



Custom Modeling and Analytical Consulting



Agenda

Providing clients with our expertise and strategic thinking to deliver advanced custom models for enhanced decisions

- Modeling in the current environment
- Custom modeling overview
- Our modeling approach
- Our experience





Modeling in an increasingly regulated environment

Overview

It is becoming increasingly important to assess your custom risk models to ensure optimal predictive performance

- The OCC 2011-2012 Supervisory Guidance on Model Risk Management requires the annual validation of existing risk models and the attributes used to build them

To help you meet current regulatory requirements, Experian's analytical consulting team offers:

- Proven modeling methodologies
 - ▶ Our consultants and analysts utilize the most sophisticated and advanced statistical techniques to develop custom models
- The industry's most comprehensive set of data assets and credit attributes for model development
 - ▶ Experian's Premier AttributesSM incorporate the most up-to-date bureau data available, resulting in the most robust and predictive models





Modeling in uncertain economic times

Model development



- Consumer behaviors and financing requirements continue to rapidly change
- A model development population should represent the future through-the-door population
- Experian may employ weighting of the sample selection population to adjust for changes in product mix, product terms, policy rule changes, seasonality, etc.
- Recommend using an out-of-time validation sample to compare to other available scores and ensure a stable scorecard
 - ▶ Out-of-time validation will be used to evaluate the ability to update the model based on changes to the overall economy



Custom Modeling

Our expertise

- As one of the leading modeling companies in the world, Experian Decision Analytics has a depth of experience in building custom scoring solutions that is unsurpassed in today's marketplace
- Experian's team of expert consultants and statistical analysts have a vast background and significant experience in developing and delivering custom models which extend across all stages of the credit life cycle, including:

- ▶ **Marketing analysis**
- ▶ **Account acquisition**
- ▶ **Account management**
- ▶ **Collections**

- Our team leverages Experian's core data assets to design and develop custom models using advanced analytical techniques that provide for better decisioning and efficiencies





Custom Modeling Examples

Whether the goal is finding new customers, offering them the most appropriate terms, or managing the relationship throughout the full Customer Life Cycle, Experian has developed models which allow our clients to 'see' their customers and manage the decisioning process

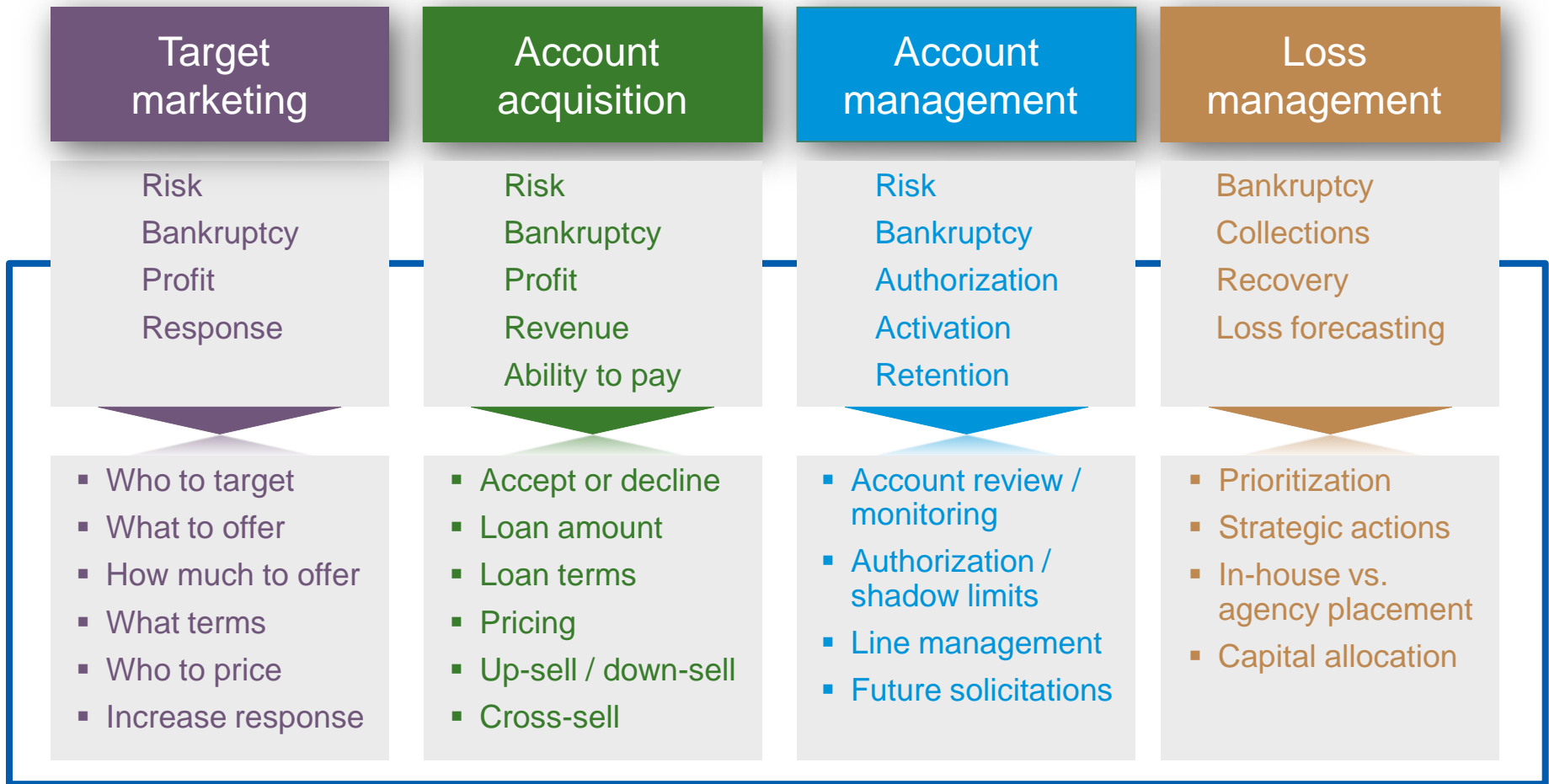
The following table provides an example of the types of solutions Experian has developed:

| | Account acquisition | Account management | Account loss |
|--------|--|---|--|
| Risk | <ul style="list-style-type: none">▪ Front-end risk▪ Prescreen risk▪ Fraud▪ Bankruptcy▪ First payment default | <ul style="list-style-type: none">▪ Behavioral▪ Credit line management▪ Roll rate▪ Delinquency▪ Transactional fraud | <ul style="list-style-type: none">▪ Early stage collections▪ Late stage collections▪ Recovery▪ Loss forecasting |
| Target | <ul style="list-style-type: none">▪ Response▪ Activation▪ Conversion▪ Purchase propensity▪ Income / wealth▪ Loyalty | <ul style="list-style-type: none">▪ Profitability▪ Usage▪ Activation / reactivation▪ Balance transfer▪ Cross-sell▪ Revenue | <ul style="list-style-type: none">▪ Attrition▪ Churn rate▪ Pre-payment▪ Retention |



Custom models to meet varying decision points

Customer Life Cycle application





Custom Modeling

Our approach



Client-specific modeling engagements address the unique characteristics of a client portfolio

- Developed to solve for a specific client need using credit bureau and client master-file data
- Used for finding new customers, offering the most appropriate terms, or managing existing relationships
- Custom-built to target a variety of products and industries, including bankcard, auto, student loan, personal loan, mortgage, telecommunications, utilities



Custom Modeling

Our approach

Our key differentiators in custom modeling

- One of the leading modeling companies in the world, with a depth of experience in building custom scoring solutions
- Our best-in-class approach to attribute development
- Vast and unique data sources
- Team approach which focuses on your needs and goals
- Use of advanced segmentation techniques create a strong and robust model
- Over 1,500 custom solutions delivered world wide





Custom Modeling

Our attributes



- Premier AttributesSM is the credit industry's most robust and comprehensive set of credit attributes that enable organizations to make more strategic and data driven decisions
- Experian credit data experts spent nearly three years developing Premier AttributesSM
 - ▶ Premier AttributesSM were developed using the latest data sources, products and industries available from the three credit bureaus
 - ▶ Over 1,000 attributes available including a core set and a series of unique industry classifications
- Premier AttributesSM provide consumer data at the most granular level resulting in enhanced modeling and analytical opportunities



Custom Modeling

Our attributes

Premier AttributesSM were developed by industry-best data experts to exploit all aspects of consumer credit data, including:

- **Improved attribute accuracy** – by utilizing new data elements and industry trends in the detailed definition, the attributes warrant:

- ▶ Refinement of industry/product designations
- ▶ More accurate attribute leveling across bureaus
- ▶ Significant lift in KS / single attribute performance

- **New attributes** – expanding industry and product designations provide additional opportunities in segmentation and risk assessment





Custom Modeling Development process

Steps in the model development process

Modeling method

- Our model development protocol follows five phases:
 - ▶ Model and sample design
 - ▶ Data exploration
 - ▶ Segmentation and preliminary analysis
 - ▶ Final model development
 - ▶ Delivery and implementation
- The process is adaptable to meet any of your internal requirements

Modeling philosophy

- Our disciplined approach to model development is employed in a manner which is both transparent and adaptable to the unique needs of each of our clients for:
 - ▶ Sound model governance
 - ▶ Intensive audit
 - ▶ Thorough documentation



Custom Modeling

Our expertise

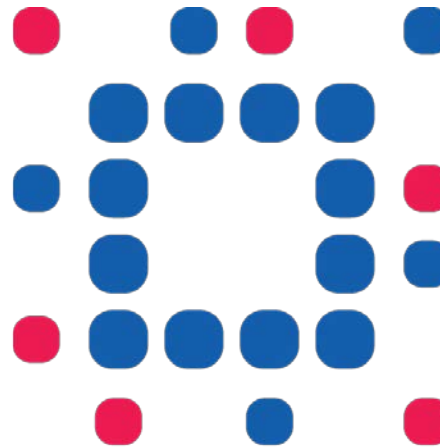
- Within North America, Experian has been developing models since 1976 and our clients include most of the Top-10 card issuers in the U.S., the Top-5 mortgage lenders / retail banks in the U.S., and the Top-4 consumer finance companies
- We develop scoring models using industry-approved statistical techniques
 - ▶ These techniques, combined with industry-leading consulting expertise, ensure not only the most predictive models, but also the best fit for you
- Our consultants and statistical analysts have a vast background and significant experience in developing and delivering custom models which extend across all stages of the credit life cycle
- We have proven methodology in linking data and building, tracking and implementing sophisticated models, resulting in strong operational use
- Our knowledge transfer of the process and models are a core part of the project process
- Our team develops models that are resilient in structure under constantly changing economic conditions



Custom Modeling Summary

Experian's modeling approach is flexible and adaptive to meet our clients' needs

- We will build models which augment existing modeling infrastructure or develop new models to meet specific decisioning requirements
- We will develop utilizing the richness of historical credit information available and leverage our deep experience in working with multiple data sources
- We will analyze segments by product, region, sales channel or other configurations
- We will mine the data to find opportunity areas that might not be recognized at an aggregate level
- We strictly impose best in class modeling practices, time series analytics, model diagnostics and consistency of results
- We will ensure that each model works from both a statistical as well as a business standpoint
- We will provide extensive documentation, supporting model governance
- We will work closely with you to provide transparency, from project design through implementation and beyond
- We will build models with strong performance and longer shelf lives



ExperianSM

A world of insight