



Use of credit data in insurance applications

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Agenda

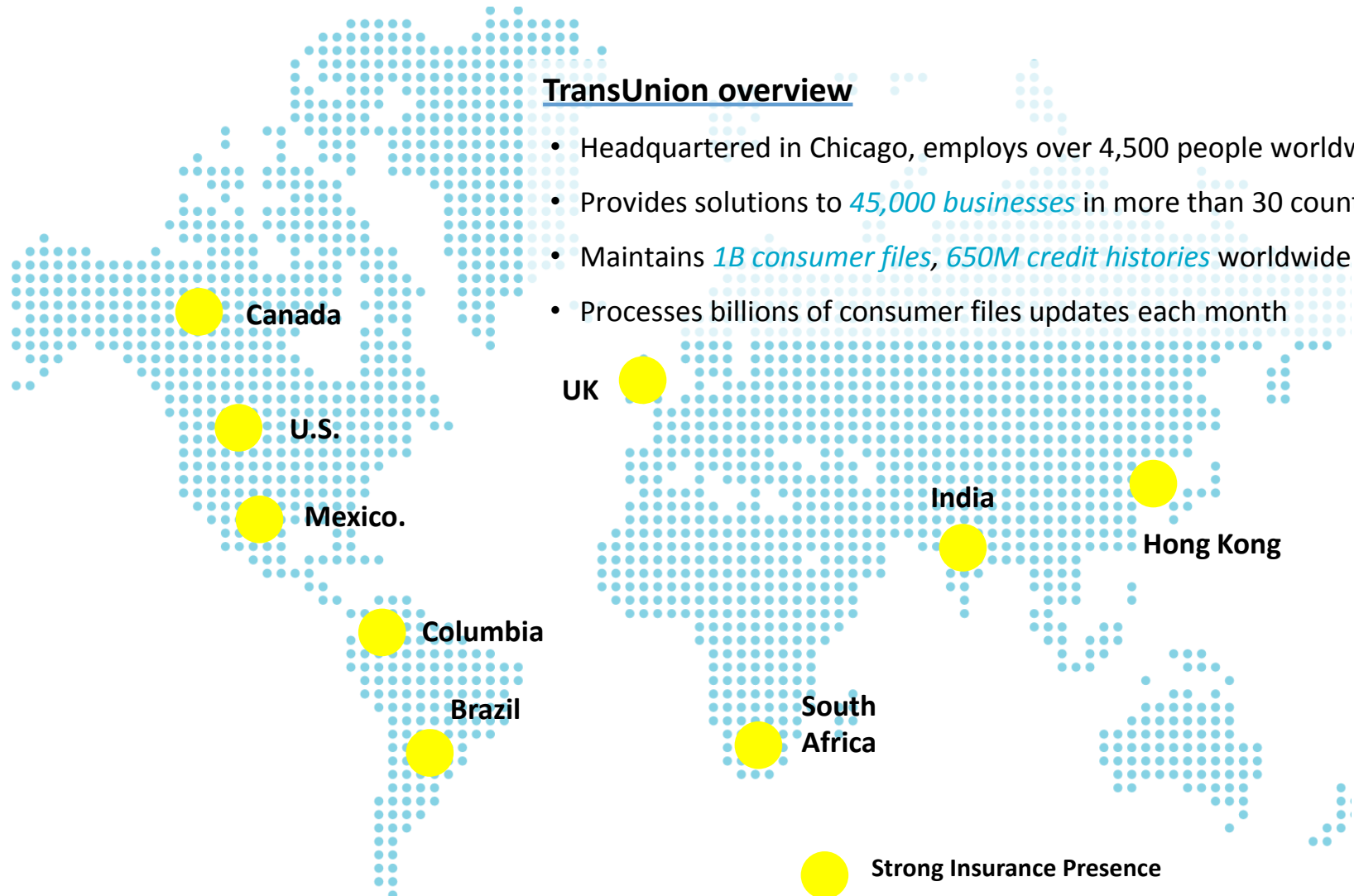
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Introduction and overview

TransUnion is a leading provider of risk and information solutions around the world

TransUnion overview

- Headquartered in Chicago, employs over 4,500 people worldwide
- Provides solutions to *45,000 businesses* in more than 30 countries
- Maintains *1B consumer files, 650M credit histories* worldwide
- Processes billions of consumer files updates each month



TransUnion's core capabilities paired with key data assets enable us to provide superior value to our global insurance customers

Core capabilities

- Sophisticated data matching and linking
- Proprietary analytics and decision rules technology

Key assets

- Unique, historically trended consumer credit and non-traditional credit databases
- Consumer and household-centric behavioral data
- Consumer data sources for marketing and fraud analytics

Insurance focus

- Serves general insurance and long-term insurance customers through a dedicated insurance vertical with major presence in 9 international geographies
- Leverage global analytical and product development Center of Excellence to deliver bespoke data-led solutions across the policy-holder life-cycle

Changing landscape in Hong Kong insurance market

Increased focus on regulation

- Establishment of independent Insurance Authority
- Modernize regulatory infrastructure and provide better policyholder protection

Intensified competition

- Rise of FinTech
- Increasing involvement of Mainland Chinese insurers

Pressure to reduce costs

- Soft market and deteriorating profitability
- Severe typhoon-related losses

Economic headwind in Mainland China affecting growth prospect

- Efforts to deleverage debt and financial risks
- Intensifying trade war with the US put “dark clouds” over growth

Use of credit data in insurance: historical perspective

Use of credit in personal line P&C underwriting is an established practice in the U.S. and globally



90%
personal
auto



70%
personal
property

Benefits of credit-based insurance scores

- ✓ Strong correlation with loss costs
- ✓ Objectivity of measurement
- ✓ Scale and ease of administration

Use of credit data in pricing and underwriting is accepted by most state insurance regulators

Use of credit data:
Estimated market penetration

Source: Insurance carrier rate/rule filings and carrier input

An efficient insurance market can raise the industry: U.S. example

Who is being insured?



Rating based on self-reported identifying data

Credit-based insurance scoring introduced
Progressive & Allstate among first adopters

Wide adoption of credit in rating P&C

Multivariate modeling introduced
Progressive, Allstate, Geico, Travelers lead adoption

First generic credit-based insurance score introduced

TransUnion Insurance Risk Score 1.0 introduced

TransUnion TrueRisk introduced

1990

2000

2010

100% Agent Distributed

Rating based on self-reported vehicle data

Insurers begin using self-reported mileage in rating

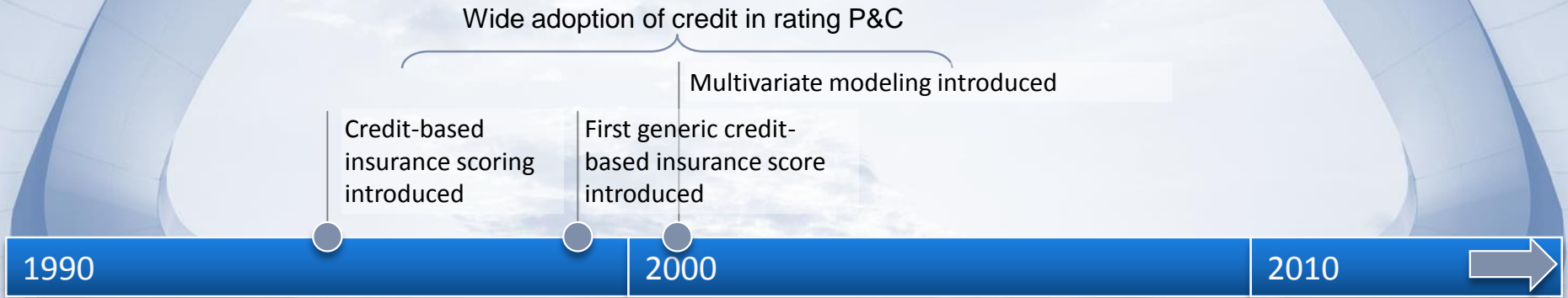
Industry first generic Vehicle History Score introduced by TransUnion

Agent (60%) & Direct (40%)

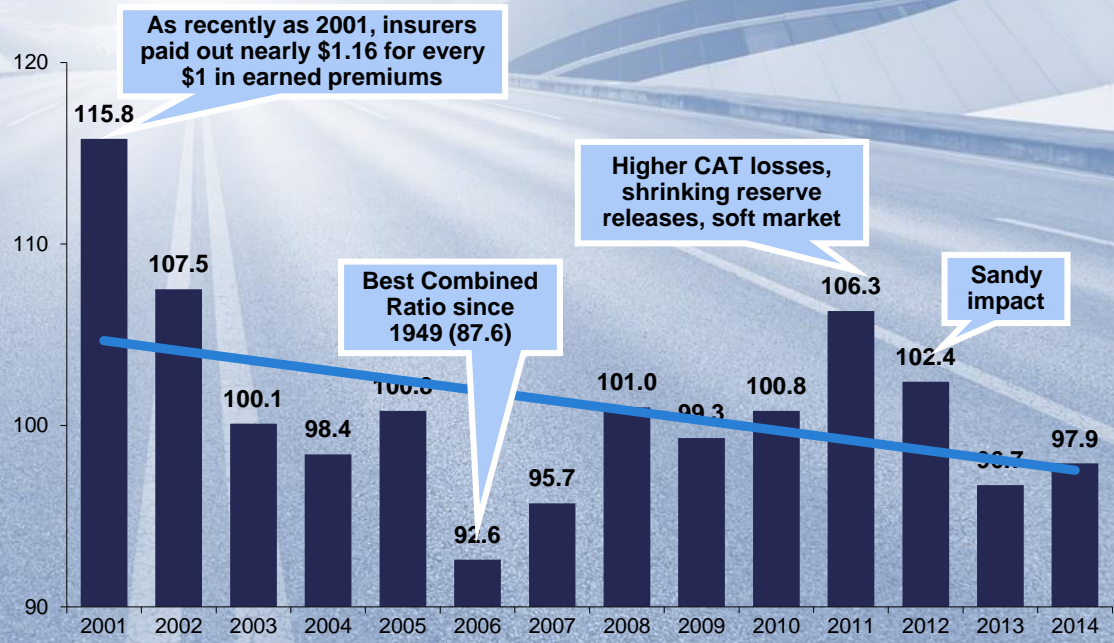


What are they insuring?

An efficient insurance market can raise the industry: U.S. example



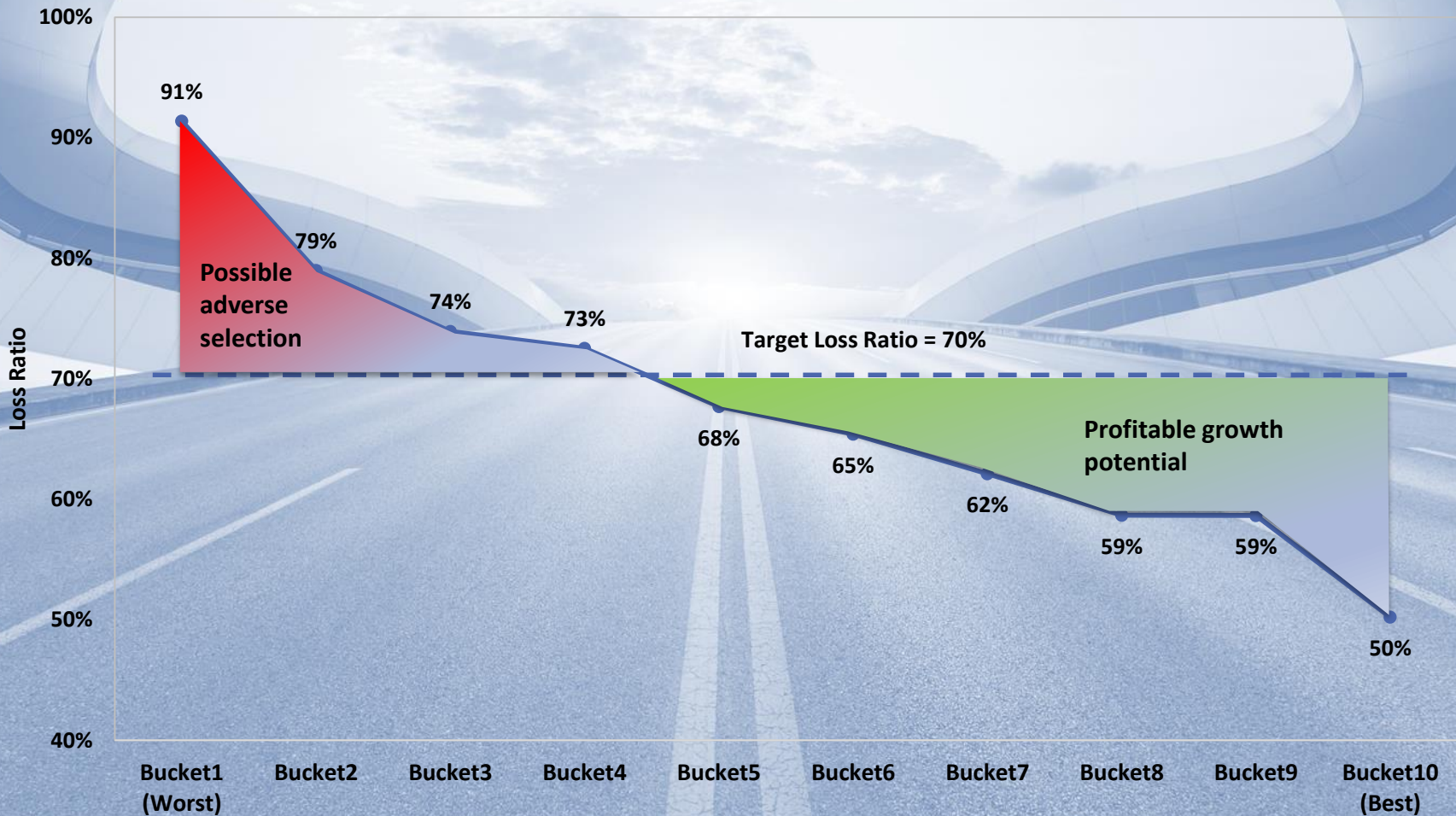
P&C Combined Ratio has declined



Source: Insurance Information Institute

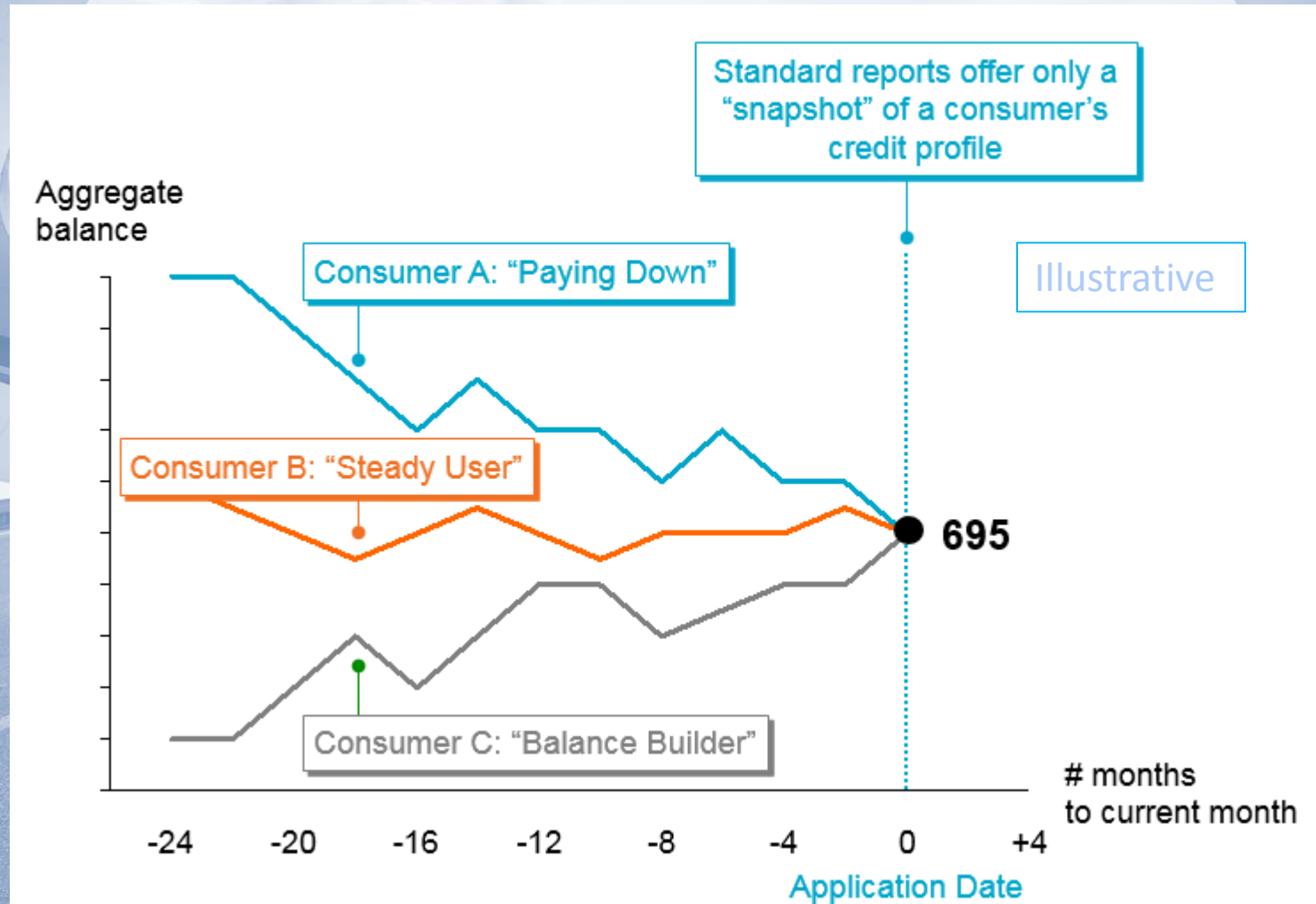
Credit is one of the top rating factors in U.S. auto insurance pricing

Example Loss Ratio by Credit Score Buckets

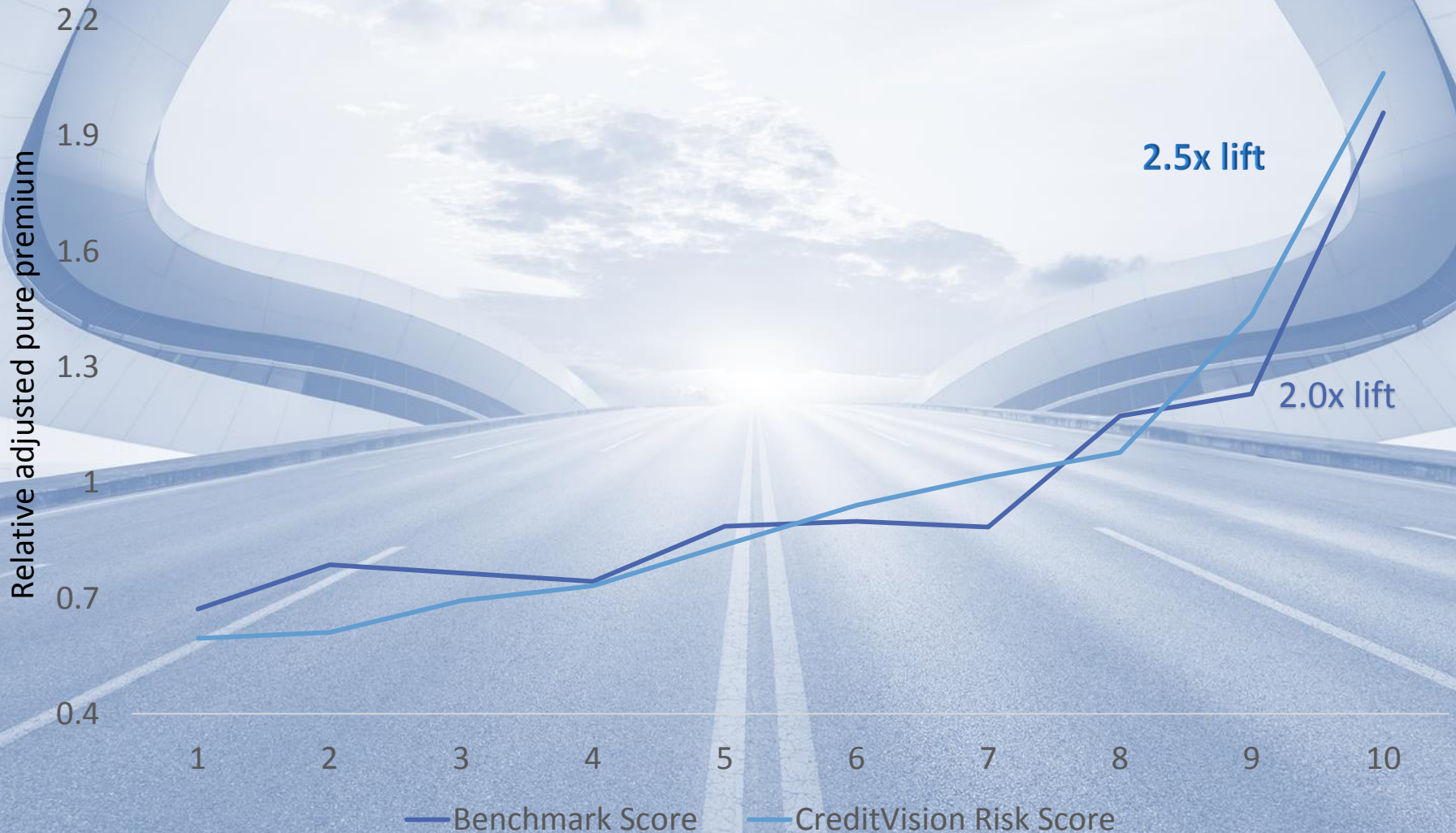


Use of credit data in insurance: recent innovation in trend credit

Use of trended credit offers broader and deeper view into consumer's credit history

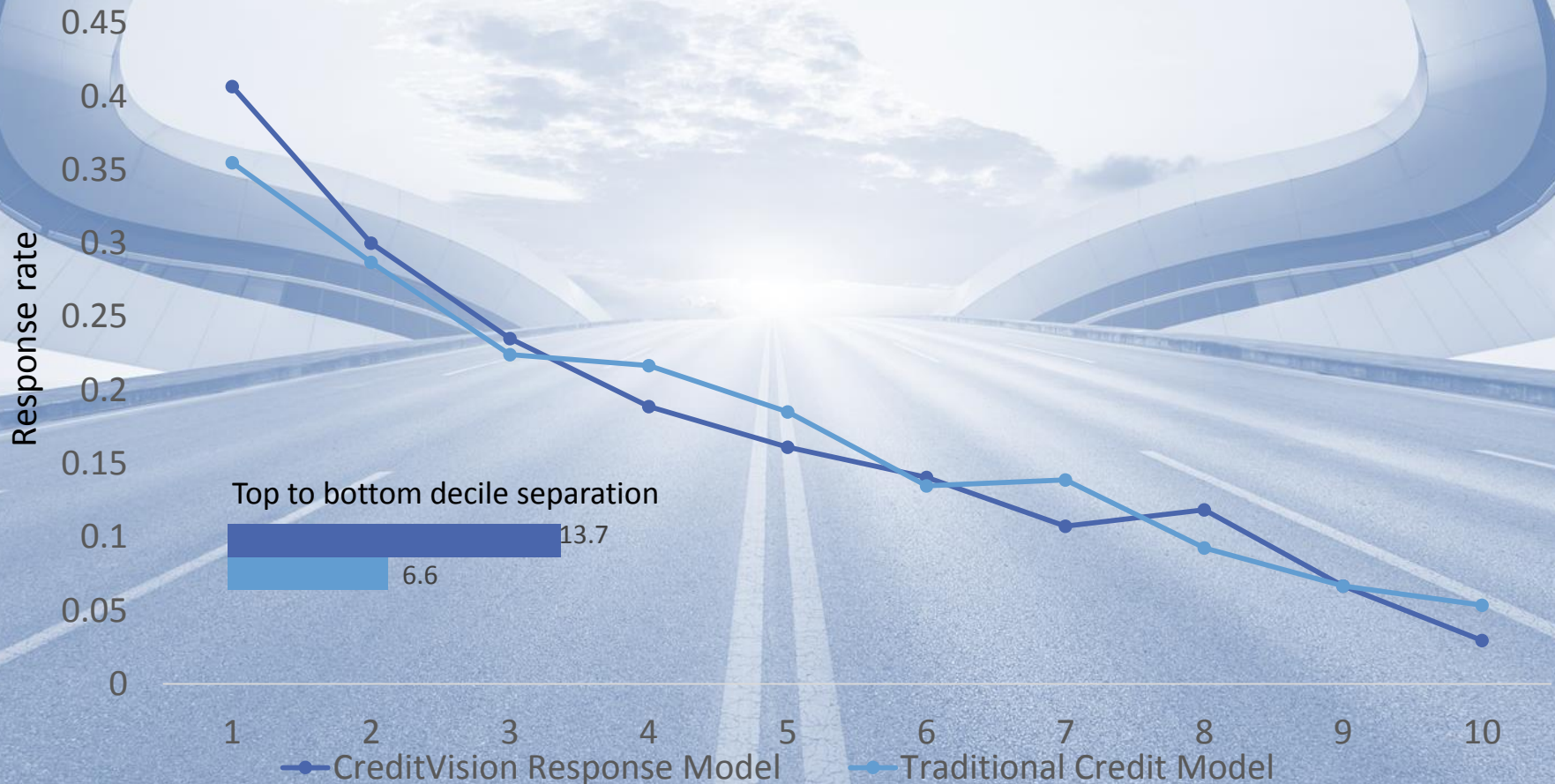


Trended credit offers significant lift over traditional insurance risk scores in benchmark comparison



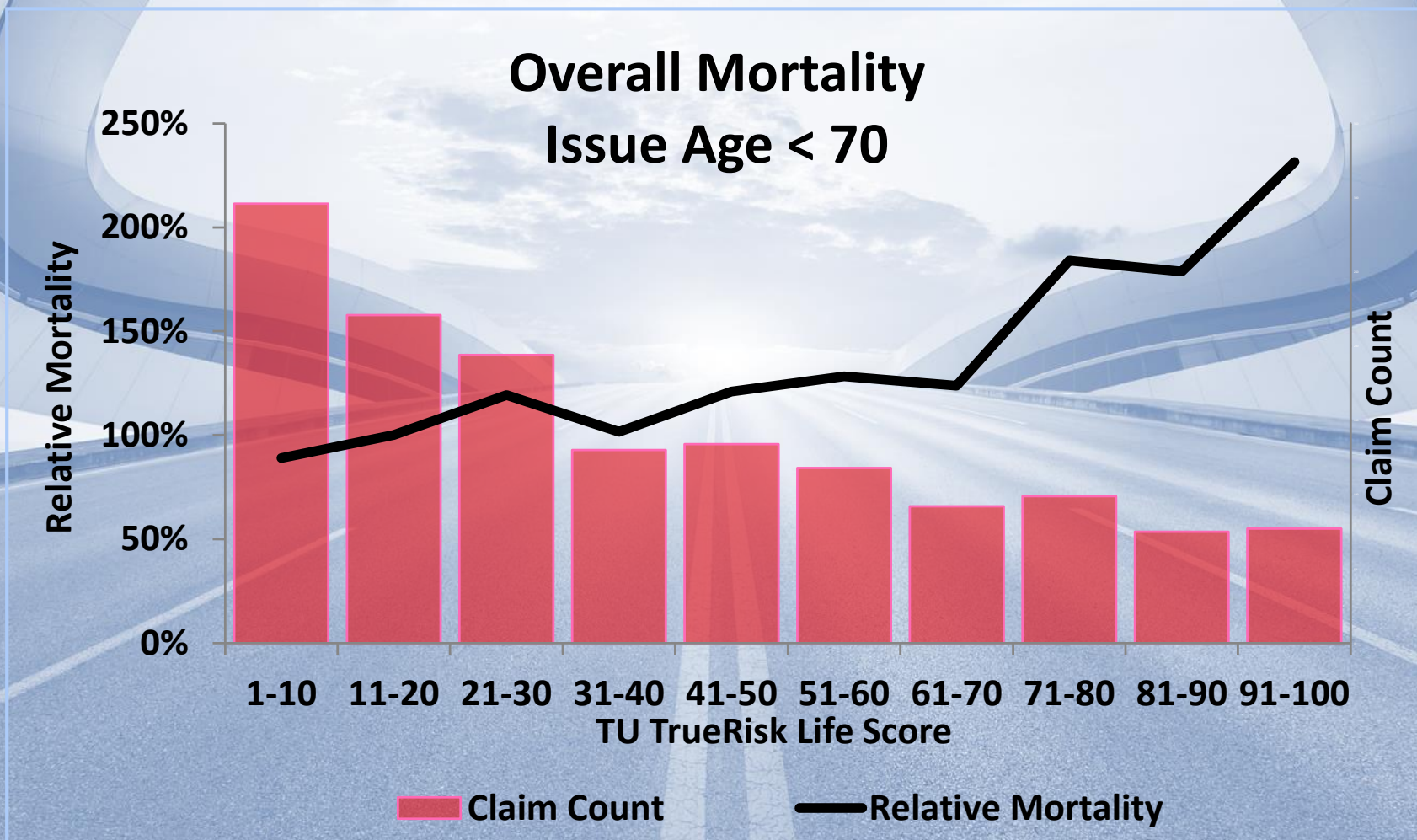
Trended credit can be used to more effectively target high response customers in marketing campaigns

Direct mail response rate by scoring decile



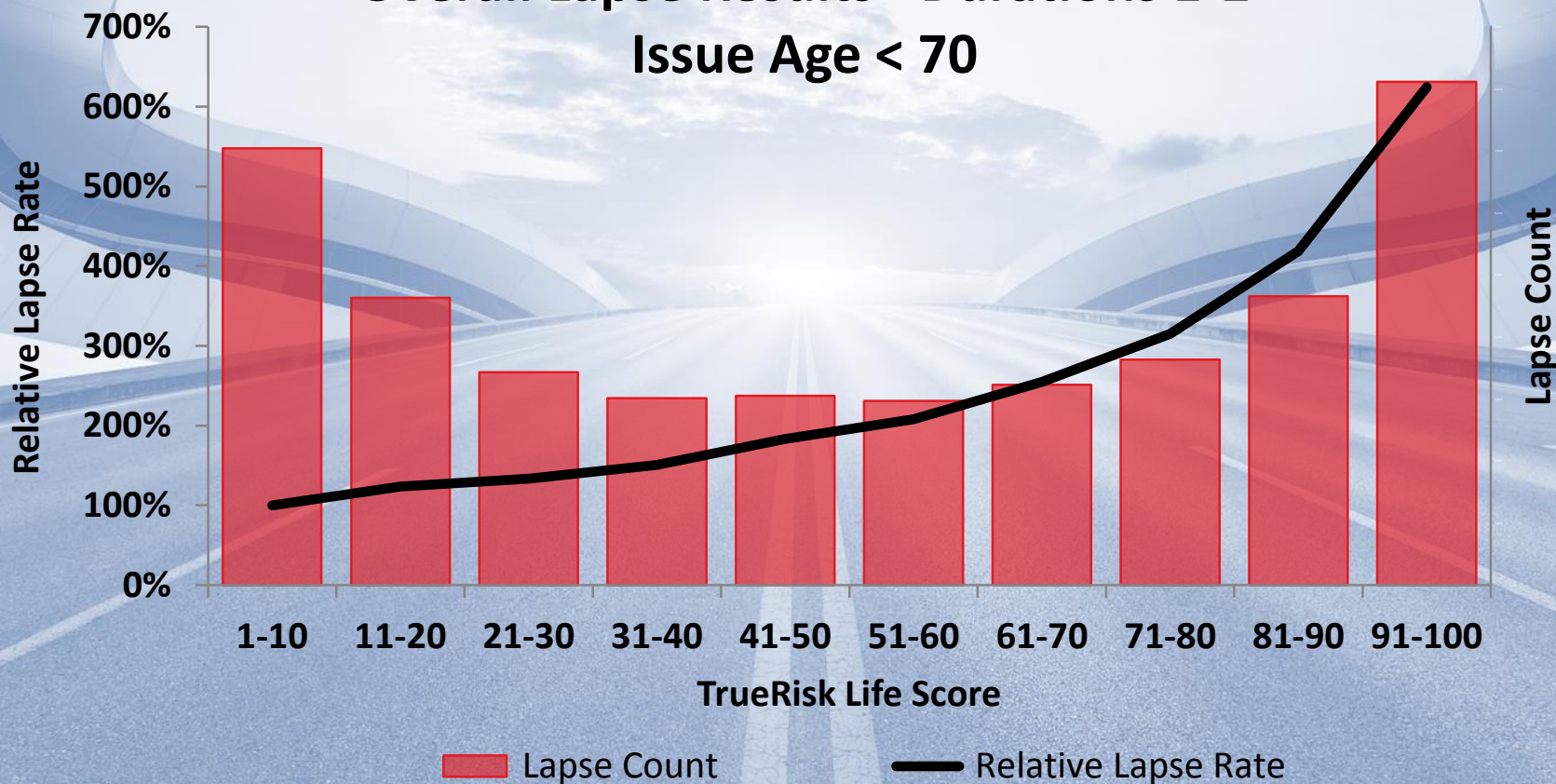
Use of credit data in insurance: Long term insurance

Credit data can be used to effectively predict mortality and lapse risks in life insurance



Credit data can be used to effectively predict mortality and lapse risks in life insurance

Overall Lapse Results - Durations 1-2 Issue Age < 70



Summary

Summary

Use of credit in insurance is an established practice in U.S. and globally

Use of credit data allow insurance industry to compete more effectively and profitably

Trended credit data offers increased insights into consumer risk profiles and behaviors

- **Can be used to improve insurance risk segmentation and more effective targeting**

Credit can be used in life insurance to predict mortality and lapse risk effectively



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