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Modern model and attribute governance — going beyond the regulatory burden

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Introducing:

- **Chuck Robida**
  Experian
- **Robert Stone**
  Experian

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Attribute governance

Best practices in attribute development and management

Attribute development	Analytical approach to converting data into HIGHLY ACCURATE ATTRIBUTES
Documentation	Should be robust, comprehensive and consistent, while supporting VERSION MANAGEMENT
Monitoring and maintenance	Monitor for STABILITY and TRENDS

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Attribute development

Considerations for creating attributes

Attributes created to provide the highest level of detail and accuracy of credit data

Establish approach and methodology

- Extensive review of credit data, industry trends and challenges
- Building blocks or self contain code by attribute
- Initial values, type, length
- Missing and default values
- Writing specifications
- Auditing

Tri-bureau leveling

- Distribution reports for each attribute upon data availability

Bureau technical reviews

- Evaluate if bureau changes need to be incorporated into new and existing attributes

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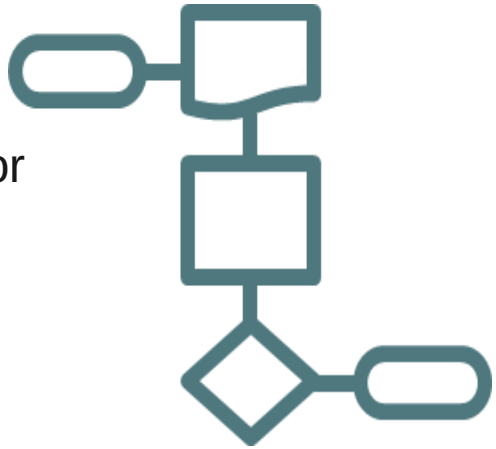
Attribute documentation

Conventions and standards

Create conventions and standards



- Meaningful filter and attributes naming conventions
- Complete and accurate description of the attribute behavior
- Consistency across industries
- Reference to source data
- Rules for version control and change management
- Document general conventions (i.e., truncating vs. rounding, counting months, starting with zero or one)

Other document considerations

Tri-bureau – identify attributes where leveling is weak due to bureau differences

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Attribute monitoring and maintenance

Monitor distribution of attributes on a regular basis

Determine appropriate periodic review: monthly, quarterly, bi-annual or annually

Evaluate period-to-period changes

Measure change

Set thresholds for review

As time progresses, shifts and seasonality become more noticeable

May warrant redevelopment

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Attribute maintenance

There is a need to create new attributes aligned with industry trends or modify existing attributes to ensure continued integrity

- New data elements available
  - Loan modifications
- Attributes with significant reporting variations that warrants redevelopment
- Bureau changes
- Data providers changes reporting
- Consumer behavior changes
- Compliance changes or requirements
  - Exclusion of medical debt
  - Regulatory changes regarding fair lending

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GOVERNANCE

"The Ultimate Answer to Life, The Universe and Everything is...42!"

– Douglas Adams
The Hitchhiker's Guide to the Galaxy

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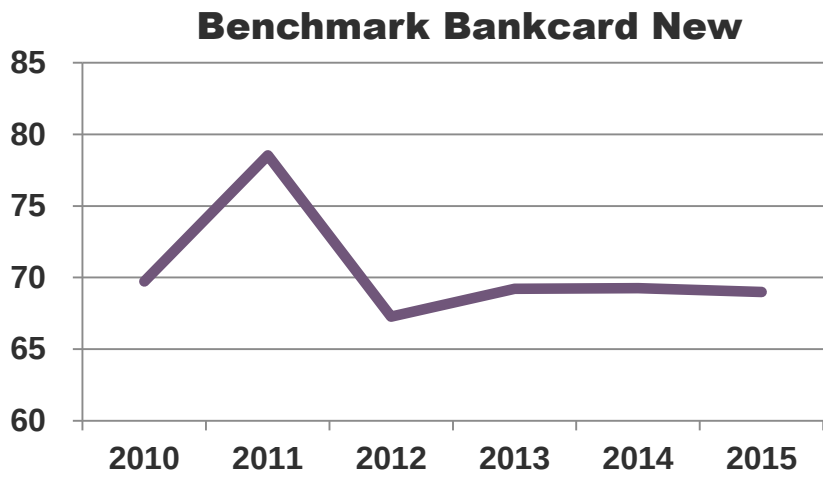
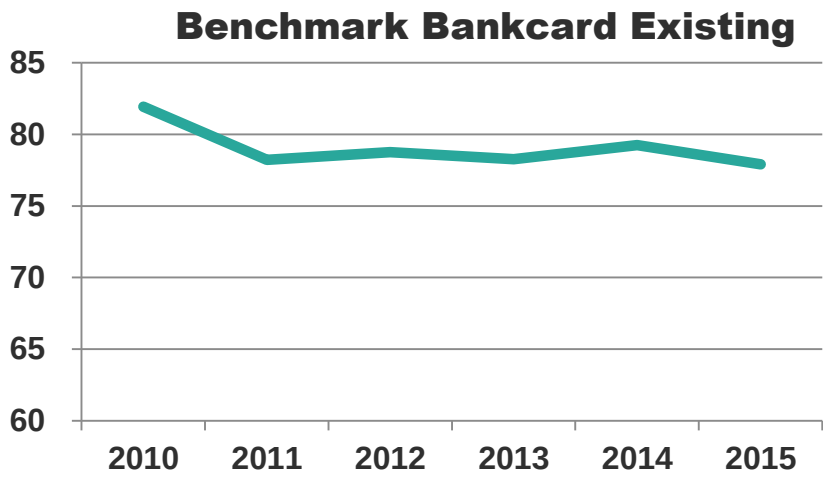
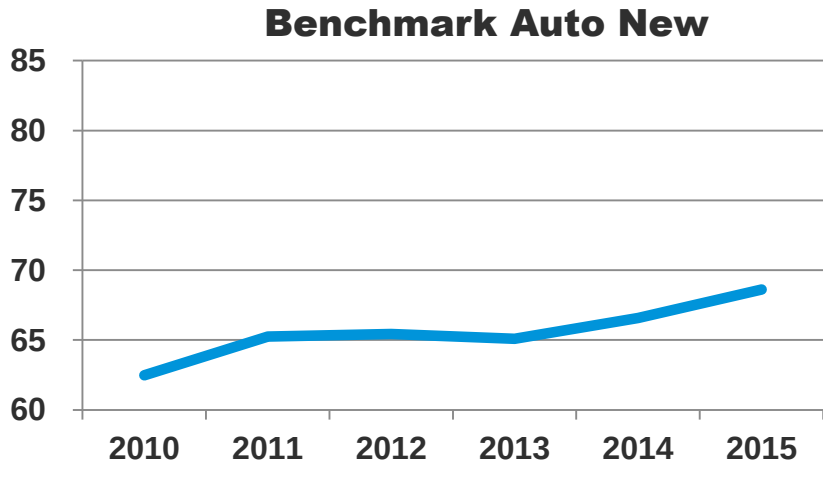
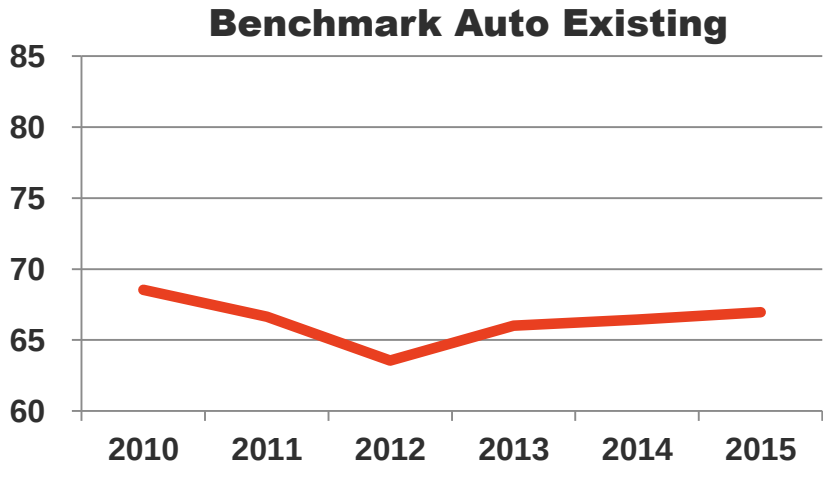
Annual validation results









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What the?

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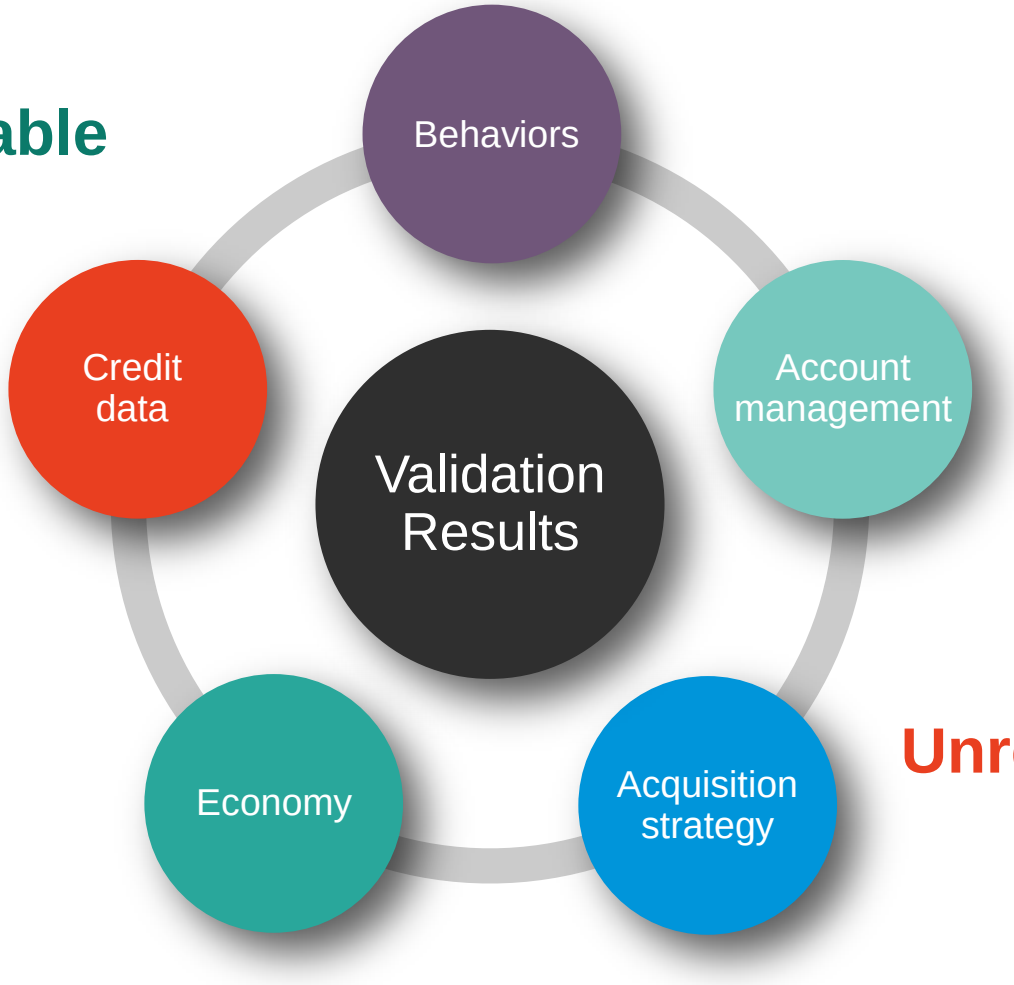
Influencers

Recoverable



Unrecoverable

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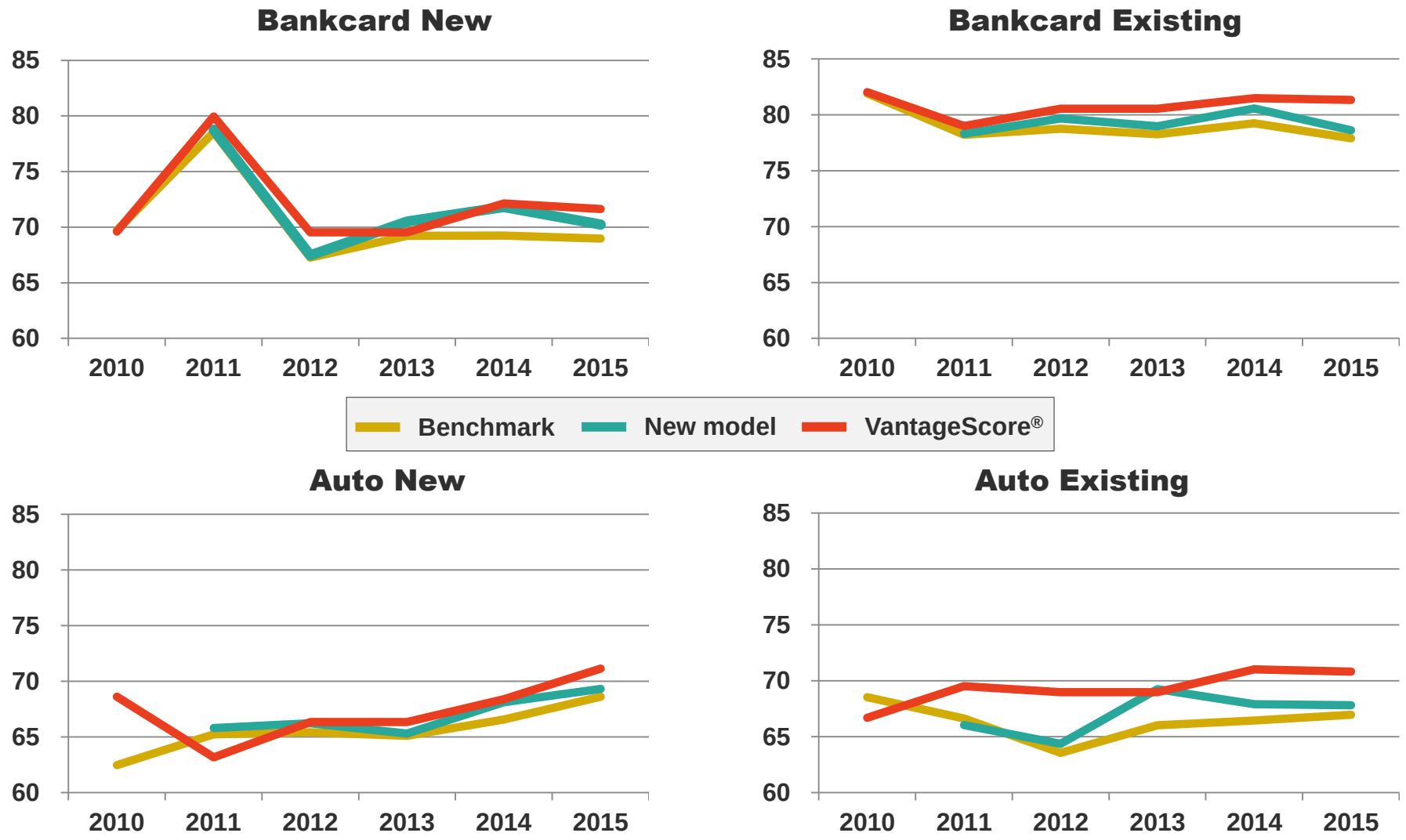
Annual validation results



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OBSERVATION

"Many hidden truths are often unobserved, not invisible."

– Matthew A. Petti
Alpha to Omega: Journey to the End of Time

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Changes in bureau codes

Experian	IMPACT
New special comment: CP-Forbearance	New attribute
New sub-segment: Actual payment	New Experian only attribute
New sub-segment: 84-month grid	Future existing variable enhancements
Trans Union	**IMPACT**
New remarks codes LNA-Line no longer available, SCD-Credit line suspended due to collateral depreciation	Improve accuracy of existing attribute
New remarks code LMD-Loan modified under federal government program	Future attribute
New remarks code FOR-Forbearance	Future attribute*
Equifax	**IMPACT**
New narrative code KS-Line suspended due to collateral depreciation	Improve accuracy of existing attribute
New narrative code KV-Loan modified	Future attribute*
New narrative code KW-Forbearance	Future attribute*
Date reported, date opened added DD	Under evaluation

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Credit data trends

April 13, 2015

175,000 Ohio tax liens suppressed!
Bankruptcy unaffected

January 22, 2015

436,000 Mississippi tax liens inaccessible!

June 27, 2015

Issuer begins to delete 2,500,000 credit cards Closed, transferred and charge-offs included

March 31, 2016

13,000,000 collections deleted!
Reporter non-compliant
Nine million consumers affected

April 11, 2015

50,000 student loans deleted! 12,000,000 consumers affected Most loans transferred status

December 14, 2014

Lender deletes 700,000 auto loans; 130,000 repositions!

December 11, 2015

Reporter deletes 2,500,000 retail accounts!
Primarily Chapter 7 & 13 bankruptcies sold to another party

January 6, 2016

Reporter deletes 10,500,000 credit cards
Charge-off sold to other lenders

June 17, 2015

Lender changes 8,000,000 KOBs from bankcard to retail!

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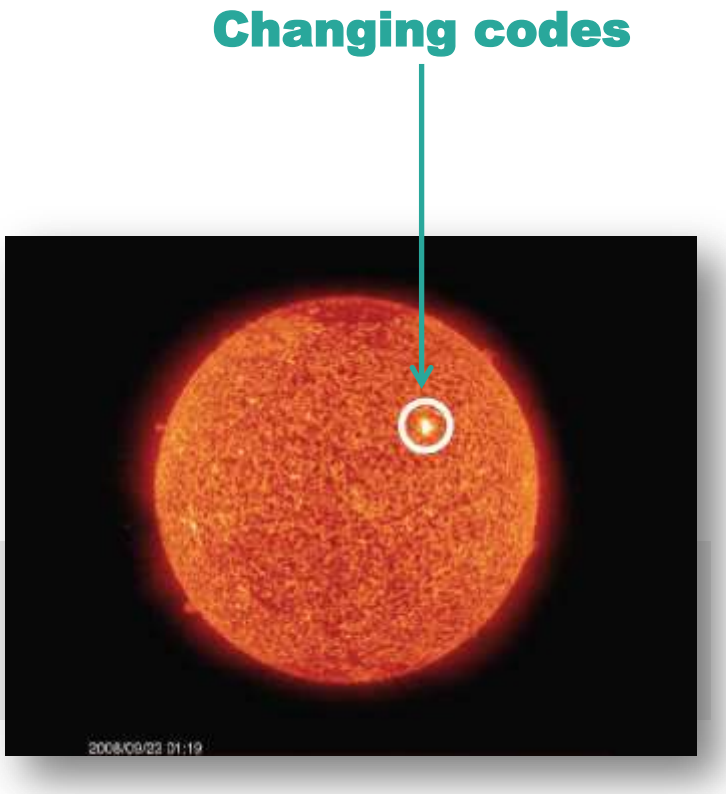
Model performance and attribute governance

Upgrade attributes to the latest definitions

- Credit databases
  - Boring on the outside
  - Torrents on the inside
- Attributes updated to accurately, consistently assess behaviors
- New information leads to new attributes
- Models relatively robust year-over-year
  - Many confounding factors



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Model risk management
Regulatory requirements

What is expected of institution for **compliance?**

Policies

All financial institutions that use models in their decisioning processes **must** ensure that their internal policies and procedures are consistent with the guidance outlined by the OCC regulations

Validation requirements

The OCC requires that financial institutions perform ongoing model validations at least once a year, include an independent review, and produce proper model documentation

Assessment of model risk

Banks need to mitigate the potential risks arising from the reliance on models that may be improperly validated or tested

Managing model risk

Models risk can be considerably reduced through rigorous model validation procedures

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Model risk governance

Business review overview

Comprehensive review
of your…

- Current policies and procedures
- Risk exposures and business activities
- The complexity and extent of its model use

Gap Analysis Report that
clearly demonstrates…

- Actual vs. intended model performance
- Identifies discrepancies between current actions and regulatory requirements

Action plan
or “blueprint report” that includes…

- Prioritized actions for bridging the gaps
- Examples include: model documentation and specifications; implementation standards and protocols; consistency of model assumptions with utilizations; value and usage of monitoring reports

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Model risk governance

Validation overview

Back-testing	Comparison of actual model outcomes previously recorded outcomes
Benchmarking	Comparison of model outputs to model performance of alternate models
Sensitivity analysis	Evaluate the impact of small changes to inputs or parameter values on model performance
Stress testing	Evaluate model performance over a wide range of parameter input values that are correlated with macro economic factors

Model validation

- Model governance protocol includes four specific analyses which should be executed on both generic and custom built consumer credit risk models
- You need a team of experienced modelers and analytical consultants with a vast background and significant experience in developing and validating custom and generic risk and loss forecasting

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Vision Conference
Breakout Session Survey

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1. How would you rate the presenters' knowledge?
☐ Excellent ☐ Above average ☐ Average ☐ Below average ☐ Poor

2. How would you rate the presenters' delivery?
☐ Excellent ☐ Above average ☐ Average ☐ Below average ☐ Poor

3. How would you rate the presenters' time management?
☐ Excellent ☐ Above average ☐ Average ☐ Below average ☐ Poor

4. How useful was the session information?
☐ Very useful ☐ Somewhat useful ☐ Neutral
☐ Somewhat not useful ☐ Not useful

5. How would you rate the session on being current?
☐ Very current ☐ Somewhat current ☐ Neutral
☐ Somewhat not current ☐ Not current

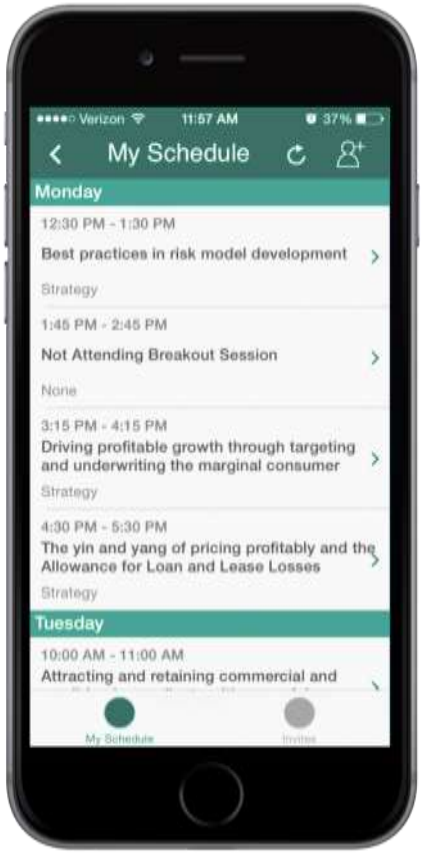
6. How relevant was the session content to the title and description?
☐ Very relevant ☐ Somewhat relevant ☐ Neutral
☐ Somewhat not relevant ☐ Not relevant

7. How would you rate the level of content?
☐ Too advanced ☐ Just right ☐ Too basic

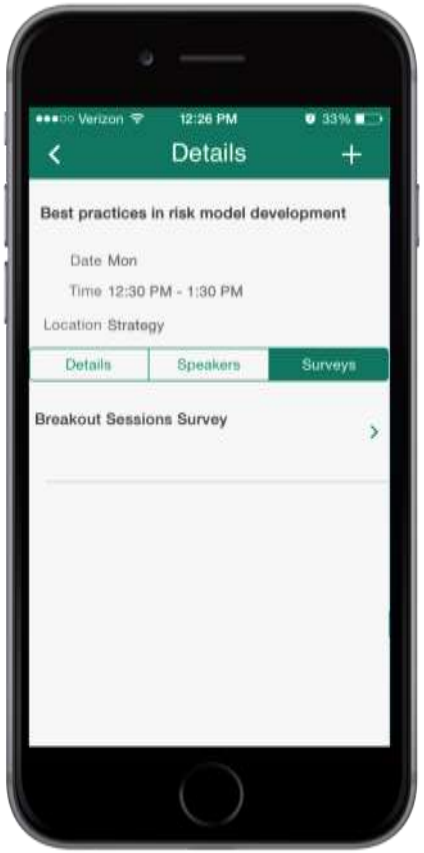
8. Why did you attend this session? (Check all that apply.)
☐ Relates to my business ☐ The presenter(s) ☐ Interest in new product
☐ Compelling session description ☐ Increase product knowledge

9. Do you have any additional comments?

1 Select the Survey button and complete



2 Select the breakout session you attended



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