



ANNUAL MEETING

Smarter Segmentation for the Lazy Actuary

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Agenda

- Questions
- Interact with your data
- Using the machine
- Special considerations
- Conclusions

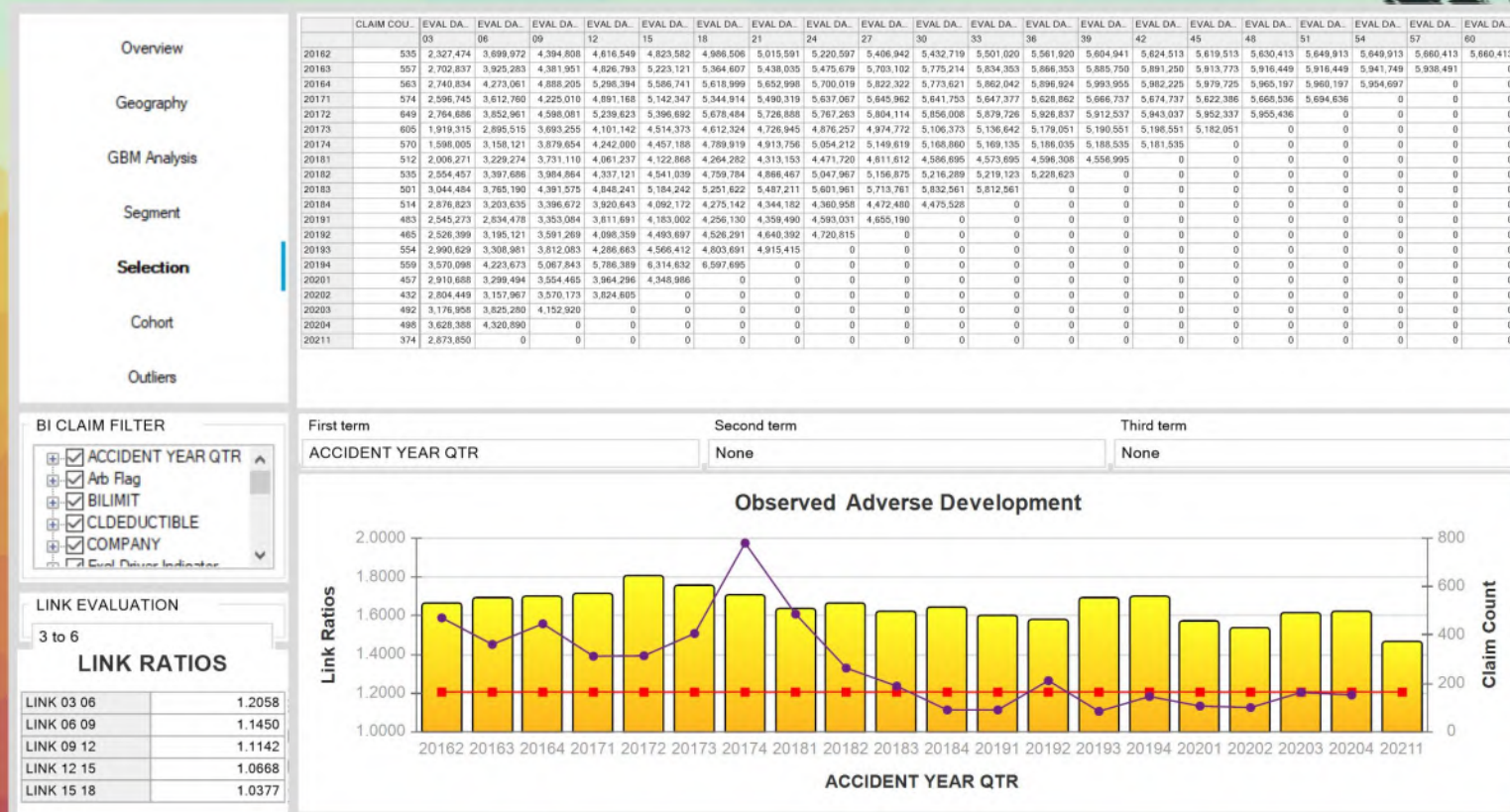


Questions

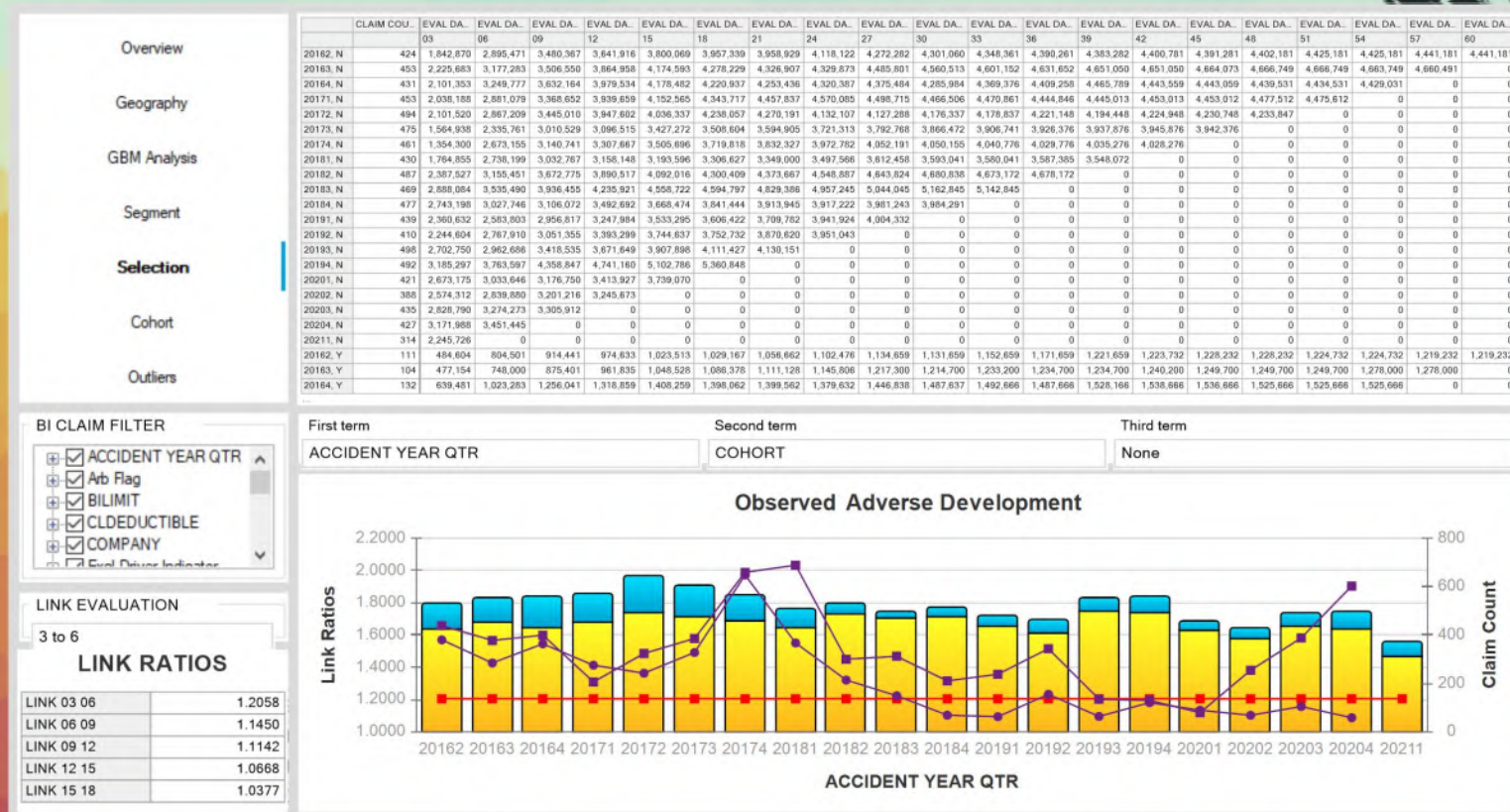
- How homogenous is the underlying data?
- Is there observed adverse development?
- What are the drivers of the observed adverse development?
- Are there outliers?



Start with the Answer

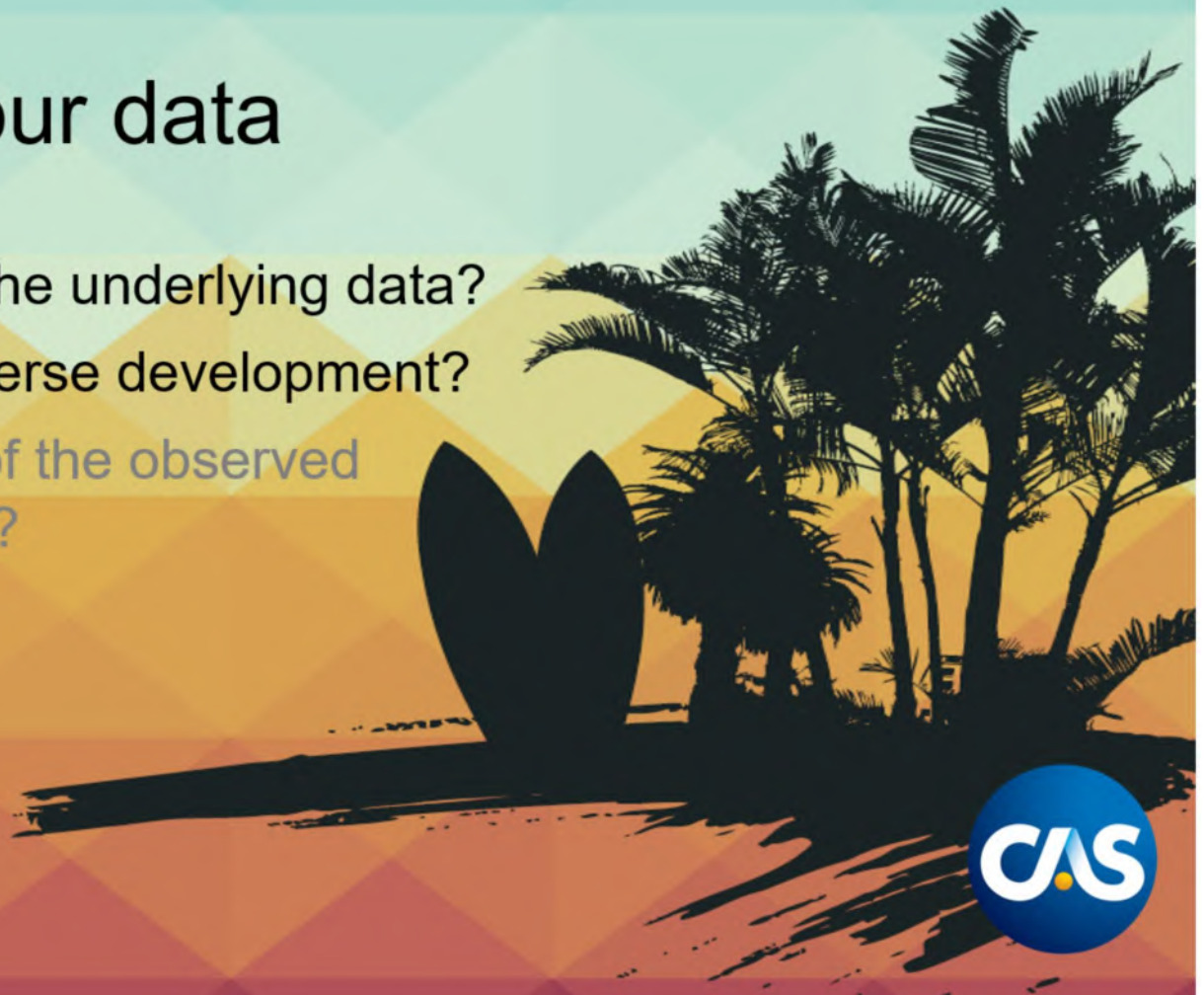


Start with the Answer

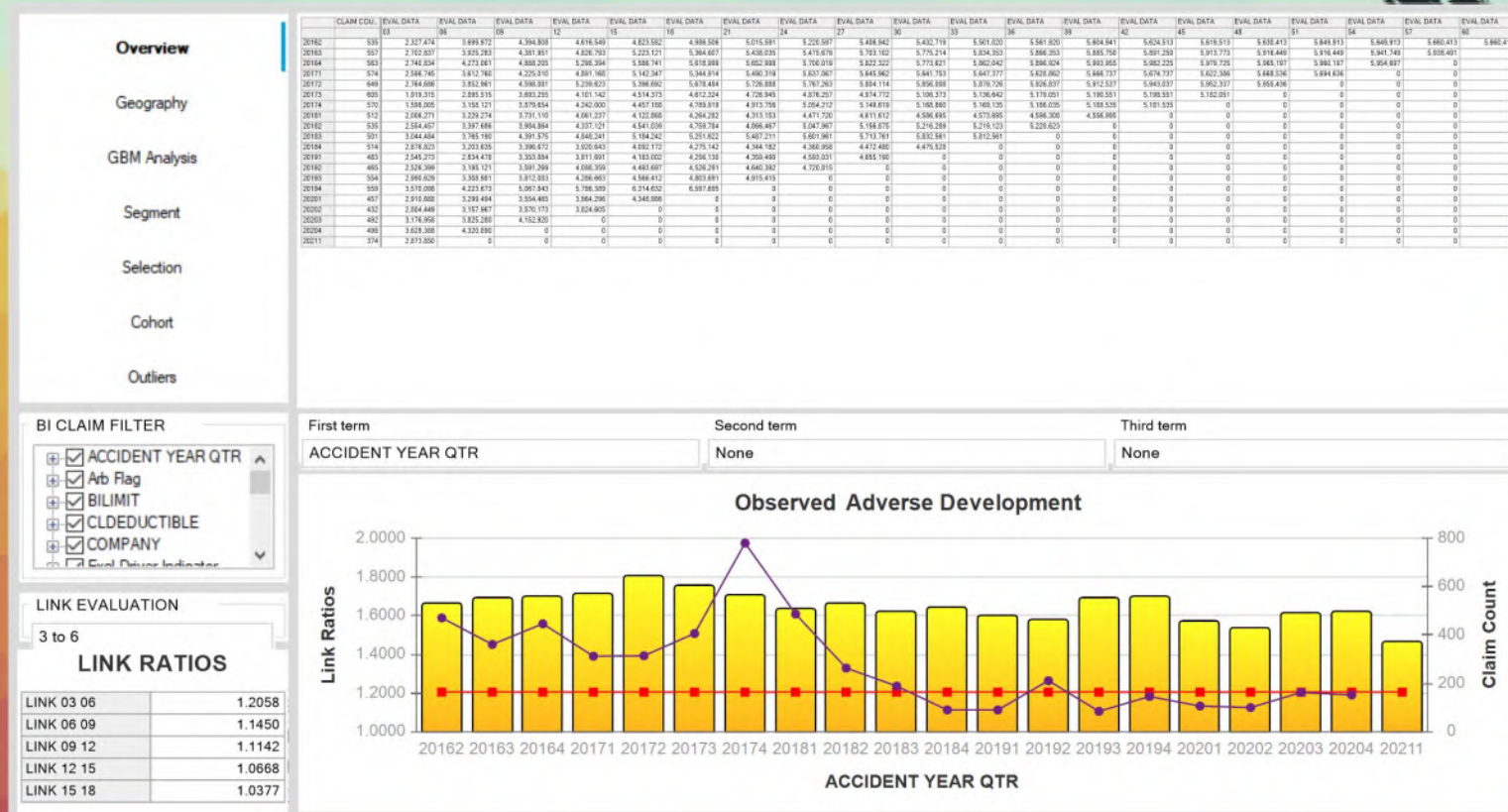


Interact with your data

- How homogenous is the underlying data?
- Is there observed adverse development?
- What are the drivers of the observed adverse development?
- Are there outliers?



Interact with your data: "Find the pattern"

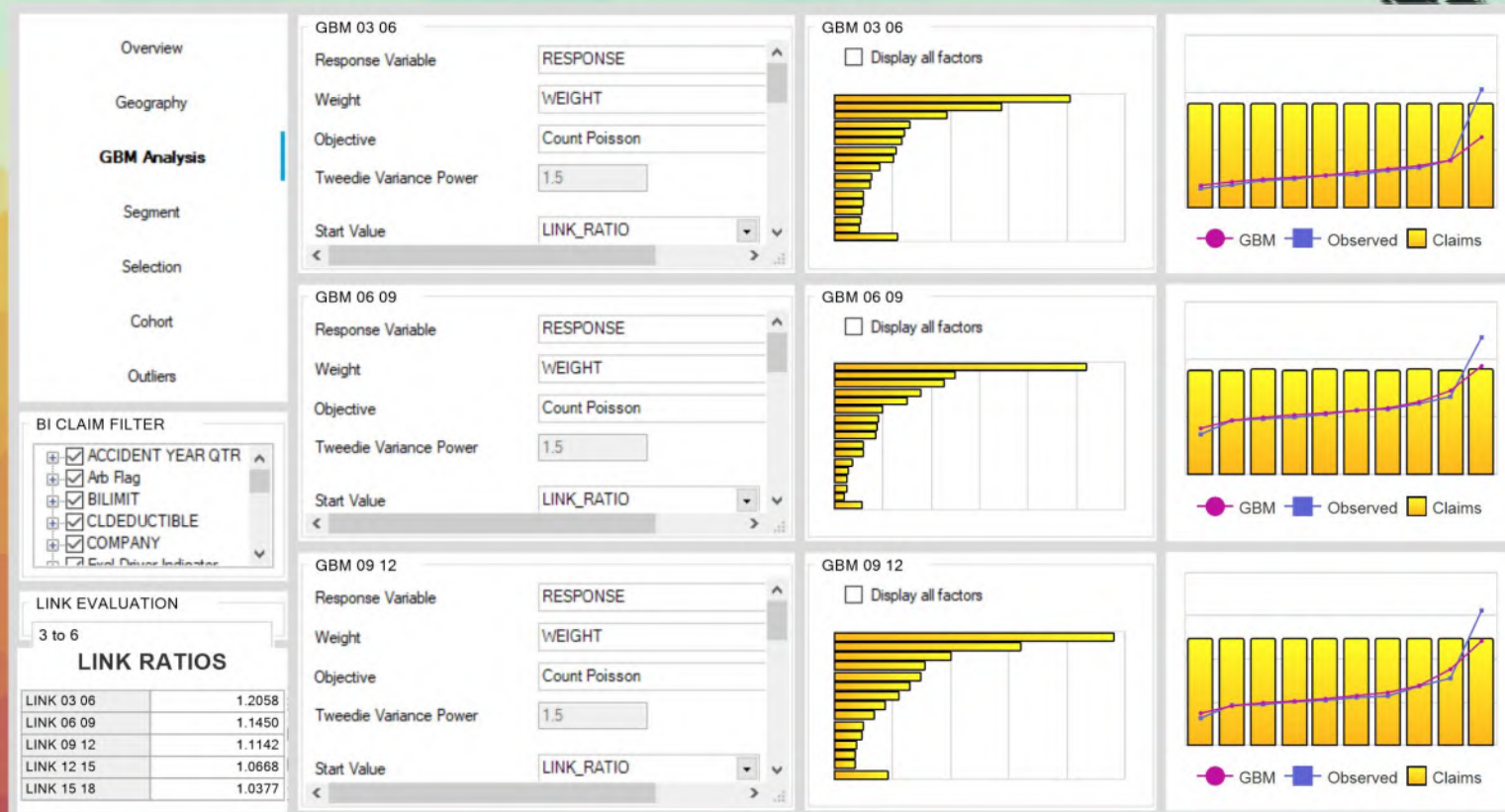


Using the Machine

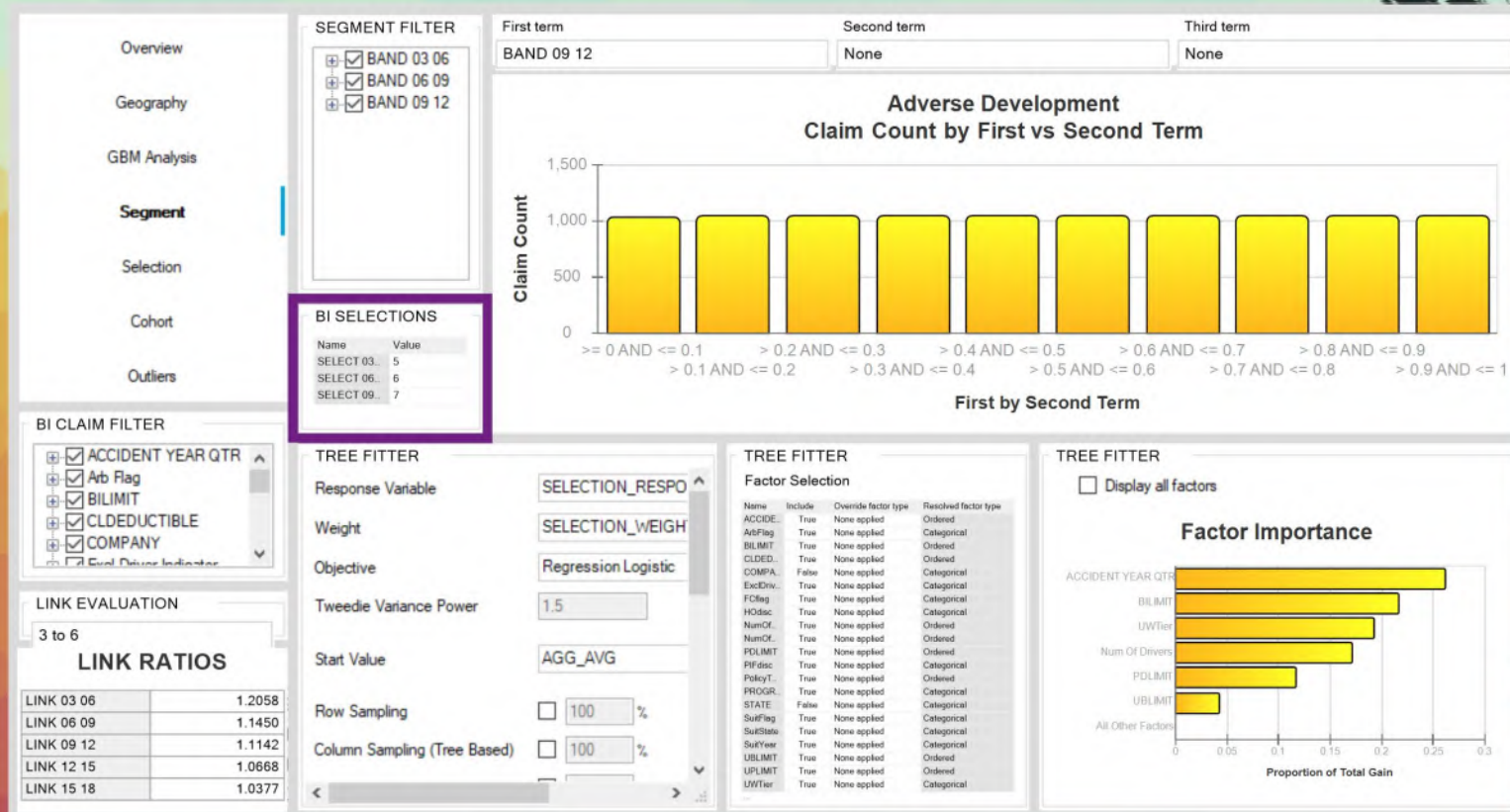
- Standard approach has the analyst slice and dice data to find permutations of characteristics that create the pattern of observed adverse development
- Machine approaches require specification of what to look for and has the algorithm search for what drives the results



Using the Machine: “Identify the pattern”



Using the Machine: “Identify the pattern”



Special Considerations

- How homogenous is the underlying data?
- Is there observed adverse development?
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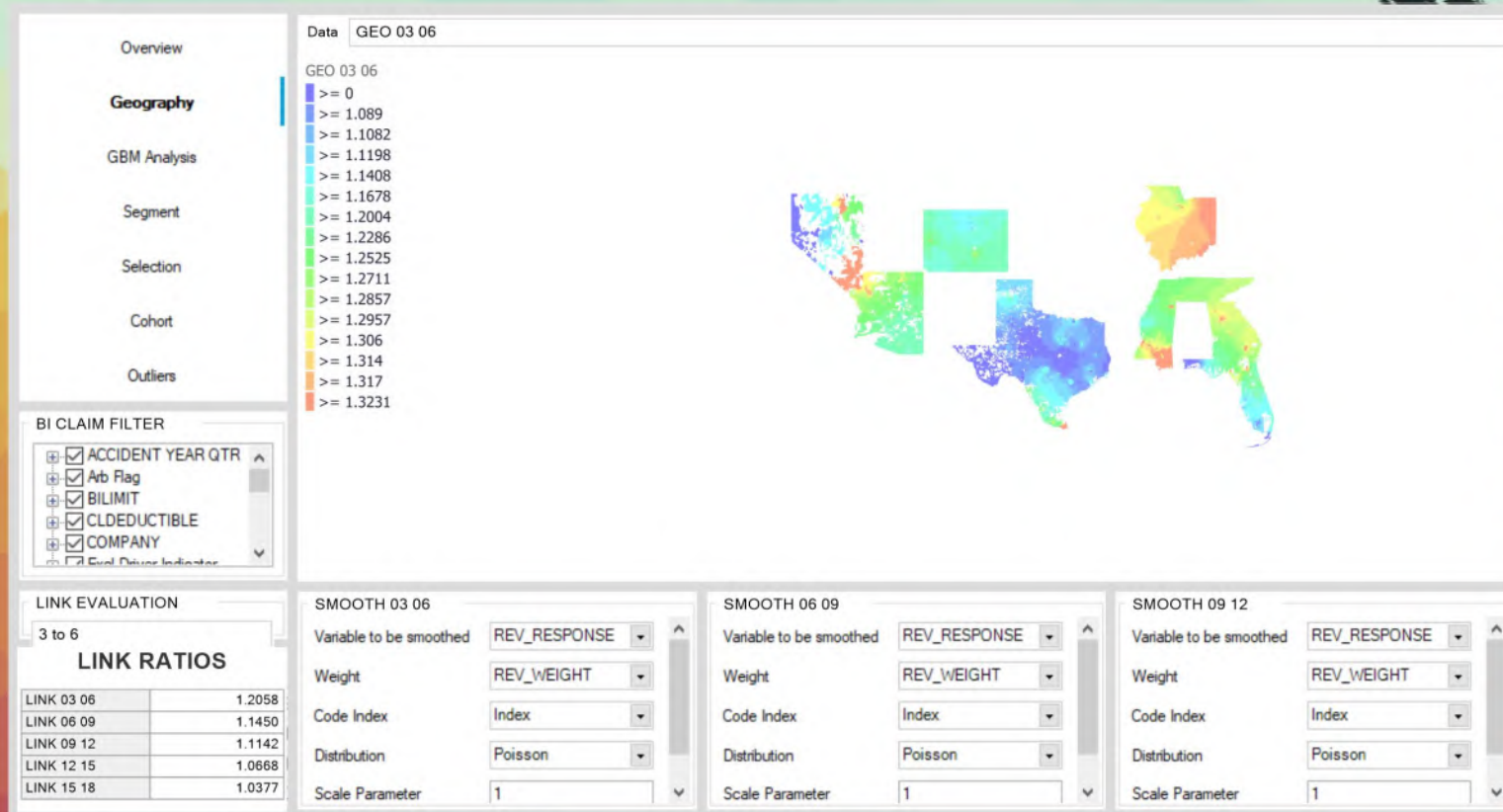


Special Considerations

- Geography: adjacency smoothing provides more control and is not limited to distance
- Outliers: what to do about claims that share common characteristics with adversely developing claims
- Describe the cohort



Special Considerations

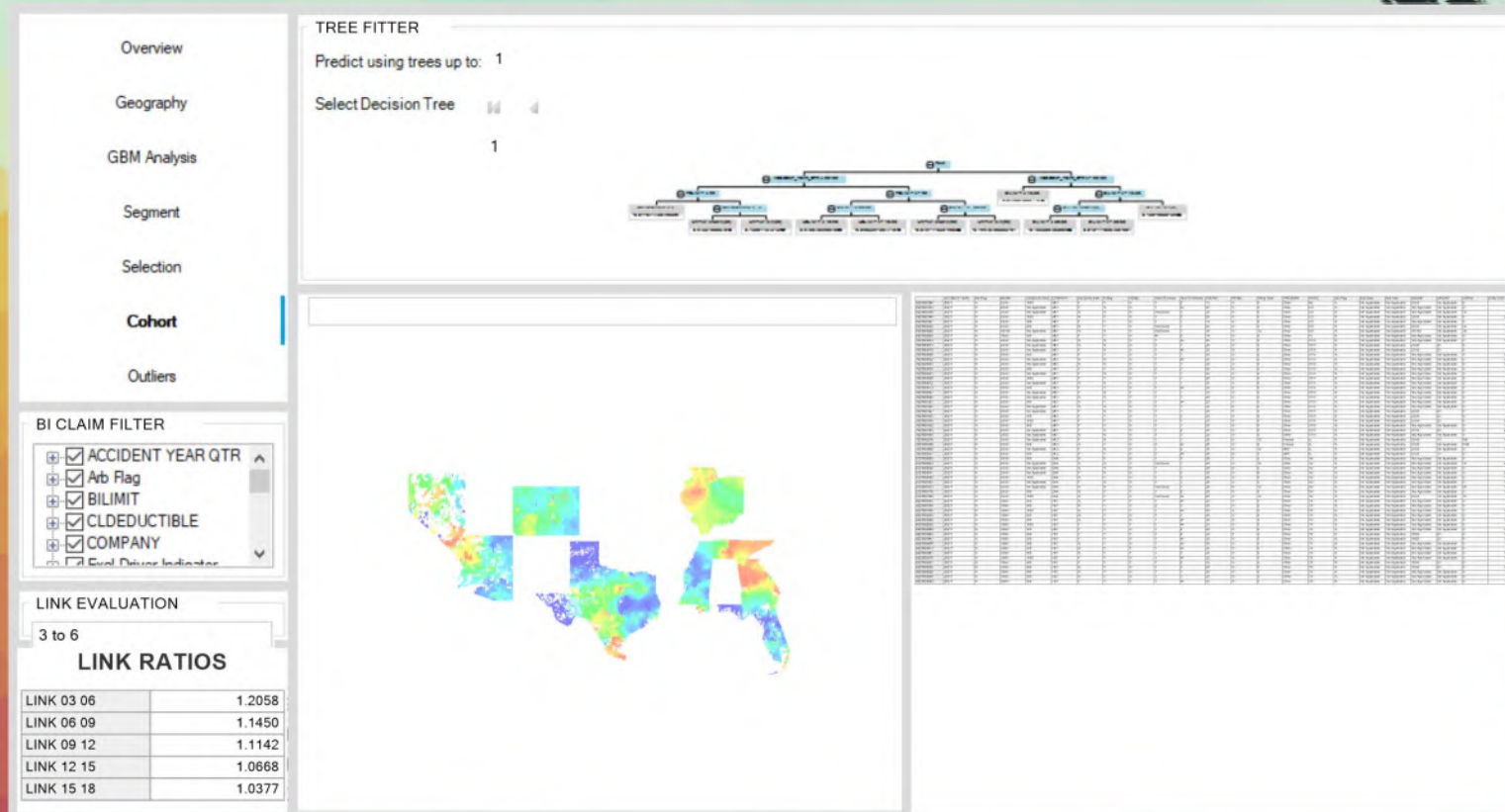


Special Considerations

Overview	GBM SORT SWITCH...
Geography	3 to 6
GBM Analysis	OUTLIER FILTER
Segment	☒ ACCIDENT YE
Selection	☒ Arb Flag
Cohort	☒ BILIMIT
Outliers	☒ CLDEDUCTIBL
	☒ COMPANY
	☒ Excl Driver Ind
	☒ FCflag
	☒ HODisc
	☒ Num Of Drivers
	☒ Num Of Vehicle
	☒ PDLIMIT
	☒ PIFdisc
	☒ Policy Term
	☒ PROGRAM
	☒ STATE
	☒ Suit Flag
	☒ Suit State
	☒ Suit Year
	☒ UBLIMIT
	☒ UPLIMIT
	☒ UWTier
BI CLAIM FILTER	
☒ ACCIDENT YEAR QTR	
☒ Arb Flag	
☒ BILIMIT	
☒ CLDEDUCTIBLE	
☒ COMPANY	
☒ Excl Driver Indicator	
LINK EVALUATION	
3 to 6	
LINK RATIOS	
LINK 03 06	1.2058
LINK 06 09	1.1450
LINK 09 12	1.1142
LINK 12 15	1.0668
LINK 15 18	1.0377

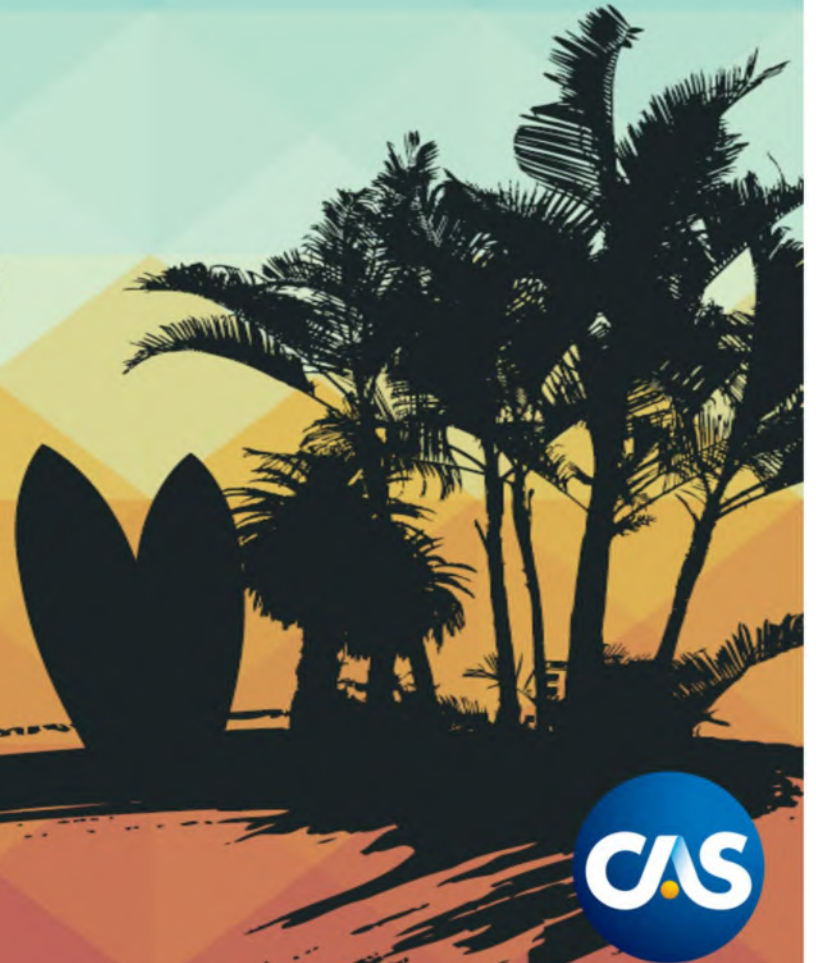


Special Considerations



Conclusions

- Segmentation is a common practice in assessing reserves
- Machines can help identify segments but require a clear statement of scope
- Additional consideration and care is required during development and interpretation



Thank you



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