



A Discussion on The Use of Credit Information and Scoring for Insurance

**By
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Fair Credit Reporting Act (FCRA)

- Original statute in 1970
- Major amendments in 1996; effective September 30, 1997
- Requires “consumer reporting agencies” to adopt procedures governing accuracy, relevancy, access to and utilization of “consumer reports”
- Allows consumers access to their files and a complaint procedure





Fair Credit Reporting Act (cont'd)

- Requires users of consumer reports to certify the permissible purpose(s) and use only for certified (permissible) purpose(s); and to give FCRA adverse action notices
- Imposes accuracy-oriented obligations on furnishers of information





Fair Credit Reporting Act (cont')

- Permissible purposes
 - Court order or written instructions of consumer
 - Use in connection with a credit transaction involving the consumer; credit extensions/review of accounts/collections
 - Use for underwriting insurance
 - Employment





Fair Credit Reporting Act

- Permissible purposes (cont'd)
 - Use by person with other legitimate business need for information in connection with a business transaction initiated by the consumer, or to review an account to determine whether the consumer continues to meet the terms of the account





Fair Credit Reporting Act

- Permissible purposes (cont'd)
 - Prescreening: Use for “transaction not initiated by consumer” for “firm offer of credit or insurance”, permit conditioning the offer on verification of information in credit report or application to ensure that consumer still meets the prescreen criteria at time of acceptance; may also condition offer on information in application meeting pre-established criteria, or on the furnishing of required collateral as disclosed in the offer





Statistical Correlation

- Personal property
 - 230,000 policies with claims
 - 1,000,000 policies without claims
 - 11 archives





Statistical Correlation (cont'd)

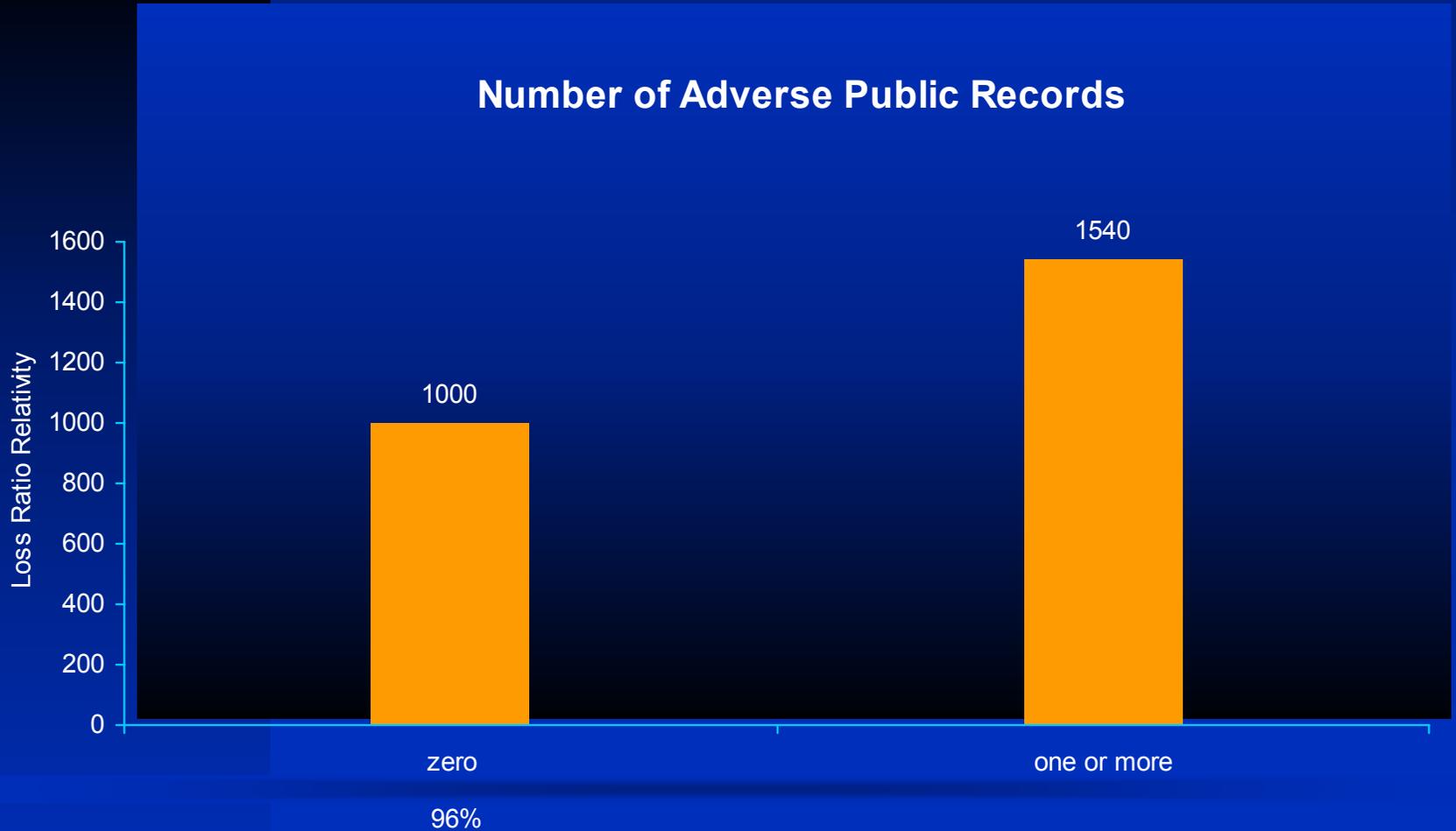
- Homeowner univariate analyses
 - Number of adverse public records
 - Months since most recent adverse public record
 - Number of trade lines 60+ days delinquent in last 24 months
 - Number of collections
 - Number of trade lines opened in the last 12 months





Statistical Correlation

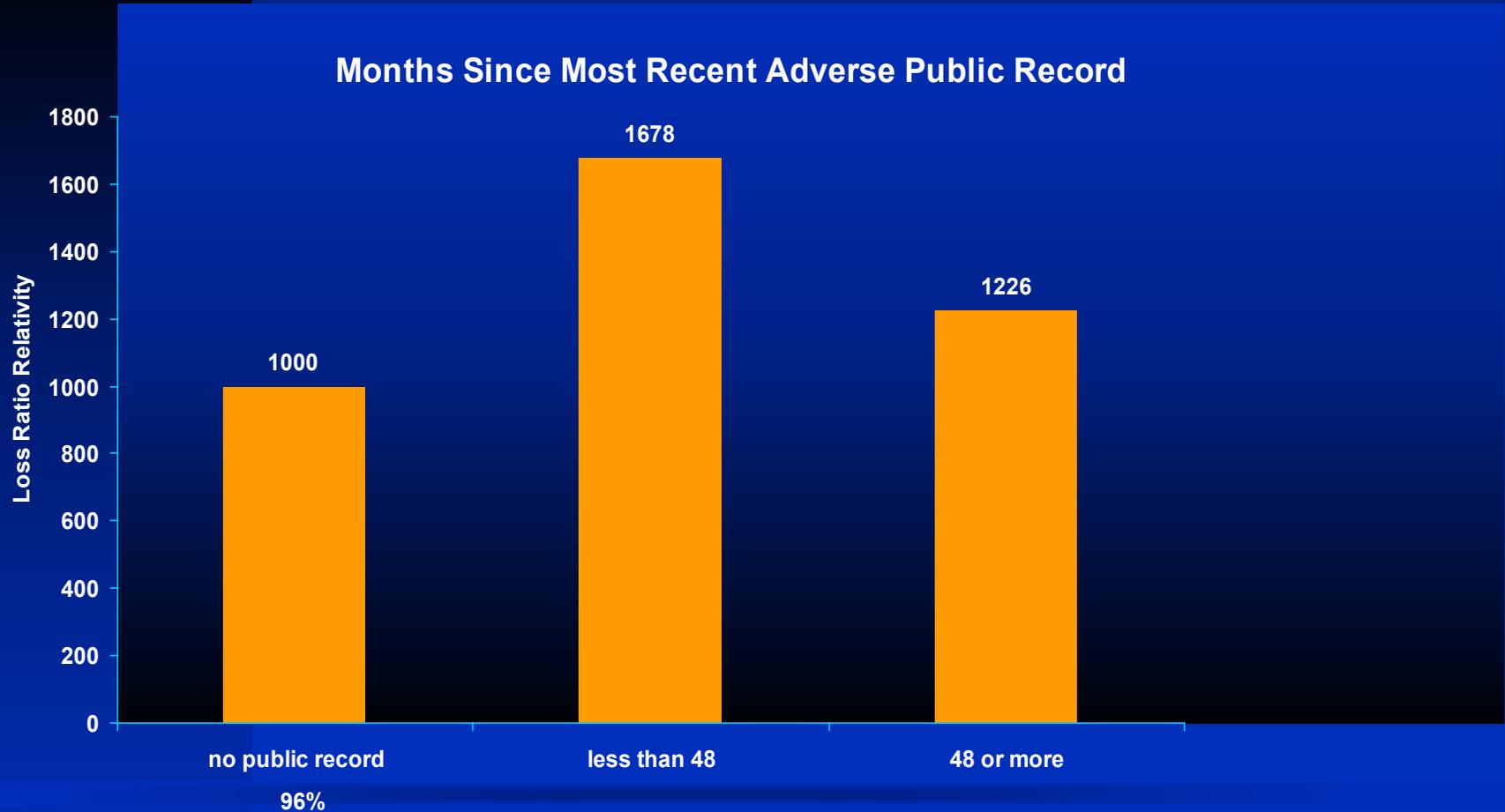
Homeowner HO - 3





Statistical Correlation

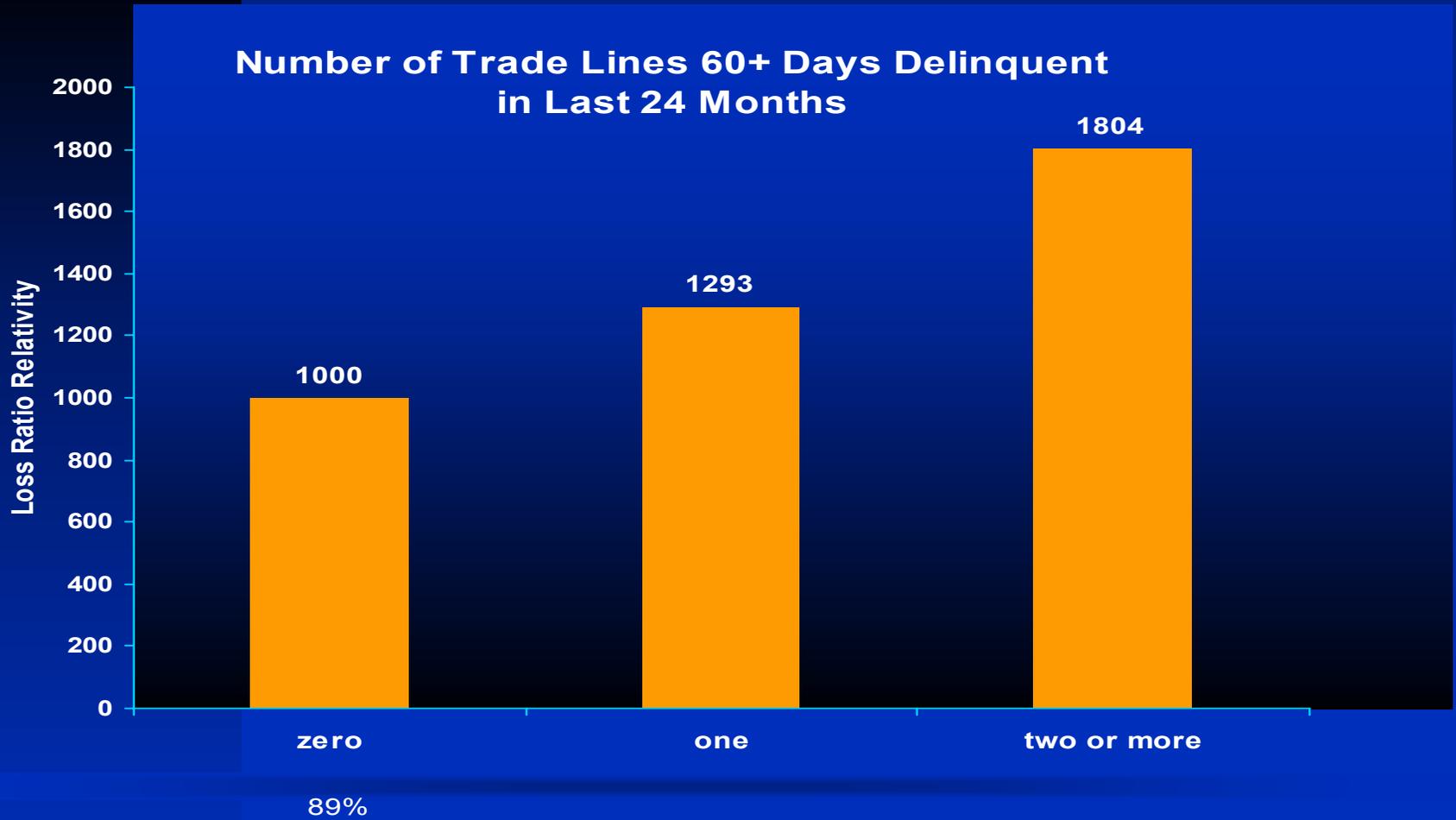
Homeowner HO - 3





Statistical Correlation

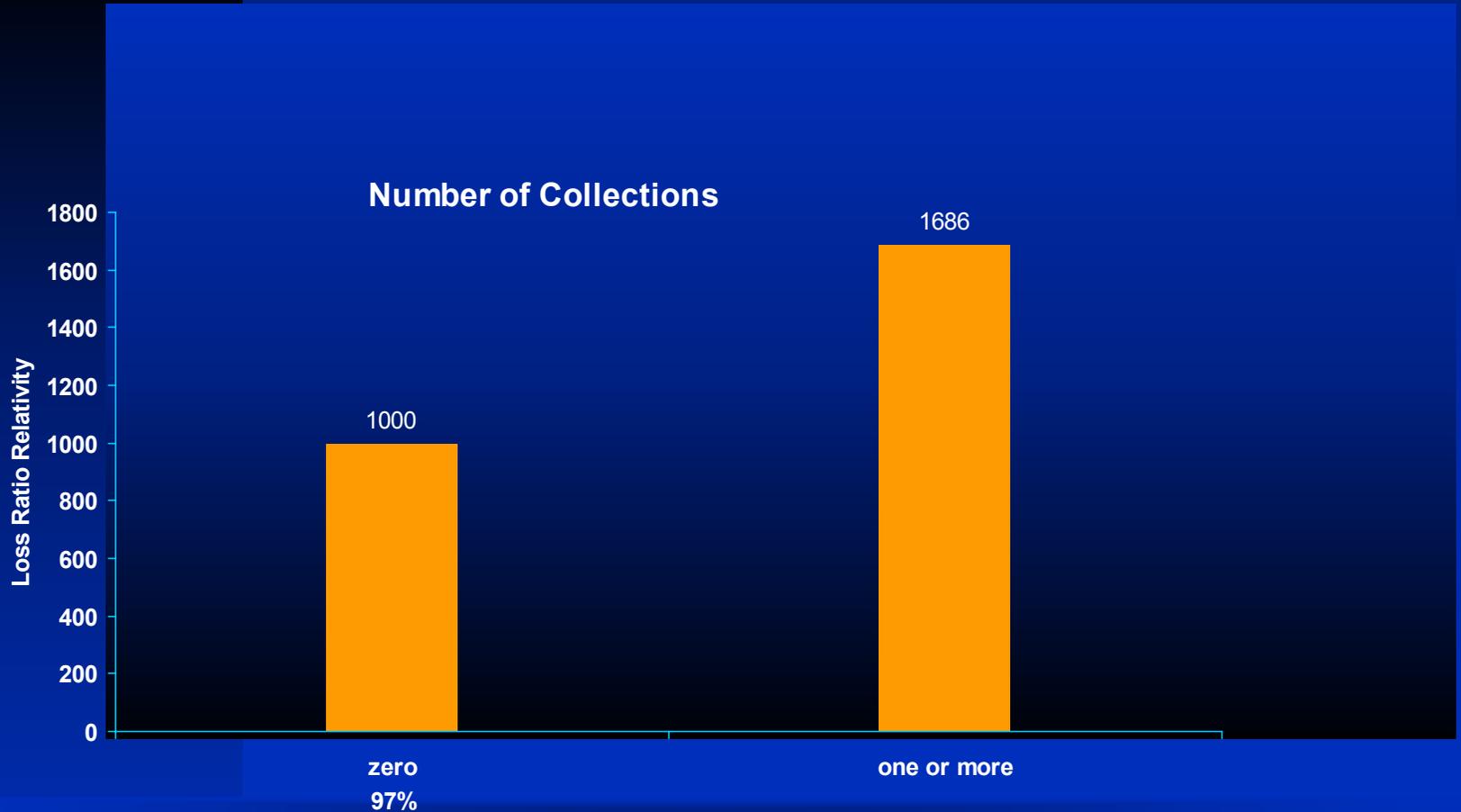
Homeowner HO - 3





Statistical Correlation

Homeowner HO - 3





Statistical Correlation

Homeowner HO - 3





Scoring Definitions

- A score for an insurance risk
 - Is a numeric summary
 - Of the impact on loss ratio relativity
 - Based on a certain set of predictive characteristics of the risk
- A model/scorecard is an algorithm, a table, or a piece of computer software
 - That will calculate a score
 - Based on a certain set of characteristics
 - Provided for a risk





Scoring Definitions (cont'd)

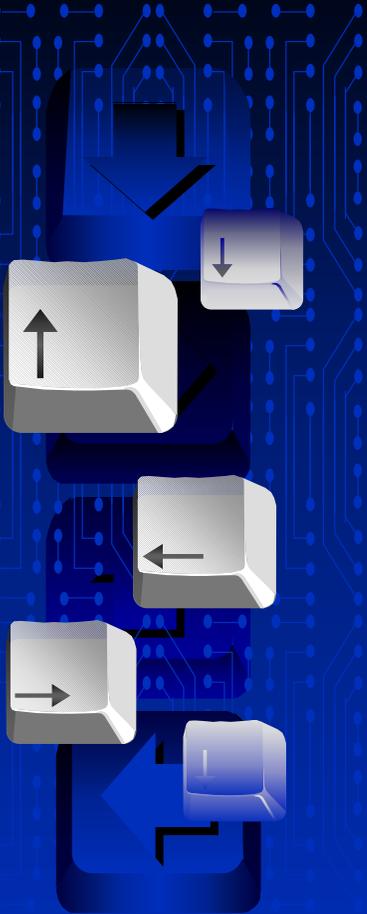
- The 4 reason codes for a score are the 4 reasons that contributed most significantly, positively or negatively, to the calculation of a score





Scorecard Examples

- Simple homeowner scorecard
- Overlapping characteristics
 - weights adjusted





Scorecard Examples

Simple Homeowner Scorecard

Number Adverse Public Records

zero
30

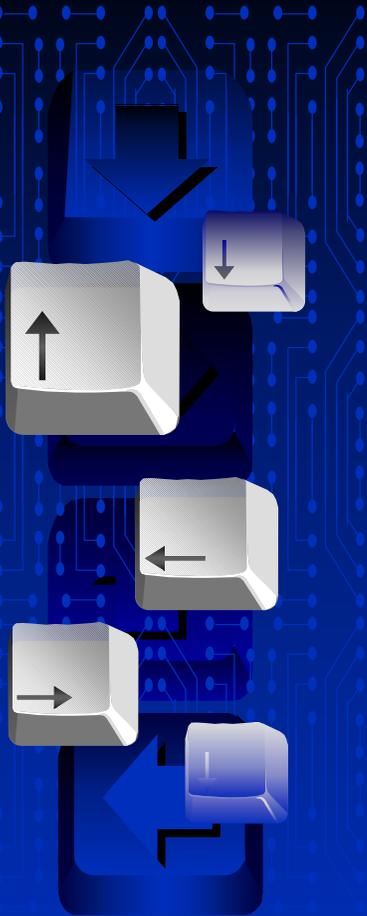
one or more
0

Months Since Most Recent Adverse Public Record

no public record
30

less than 48
0

48 or more
10





Scorecard Examples

Simple Homeowner Scorecard

Number of Trade Lines 60+ Days Delinquent in Last 24 Months

zero

one

two or more

25

10

0

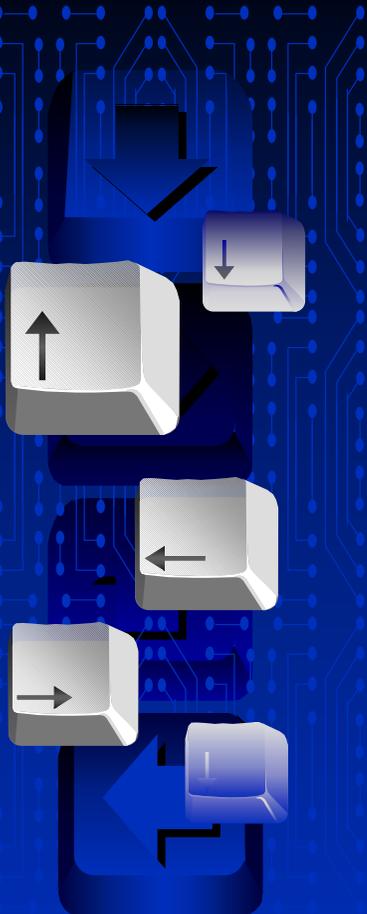
Number of Collections

zero

one or more

20

0



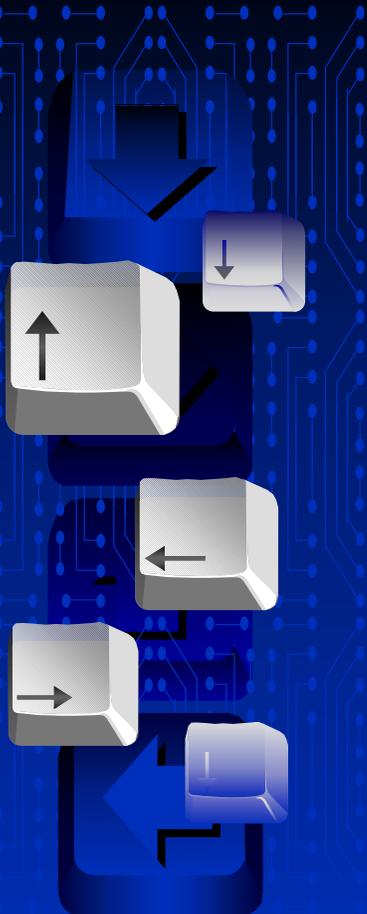


Scorecard Examples

Simple Homeowner Scorecard

Number of Trade Lines Opened on the Last 12 Months

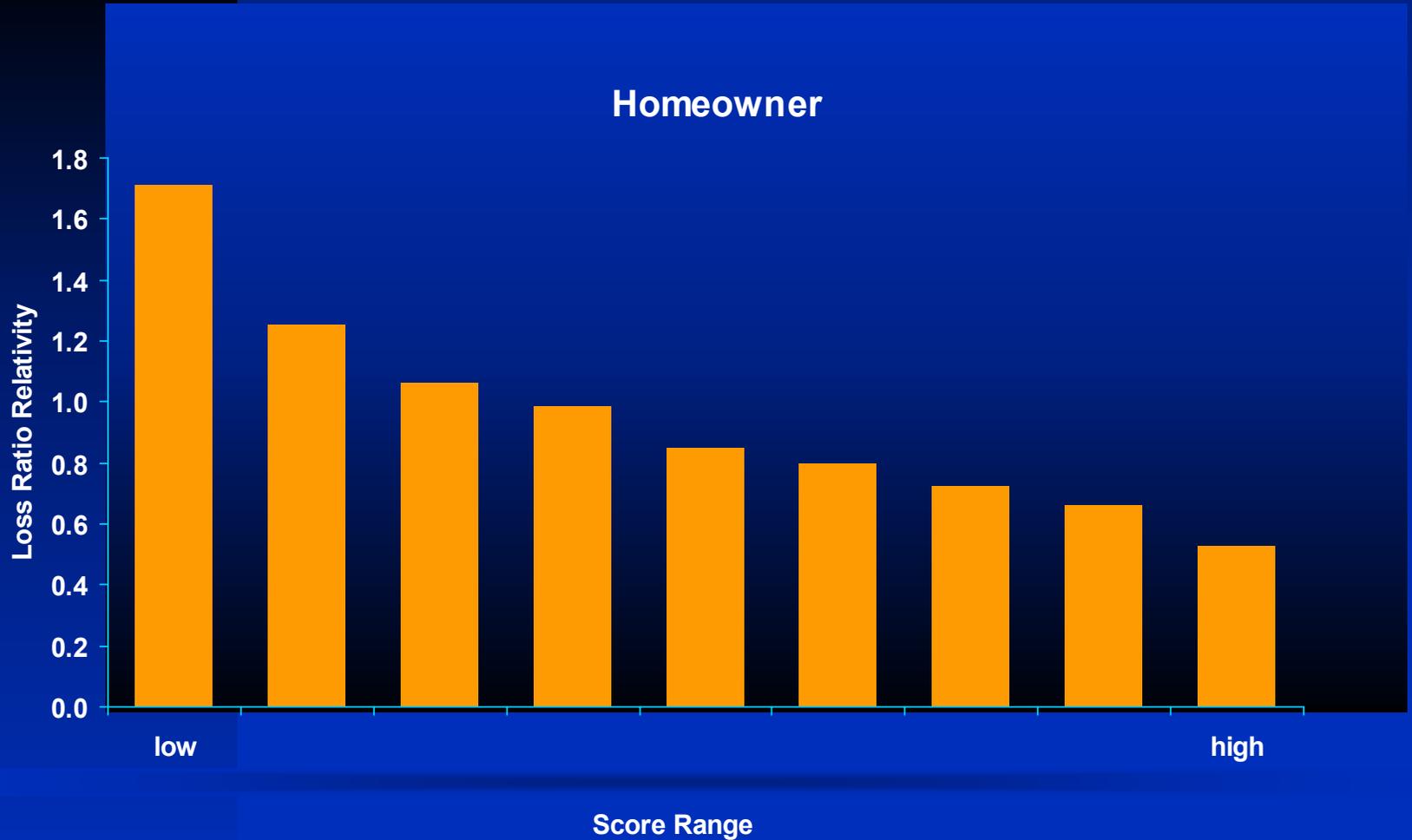
zero	one	two	three	four or more
20	10	5	3	0





Predictiveness

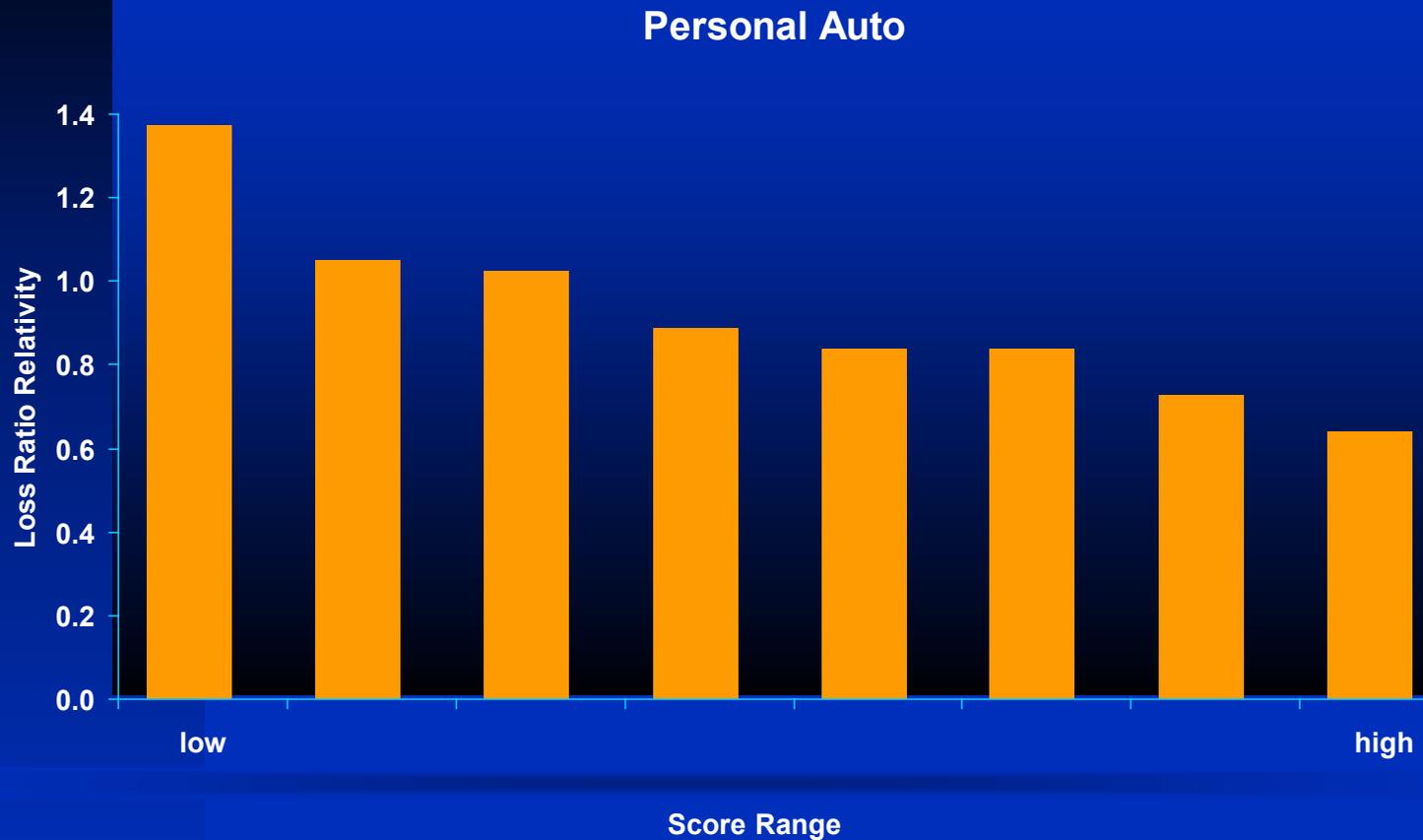
Rank Ordering





Predictiveness

Rank Ordering





Predictiveness

- Low scores correlate with high loss ratio relativities
- High scores correlate with low loss ratio relativities
- Validated by
 - Insurers
 - Tillinghast





Fairness

- Data Elements Used
 - Balances
 - Collections
 - Delinquencies
 - Inquiries
 - Limits
 - Payment Dates
 - Payment Due Dates
 - Public Records
 - Trade Line Open and Close Dates
 - Trade Line Types





Fairness (cont'd)

- Data Elements Not Used
 - Age
 - Disability
 - Gender
 - Health Status
 - Income
 - Location
 - Marital Status





Fairness

- Data Elements Not Used (cont'd)
 - Nationality
 - Net Worth
 - Occupation
 - Race
 - Religion
 - Sexual Orientation
 - Zip Codes





Fairness (cont'd)

- Income Study by an Insurer
 - Flat relationship between income levels and scores
- Virginia Bureau of Insurance
 - 'Use of Credit Reports in Underwriting', 1999 report
 - To the Senate Commerce and Labor Committee of the the General Assembly of Virginia
 - "... Nothing in this analysis leads the Bureau to the conclusion that income or race alone is a reliable predictor of credit scores thus making the use of credit scoring an **ineffective** tool for **redlining**. ..."





Usage of Insurance Bureau Scores

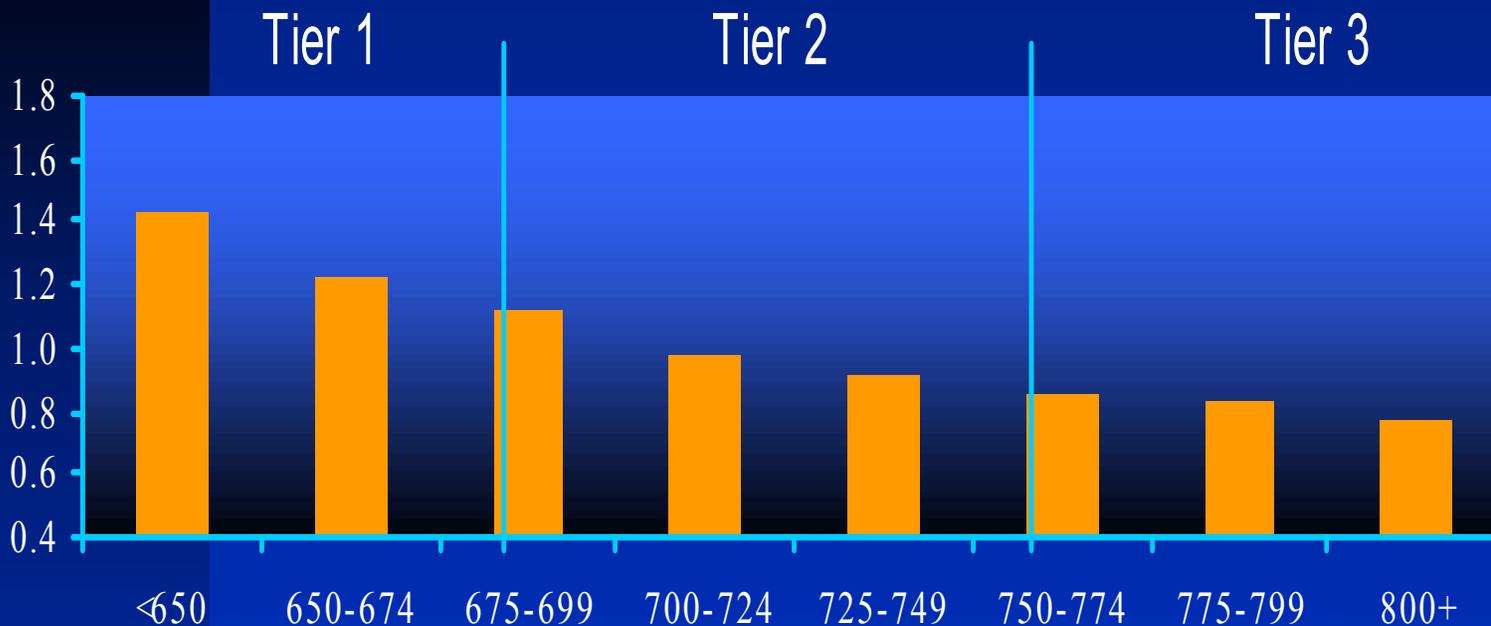
- Facilitate
 - tier placement



Illustration of Tier Placement



Loss Ratio Relativities



Score Range



665-685
referral



740-760
referral



Questions & Answers



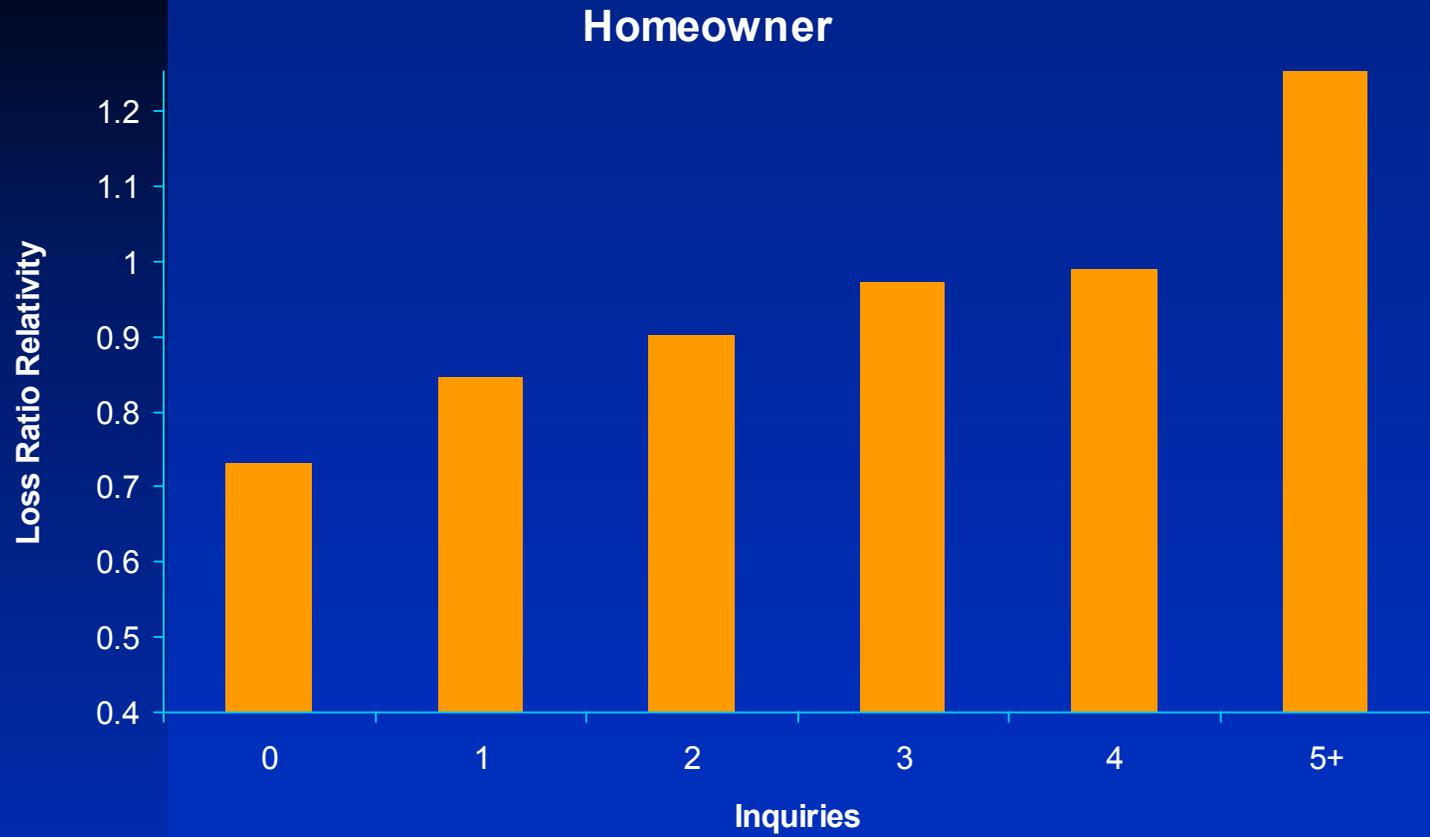
Accuracy

- FCRA mandate correction process
- 1992 Arthur Anderson Study
 - Commissioned by Associated Credit Bureaus
 - Based on 15,202 declines
 - 2% dispute on declines
- MVR accepted by most regulators
 - higher error rates



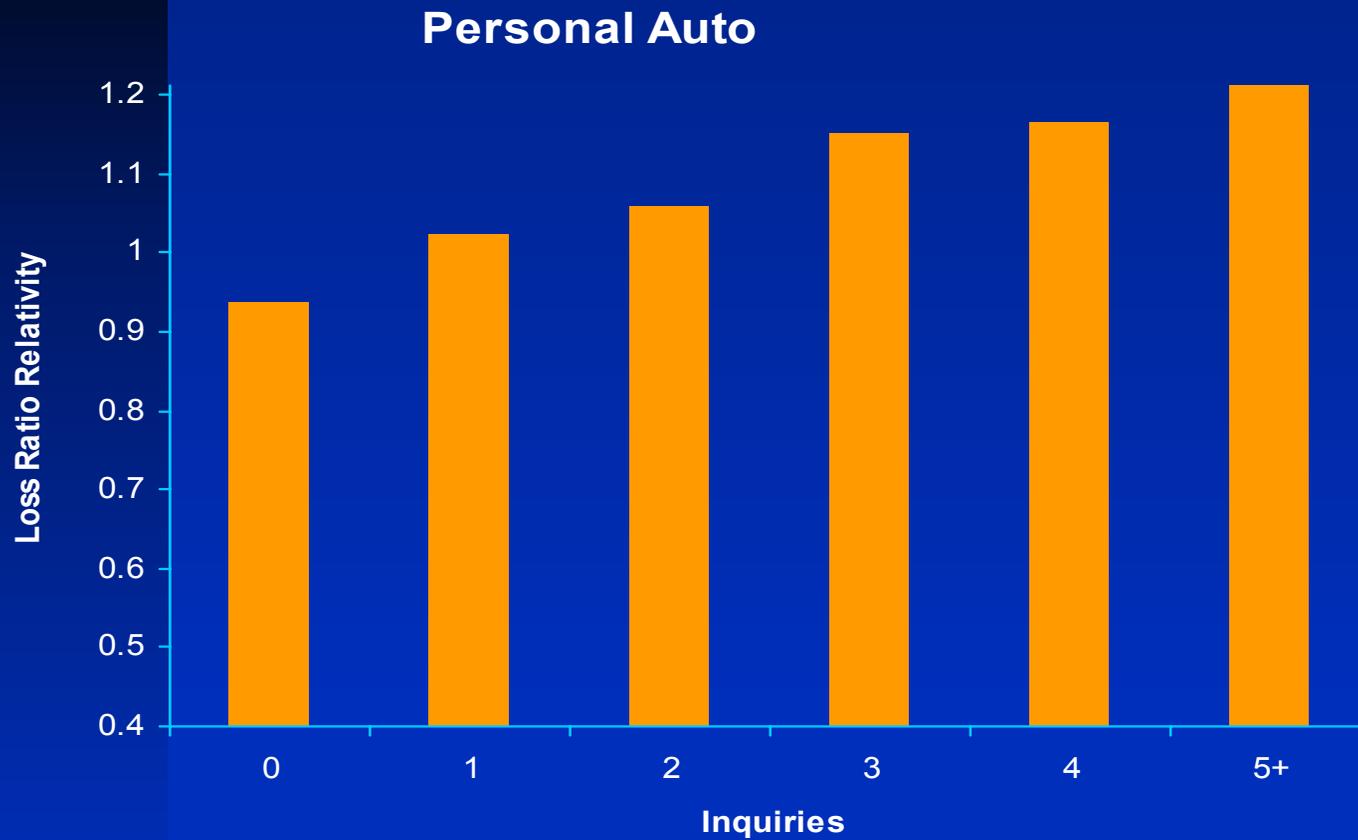


Inquiries





Inquiries





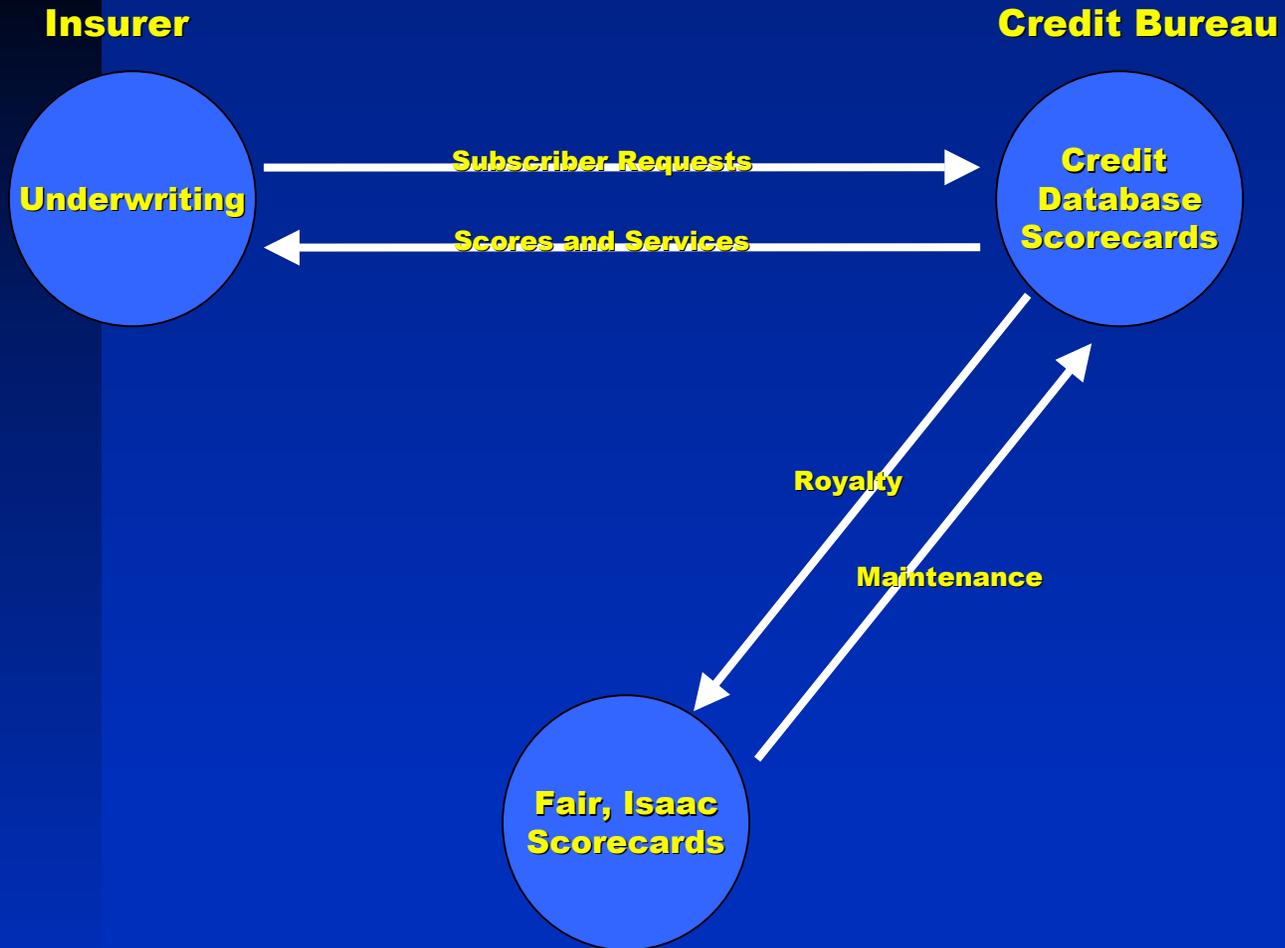
Inquiries

- Predictive of loss ratio relativities
- Fair, Isaac includes consumer-initiated inquiries
- Fair, Isaac excludes inquiries for
 - Marketing / prescreening
 - Account reviews
 - Insurance





Current Operations





Statistical Correlation (cont'd)

- Personal auto
 - 350,000 policies with claims
 - 1,000,000 policies without claims
 - 6 archives





Statistical Correlation (cont'd)

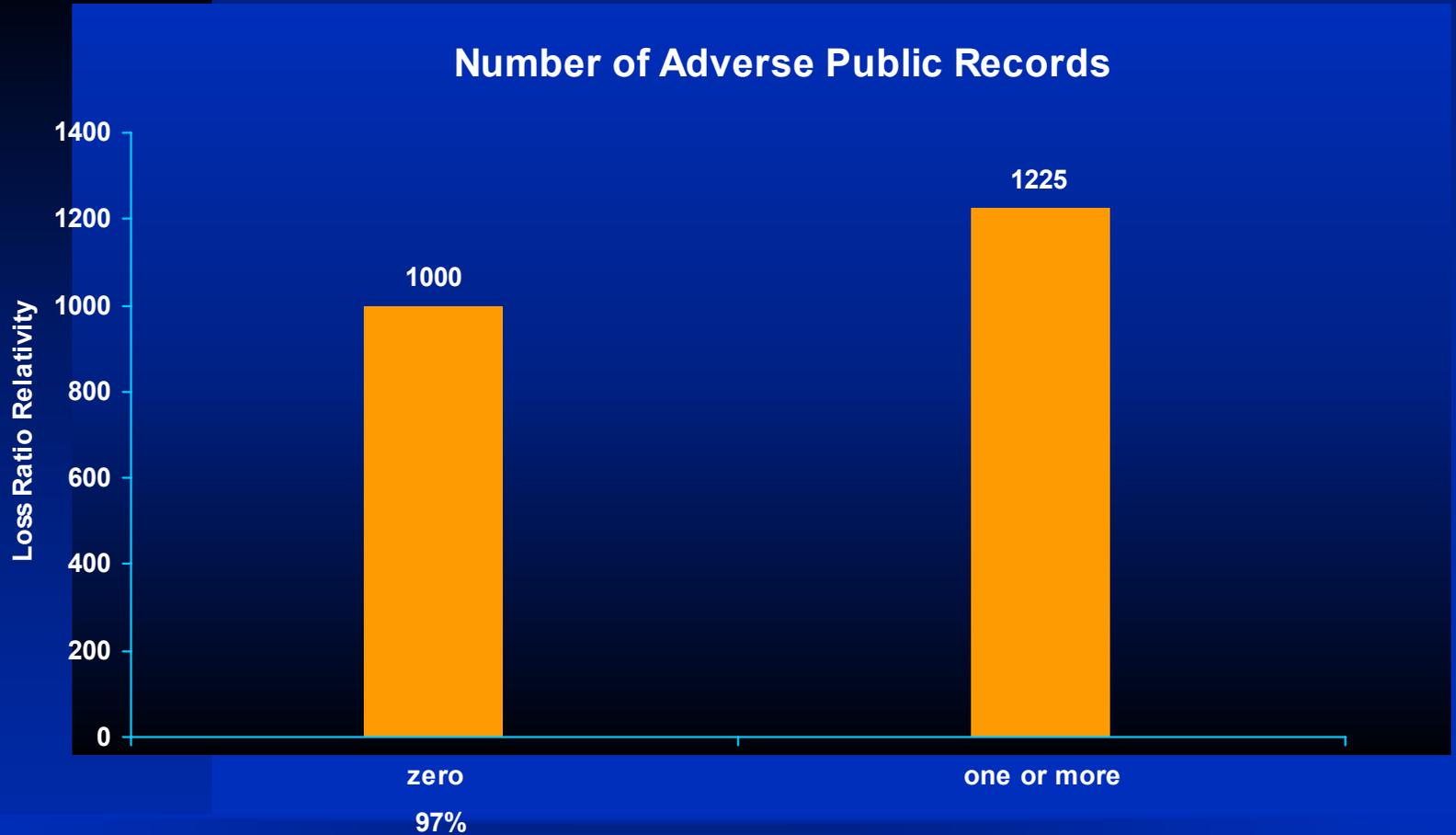
- Personal auto univariate analyses
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 - Number of trade lines opened in the last 12 months





Statistical Correlation

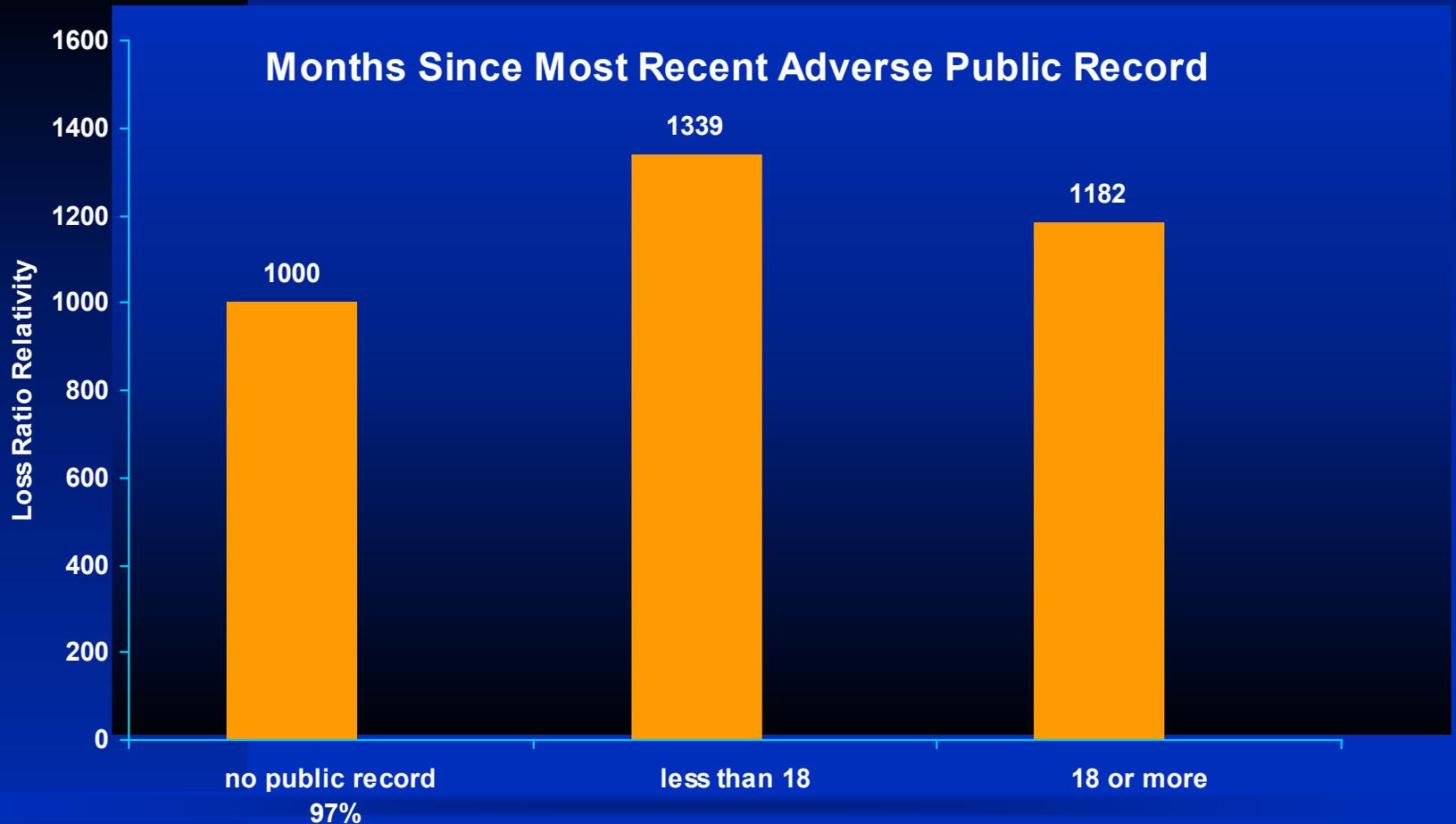
Personal Automobile





Statistical Correlation

Personal Automobile

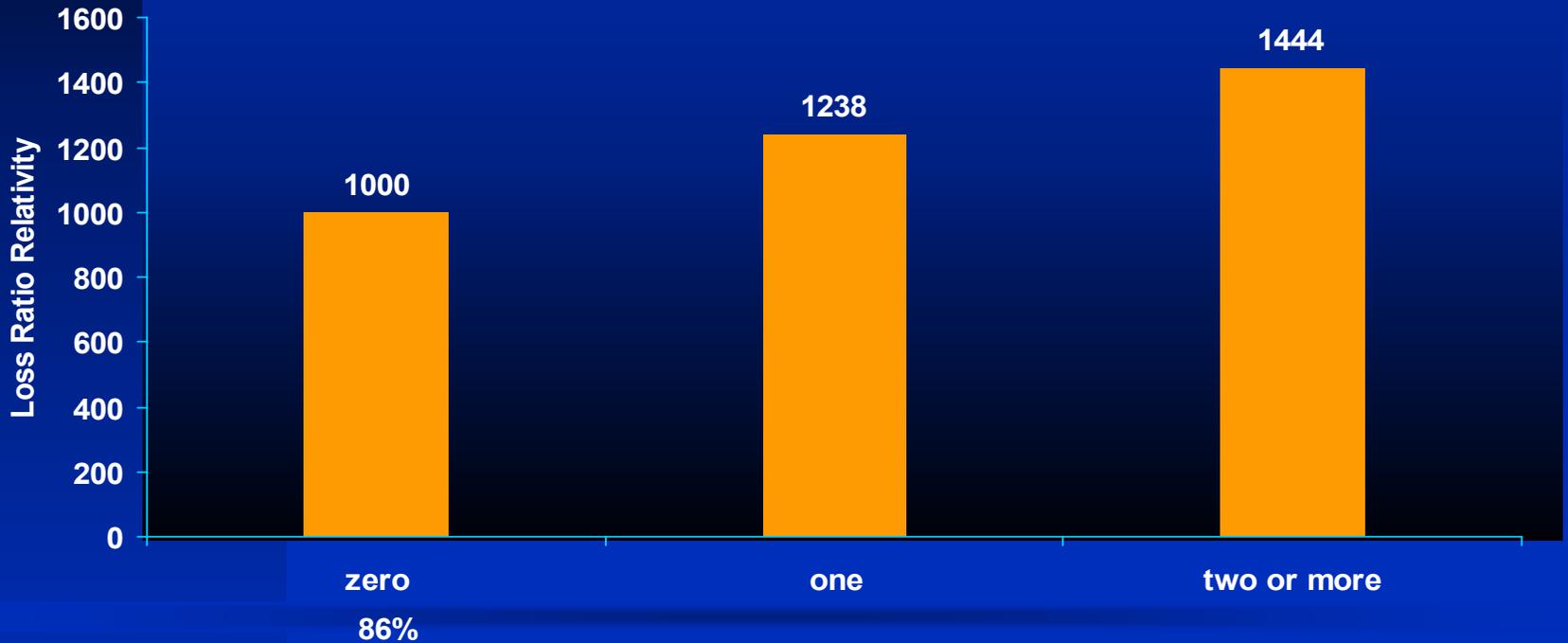




Statistical Correlation

Personal Automobile

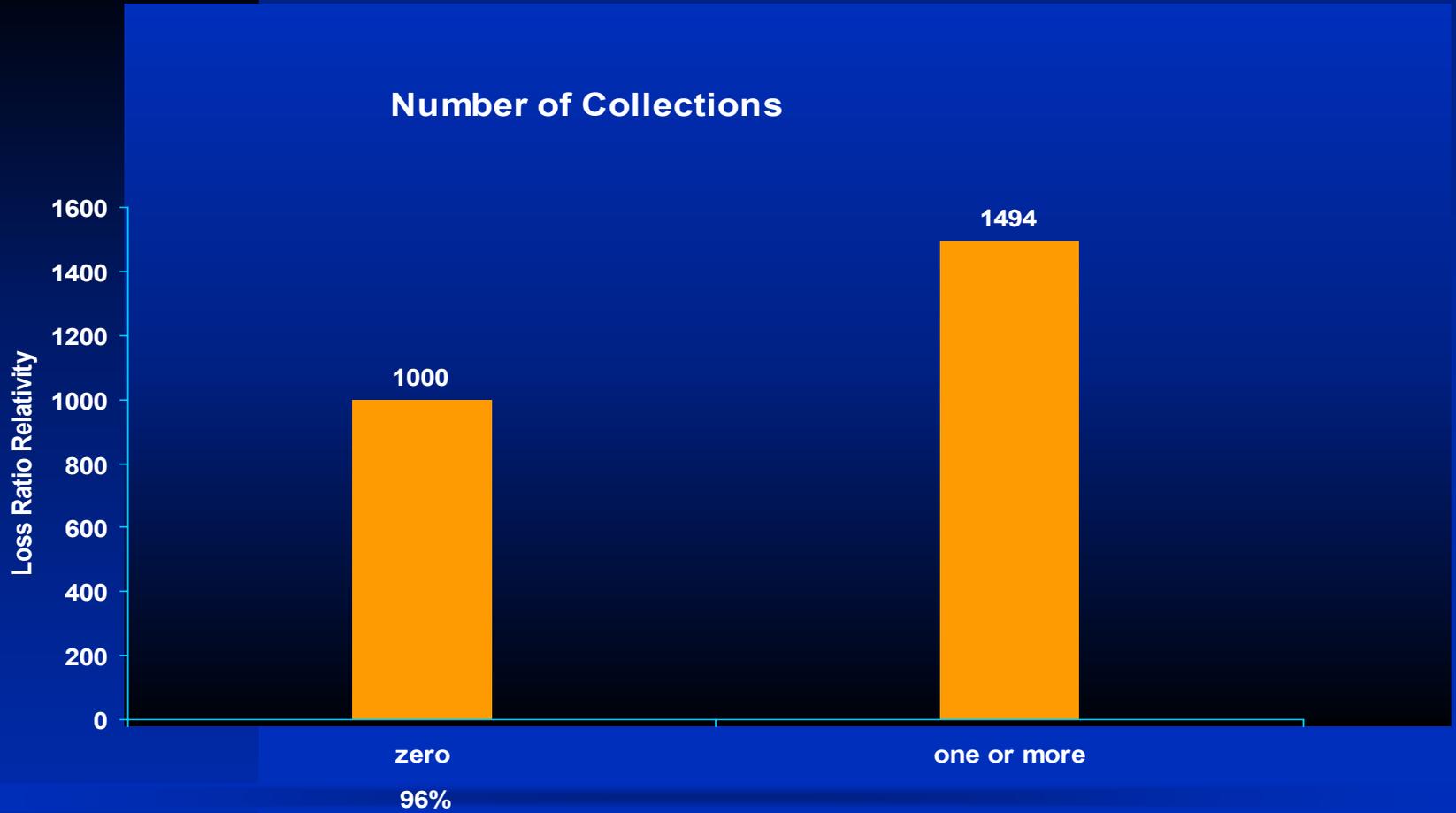
Number of Trade Lines 60+ Days Delinquent
in Last 24 Months





Statistical Correlation

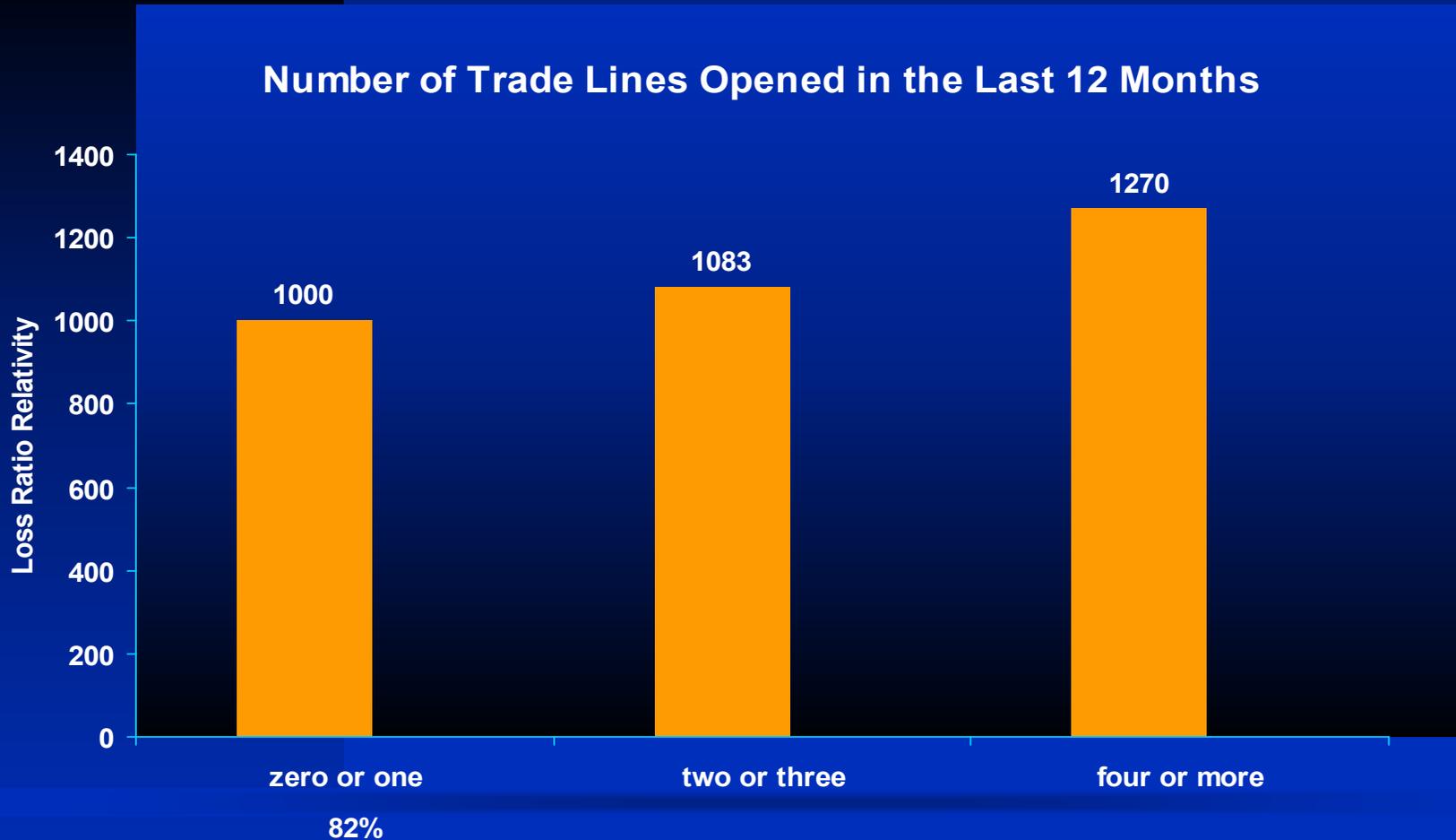
Personal Automobile





Statistical Correlation

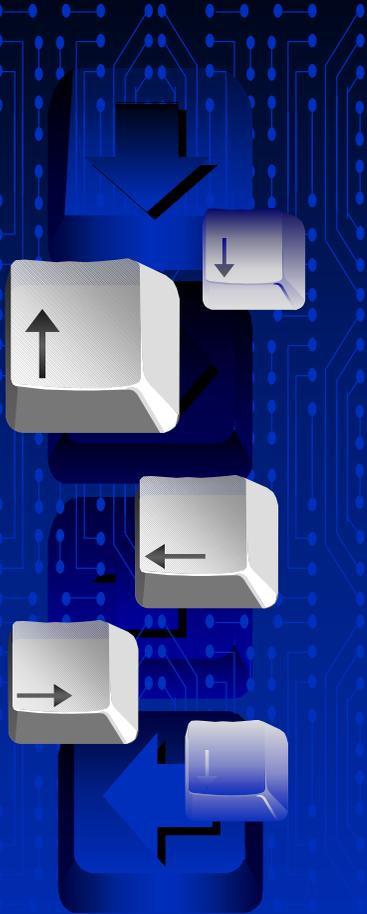
Personal Automobile





Results

- Insurance Bureau Scores Vs. Loss Ratio Relativities
 - Multivariate analysis - homeowner (HO1, HO2, HO3, HO4, HO6, dwelling fire)
 - Multivariate analysis - personal auto (non-standard, standard minimum limits, standard above minimum limits, preferred minimum limits, preferred above minimum limits)
 - Risk ranking





Results

- Insurance Bureau Score Vs. Loss Ratio Relativities (cont'd)
 - Development vs. validation datasets
 - Validation (handouts)
 - Tillinghast study; Conclusion, page 5;
“...The data for all companies included in this study except Company 2 indicates at least 99% probability that a relationship exists. The data for Company 2 indicates a 92% probability that there is a relationship. A layman’s interpretation of this result could be that it is very likely there is a correlation between Insurance Bureau Scores and loss ratio relativities.”

