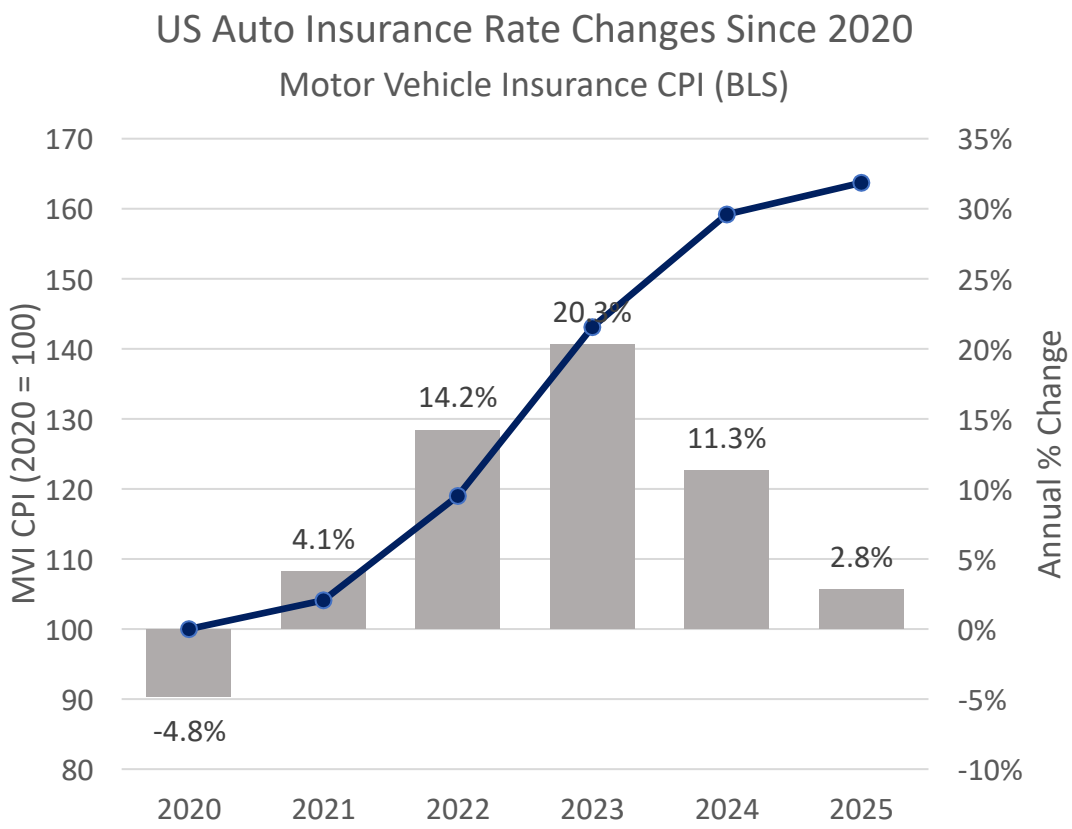
U.S. Auto Insurance Expenditures Since 2020

Bureau of Labor Statistics (BLS)

- Motor vehicle insurance in U.S. city average, all urban consumers, not seasonally adjusted
- Data shows 64% increase from Dec 2020 to Dec 2025

Landscape

- Pandemic lull (2020)
- Rate increases to catch up with higher loss costs (2021-2022)
- This was followed by sustained inflation (2023-2024)

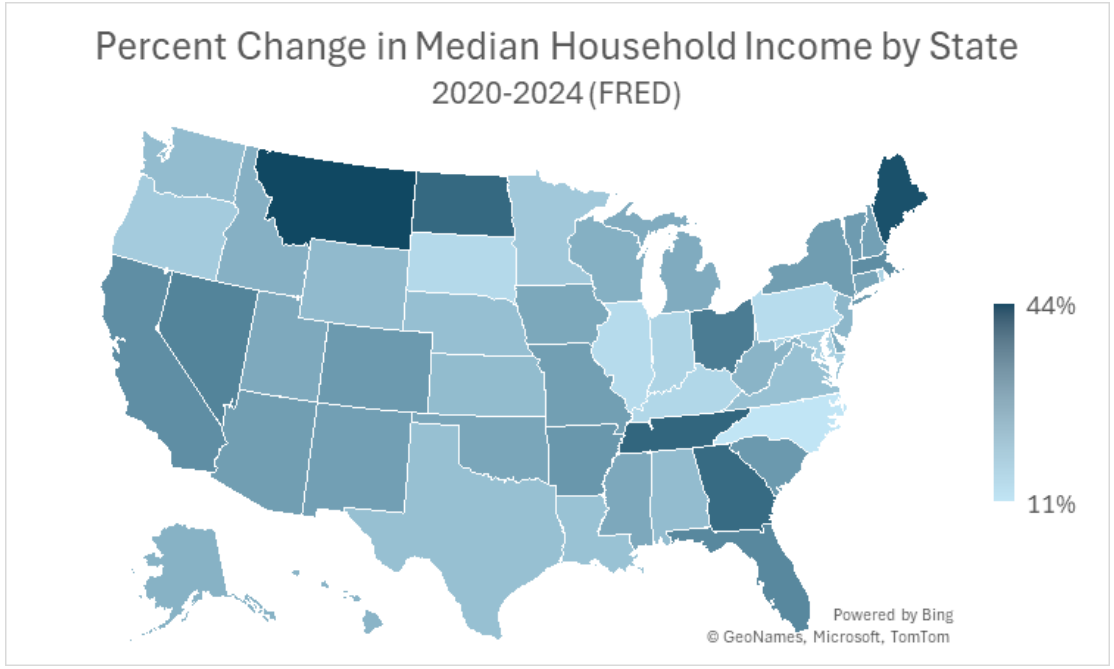


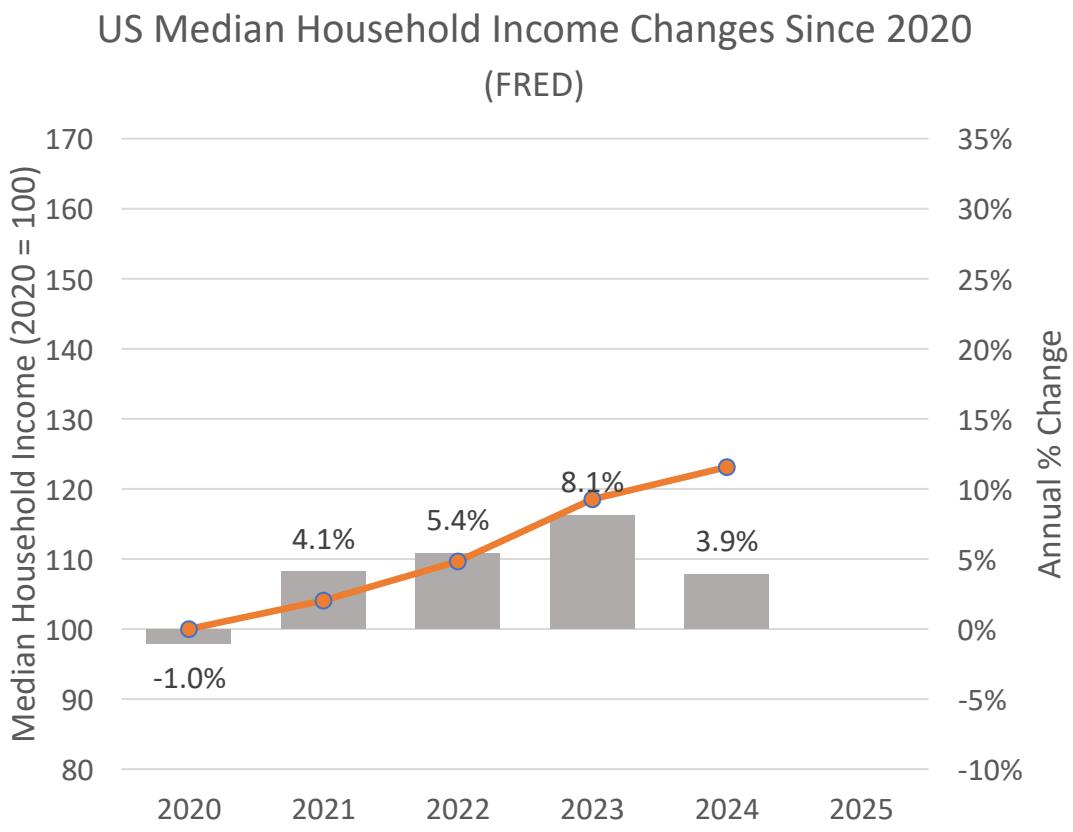
Sources:
https://data.bls.gov/timeseries/CUUR0000SETE?output_view=data
https://www.iii.org/sites/default/files/docs/pdf/triple-i_trends_and_insights_auto_06122025.pdf

U.S. Median Household Income Since 2020

Federal Reserve of St. Louis (FRED)

- Data shows 23% increase from Jan 2020 to 2024

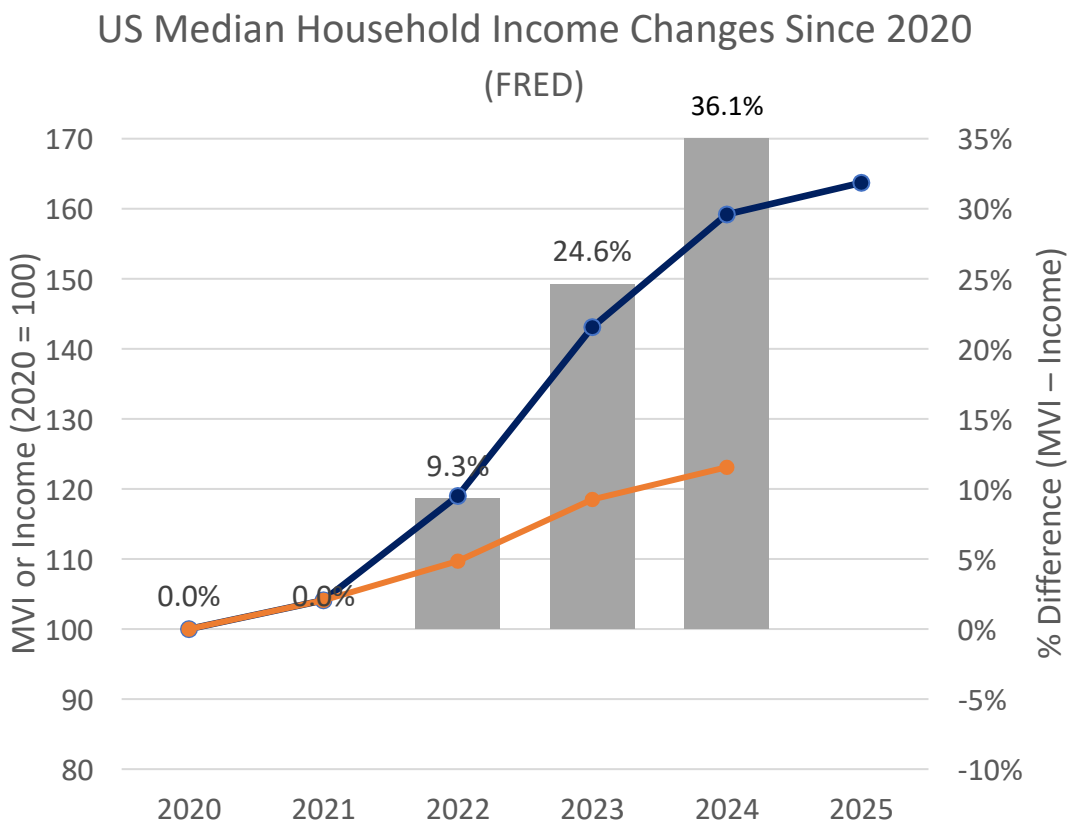




Sources:
https://fred.stlouisfed.org/release/tables?rid=249&eid=259462

Auto Insurance Expenditures Versus Income

Auto insurance expenditures grew faster than median household income from 2020 to 2024

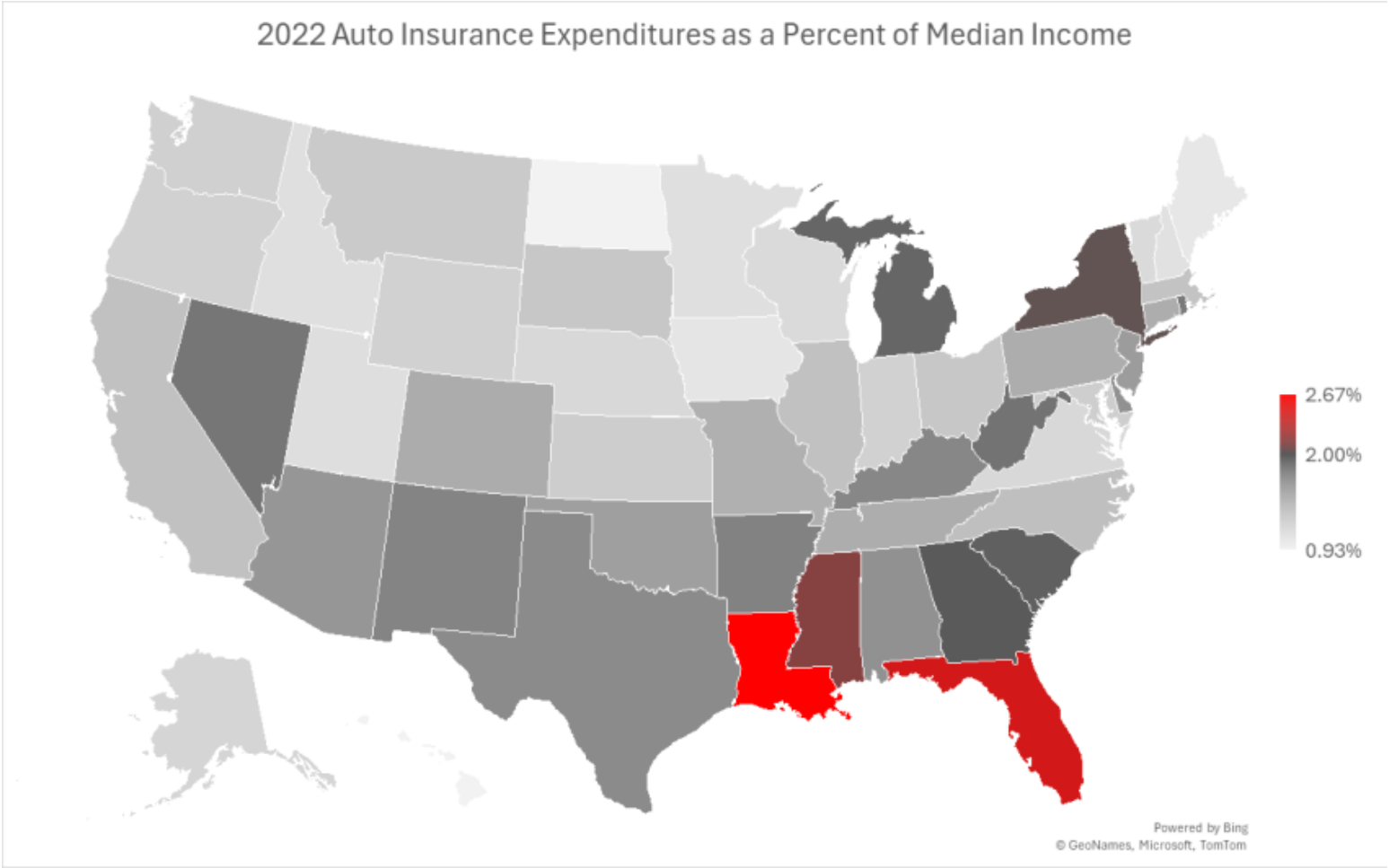


Sources:
Same as two prior slides

Affordability by State (IRC)

Broad range among states (in 2022)

- Top 3:
  - LA (2.67%)
  - FL (2.49%)
  - MS (2.18%)
- Bottom 3:
  - ND (0.93%)
  - HI (0.93%)
  - ME (1.01%)

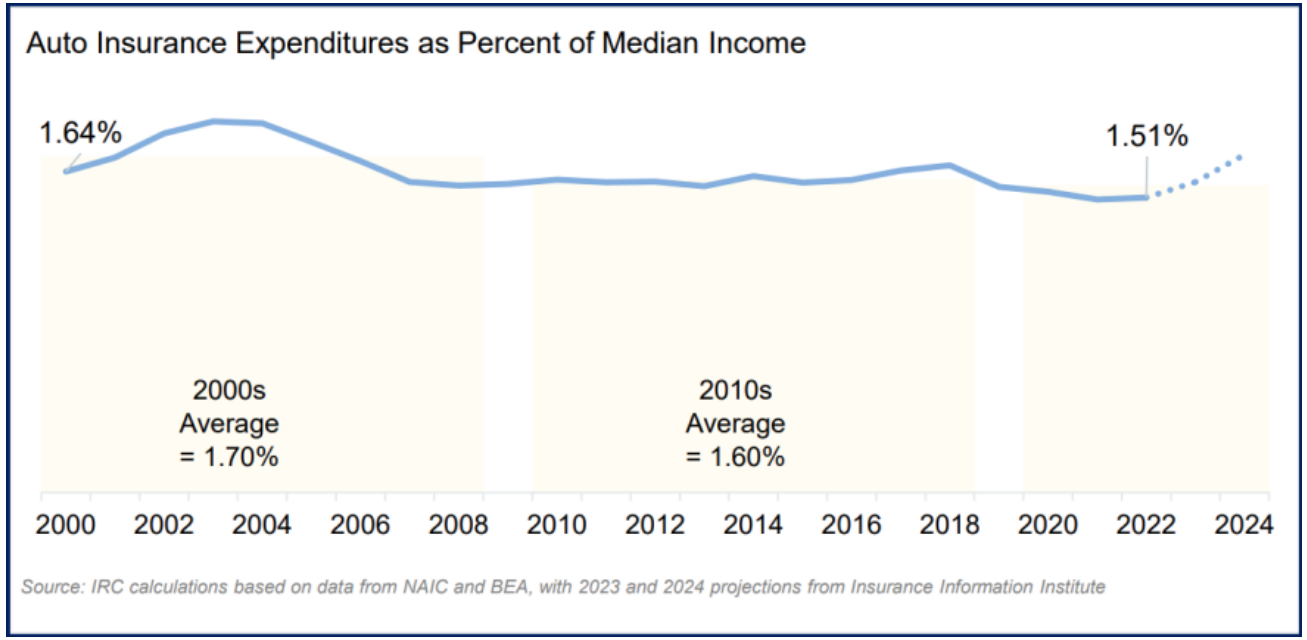


Sources:
https://insurance-research.org/sites/default/files/2025-08/2025%20-%20Personal%20Auto%20Insurance%20Affordability%2C%20Countrywide%20Trends%20and%20State%20Comparisons.pdf

Longer-term View of Affordability (IRC)

Long-term affordability has improved

- Between 2000 and 2022, median household income grew faster than auto insurance expenditures
  - Average 1.7% in 2000s (1.64% in 2000) (peak of 1.9% in 2003)
  - Average 1.6% in 2010s
  - 1.51% in 2022

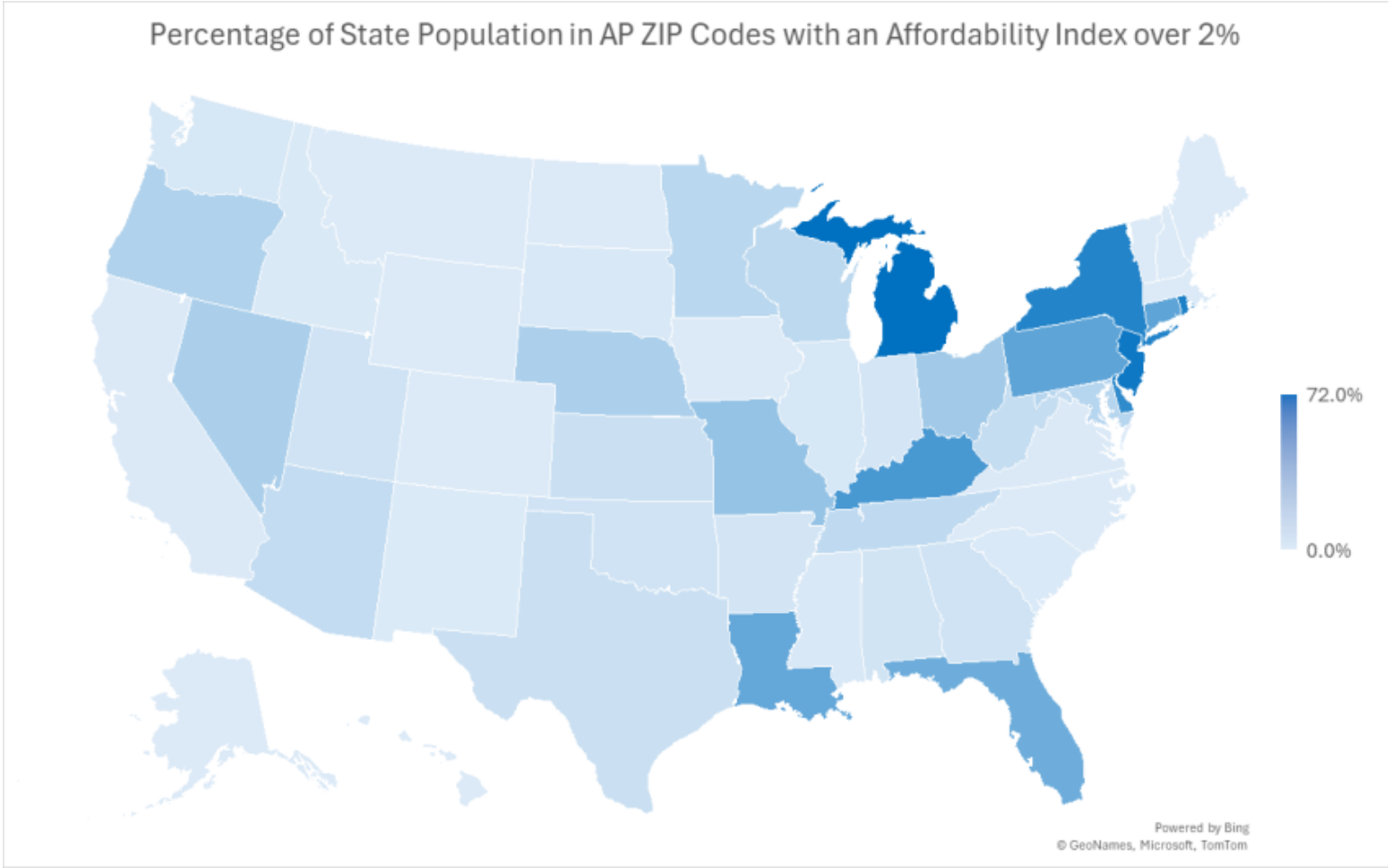


However, IRC projects deterioration due to recent cost trends

Sources:
https://insurance-research.org/sites/default/files/2025-08/2025%20-%20Personal%20Auto%20Insurance%20Affordability%2C%20Countrywide%20Trends%20and%20State%20Comparisons.pdf

Affordability in Underserved Communities (FIO)

- AP ZIP Codes are ZIP codes in which Affected Persons are the majority
- 2017 study based on data from 2014-2015
- 16.1% of the US in AP ZIP codes with Affordability Index over 2%



Sources:
https://home.treasury.gov/system/files/311/FINAL%20Auto%20Affordability%20Study_web.pdf

Drivers of Personal Auto Insurance Costs

Cost Framework: Frequency × Severity (and Expenses)

- Premiums must fund expected losses (frequency × severity), expenses, and cost of capital
- When claim costs increase faster than rates, insurers need rate catch-up (often lagged by regulation)
- Affordability discussions are often a proxy for underlying cost pressure in repair, medical, and legal systems
- Distributional effects matter: affordability differs materially across class plan structures and income levels

Cost Drivers Increasing Frequency and/or Severity

- Inflation in vehicle repair/replacement and medical costs
- Social inflation via awards/settlements
- Growth in electric vehicles: expensive parts, specialized labor; emerging battery fire considerations, and heavier vehicles affecting the energies involved in accidents
- Miles driven rebounding post-pandemic; increased distractions
- Vehicle mix and performance (SUVs/pickups; higher horsepower)
- Severe storms; theft techniques; animal collisions; cannabis legalization; traffic density
- System impacts: growth in uninsured/underinsured motorists; fraud pressure when payments become unaffordable
- Distracted driving
- Fraud

Factors That Can Reduce Losses Over Time

- Advanced Driver Assistance Systems (ADAS) and other safety features
- Newer airbag technology and broader use of restraints
- Stricter drunk driving laws and heightened awareness
- Graduated licensing programs
- Electronic traffic surveillance
- Driver improvement programs, including telematics
- Telematics benefits other than driver improvement, such as quicker FNOL, reducing time and cost to adjust claims, reducing rental reimbursement expenses, and fraud

Indeterminate/Evolving Factors (Monitoring List)

- Macro economy & miles driven (exposure) shifts
- Gasoline prices and vehicle mix
- Cell phone restriction laws and enforcement
- No-Fault/PIP fraud dynamics
- Road design & enforcement tech (cameras, roundabouts)
- EV battery technology and vehicle autonomy
- Health insurance cost trends (medical severity spillover)
- 3D-Printed auto parts
- Demographic shifts
- **Tariffs**

Tariffs

Introduction

- Tariff activity has been a “hot topic” since early 2025, with a highly uncertain landscape
- Tariffs on many imports have increased, and several reciprocal tariffs have been applied to the US
- While quantifying the potential impact remains challenging, direct and indirect impacts to the industry are expected

Potential Impacts

Direct

- Cost increases from:
  - Imported automobiles
  - Parts/materials
- Become cost increases to:
  - Repairs
  - Rentals
  - Insurance premiums

Indirect

- Cost increases/direct impacts from tariffs are likely to result in downstream "indirect" impacts, disrupting:
  - Loss development
  - Claim frequency
  - Claim severity
- Common theme: overlap with indirect impacts of COVID-19 pandemic

Potential direct impacts
Policy & insurer characteristics/considerations

- Coverage
  - Various personal auto coverages will be impacted differently (e.g., property vs. liability/medical coverages)
  - Analyses should consider coverage distribution and historical changes

- Origin of Vehicles/Parts
  - As tariffs vary by country, expected claim costs and impacts of tariffs could vary significantly based on vehicle/parts originating country
  - Analyses should consider any available information regarding distribution of vehicles/parts by country and changes over time

Potential Direct Impacts
Actuarial Analyses and Assumptions

- Loss development and trends
  - Historical development and empirical trend under lower tariff rates may not be predictive of future development/trends
- Loss adjustment expenses
  - Potential delays/shortages related to auto parts may extend time/effort to settle claims
- Premium trends
  - Cost increases will vary by manufacturer (particularly based on location)
  - Premium trends may vary from those observed historically as supply/demand of certain models or quantity/type of models produced changes
- Profit & contingency provision
  - Increased uncertainty may result in additional risk and capital requirements

Potential Indirect Impacts
Economic Outlook

Tariff activity has increased overall economic uncertainty, with potential indirect impacts of such uncertainty including:

- Higher costs/reduced profitability -> potential workforce reductions/increased unemployment
  - Similar to COVID-19, could lead to changing traffic patterns, including higher-speed, higher-severity crashes
- Changes in coverage election to reduce premiums -> potentially impacting data trends/patterns and contributing to adverse selection
- Consumers looking to generate funds during financial hardship -> potential increases in insurance fraud

Potential Indirect Impacts
Increase in Economic Inflation

Tariff activity is expected to result in higher-than-historical (pre-COVID-19) inflation levels, though not yet experienced likely due to:

- Lower-than-expected tariff increases through 2025;
- Proactive inventory stockpiling prior to anticipated tariff effective dates;
- Companies absorbing cost increases vs. passing to consumers; and
- Impacts being realized more gradually over time

Given delays, more substantial inflationary increases could be experienced later than expected

Potential Indirect Impacts
Supply Chain Disruption

Actual and expected changes in tariffs have created supply chain disruption, including:

- Changes in supply and demand (inventory stockpiling) in anticipation of tariffs
- High shipping volumes from this stockpiling
- Material shortages/production delays

Considerations and Recommendations

Loss Reduction Strategies

- Adoption/maintenance of proven safety technology (i.e., ADAS) and impairment/distracted-driving countermeasures
- Repair cost management: parts availability, OEM/aftermarket calibration, labor specialization (incl. EVs)
- Claims efficiency: earlier intervention, better triage, consistent estimating and anti-leakage controls
- Telematics and driver behavior monitoring for feedback and safety incentives

Better Risk Alignment and Cost-Based Pricing

- Expand usage-based insurance (UBI) and telematics to price based on observed driving behavior
- Leverage analytics and AI responsibly to better match premium to risk and reduce cross-subsidies
- Consider regulatory modernization that enables cost-based actuarial pricing while ensuring transparency
- Policy debates continue around ‘proxy factors’ (e.g., credit history, education) and fairness/consumer impacts

Sources:
https://insurance.maryland.gov/Consumer/Documents/agencyhearings/FIO%20January%202025%20Report%20on%20Personal%20Auto%20Insurance%20Markets%20and%20Technological%20Change.pdf

Contain Legal and Fraud Costs

- Address claim fraud and inflated ancillary bills (e.g., towing/storage) via data, enforcement, and controls
- Monitor and mitigate legal system abuse / ‘social inflation’ pressures (e.g., limitations on jury awards)
- Improve consumer education on coverages and shopping, thereby enhancing transparency
- State workgroups (e.g., Maryland) have emphasized monitoring, targeted enforcement, and program design over hard mandates
- Regulatory reforms

Sources:
https://insurance.maryland.gov/Consumer/Appeals%20and%20Grievances%20Reports/Affordability-of-Private-Passenger-Automobile-Insurance-2025-Workgroup-Report.pdf

Contain Legal and Fraud Costs

Tort/ No-Fault Reform in FL and MI

Florida HB 837

- Redefined “negligence” standards, among many changes
  - Shift from pure comparative negligence to modified comparative negligence, prohibiting recovery of damages by plaintiff if found to be 51% or more at fault
- Signed into law March 2023

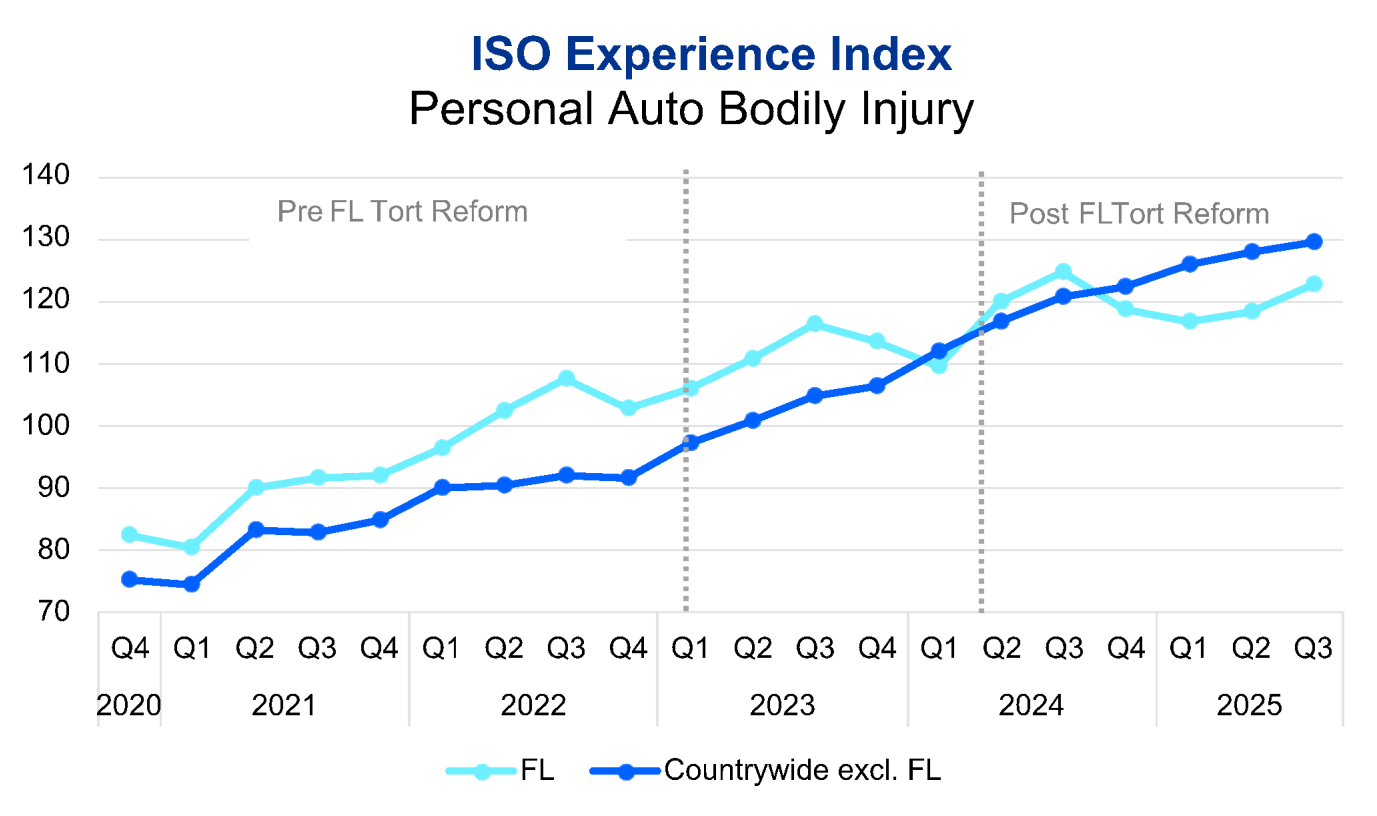
Michigan No-Fault Reform

- July 2020: introduced limited PIP options, and an option to opt-out
  - Previously PIP was unlimited for all drivers
- July 2021: new guidelines on healthcare costs
- 2025-2026 updates: adjustment to tiers and caps, medical fee schedule, documentation requirements, and more

Contain Legal and Fraud Costs
Observed Impacts of Florida Tort Reform

BI pure premium pushed upward at a slower pace after reform

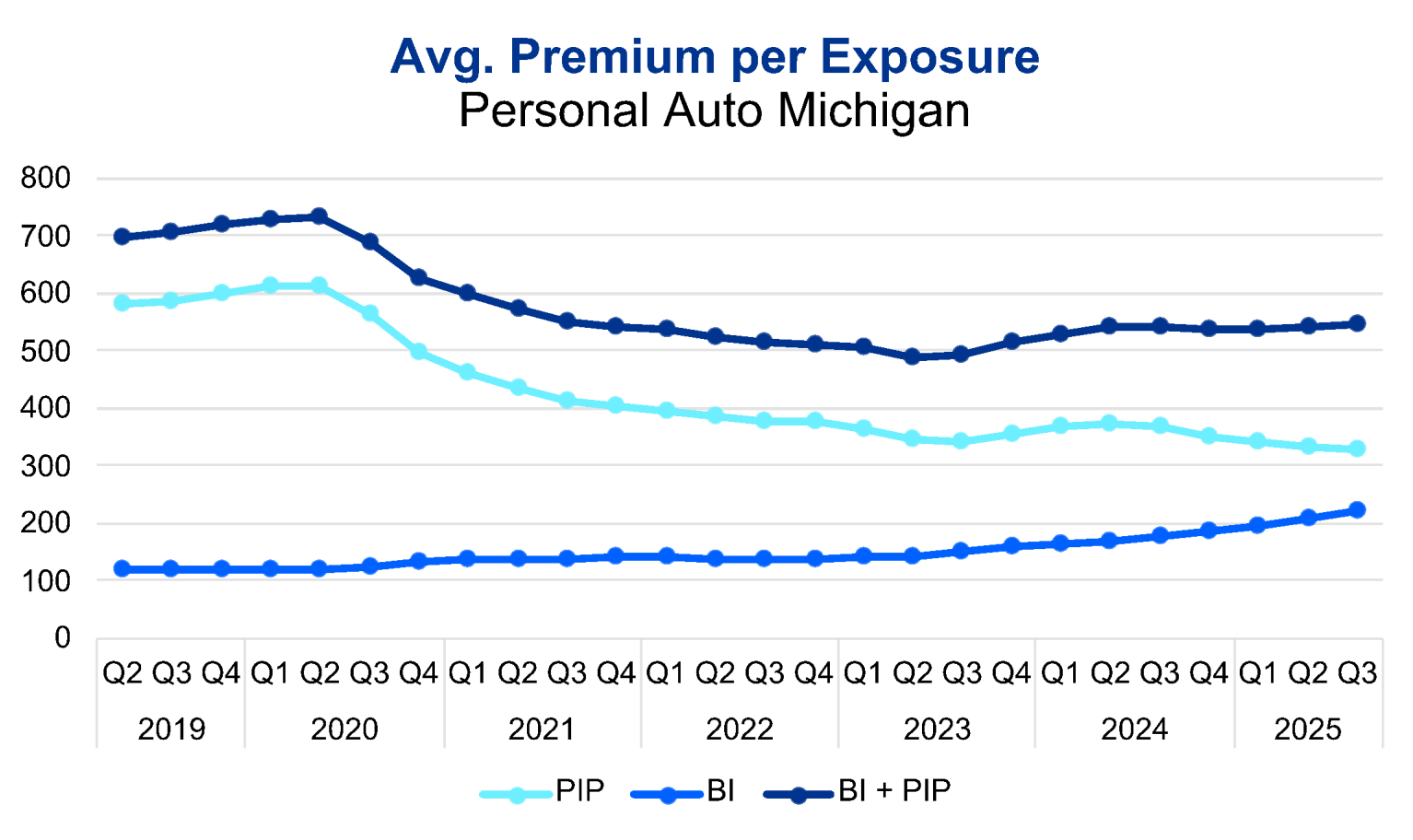
- Began diverging from countrywide patterns
- FL annualized trend
  - +6% from 2023q1 to 2025q3
  - +12% from 2020q4 to 2022q4
- CW (excl FL)
  - +12% from 2023q1 to 2025q3
  - +11% from 2020q4 to 2022q4



Contain Legal and Fraud Costs

Observed Impacts of Michigan No-fault Reform

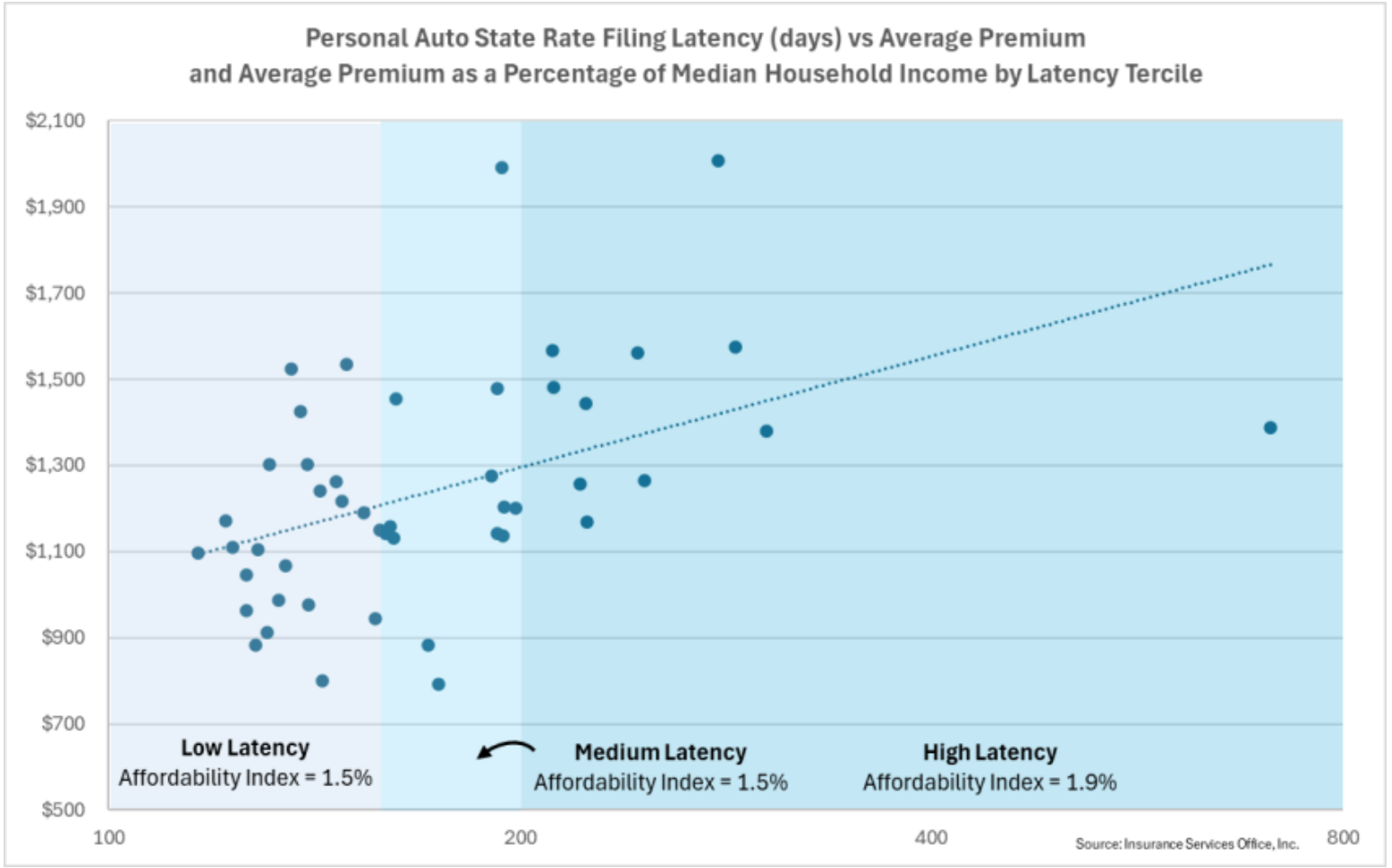
- 47% reduction in PIP premium per exposure since 2020q2
- Accompanied by 85% increase in Bodily Injury
  - But BI was 2nd lowest among all states prior to 2020
  - Now still 8th lowest
- Overall combination is still significantly lower than before 2020 reforms



Correlation Between Regulation and Affordability

States that are taking longer to approve loss cost filings tend to have higher average policy premiums.

Group of states that take the longest has a higher affordability index, as a whole.



Mitigate Impacts of UM/UIM

- Strengthen compliance/enforcement (data matching, verification at registration/traffic stops)
- Evaluate targeted affordability programs to reduce lapses and nonpayment-driven cancellations
- Use analytics to identify UM/UIM hotspots and adjust operational strategies
- IRC identifies UM/UIM and litigation as key affordability-related cost drivers

Conclusion

Key Takeaways

- Affordability is often measured as cost relative to income and varies widely by region and other factors
- Since 2020, auto insurance costs have surged, increasing affordability pressures on individuals and the insurance mechanism
- Drivers of auto insurance costs include inflation in parts and medical costs, miles driven, legal and fraud dynamics, and technology
- Levers to improve affordability include loss control, improvements in pricing, fraud/legal cost containment, and UM/UIM mitigation

Thank You

For more information, please contact

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