



## **Strategy optimization**

**The next step in credit customer decisioning**

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**An Experian Decision Analytics white paper**

## Executive Summary

### The next step in customer decisioning

Within leading organisations credit strategy is now acknowledged as a key differentiator in today's competitive landscape and the credit risk function is changing from one of 'Gatekeeper' to one of 'Strategic Advocate'. Businesses demand a far more dynamic approach to the management of customer decisions: the days of developing risk scorecards, blending with policy rules, implementing a cut off and leaving for 3 years are over!

As the speed of change increases, organisations require tools, techniques and new approaches to help them to manage customer decisions. Organisations need to be able to rapidly adapt credit strategy to changes in economic, competitive and operational environments and existing decisioning and reporting systems don't always facilitate this.

Over the past 25 years we have moved from credit scoring, to strategy management and now we approach a new third phase; strategy optimization. In order to keep up with the leaders, many organisations will need to change; strategy optimization is the 'Next Step' in customer decisioning.

### The benefits of strategy optimization

Strategy optimization is being applied across the credit lifecycle; for new business, customer and account management decisioning through to collections and recoveries. Credit Strategy Optimization from Experian Decision Analytics is delivering 5-30% profitability improvements, offering significant return on investment for forward-thinking lenders globally.

However, for many organisations, the real benefits are gained through improved operational and financial management and the ability to respond to changing environments more dynamically.

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## Executive Summary *continued*

Strategy optimization enables an organisation to improve its customer decisioning through:

- **Decisioning at a finer level of granularity** - not using broad-brush segments but looking at the characteristics of each customer and tuning the strategy to each customer's expected behaviour.
- **Taking more factors (or dimensions) into consideration** - when making a decision - not only risk, but also revenues and operational costs.
- **Dynamic response to economic, operational or competitive environments** - the ability of optimization to simulate various scenarios and predict the likely outcome means that changes to decisions can be evaluated and implemented more quickly.
- **Constraints can be better managed** - because the business has better management information and control, it can forecast future profit components and manage within these constraints more effectively.
- **Making the best possible decision for the customer and organisation** - through taking a holistic view of the customer decision: traditional rule based decisioning only considers one customer at a time, optimization considers the effect of other decisions in order to work within operational and financial constraints.
- **Better management of key business groups** - for example, optimization can identify that customers from a specific dealer or business source need to be treated in a specific way in order to meet with service level agreements or other considerations.
- **Integrating customer decisioning within the operational process** - many organisations undertake analysis to determine the best customer decision and then implement it without full consideration of the operational effects. Optimization enables organisations to consider these effects by constraining the number of different types of decisions (such as referral decisions) in order that these operational constraints are not violated and the business can adequately service customer needs.

Strategy optimization can be implemented within existing strategy management decisioning solutions with minimal change to the operational decisioning process, or can be integrated into third generation strategy management systems using dynamic individual level optimization solutions.

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# 1. Background to optimization

## 1.1 The first credit decisioning revolution

20 years ago, credit decision management was far less automated than it is now. Typically, consumers who wanted a loan would approach their bank where a manual assessment of their ability to repay would be carried out. This assessment was based on several factors, which may have included the customer's age, occupation, income and even gender, relationship with the bank and previous court judgments.

At this time, credit scoring was in its infancy and yet to take hold; and in any event, the perceived wisdom was, "People can make better decisions than computers, can't they?" Perhaps the real benefit was enabling a business to reduce the cost of decisions, through faster and more objective decisioning. This resulted in improved customer service, reduced costs and enabled new businesses to enter the credit market without having to employ large numbers of scarce and expensive underwriters.

In the years that followed, financial services organisations tapped into the opportunities created by advances in technology and formulated new approaches to decision-making.

As decision support systems started to appear, Experian Decision Analytics, amongst others, developed ever more sophisticated business rules to help organisations develop and manage these complex systems.

In parallel, organisations that previously would not have considered employing a mathematician developed highly trained and skilled analytical groups focusing on the management of customer data, the development of models and their deployment into operational decisioning systems.

## 1.2 The changing environment: the second generation

The initial decision support solutions were hard coded with little ability to change cut offs – never mind scorecards. Second generation solutions used strategy management systems to help organisations manage their credit decisions more effectively.

Strategy management systems enable the business to segment customers into different groups and take actions relevant to the groups or segments. This approach has been highly successful, however, organisations are constantly challenged by the complexity of the rules, the ability to maintain the rules and to accurately predict the effect of rule changes.

In parallel with these changes, organisations have many opportunities to exploit their customer data and mine increased data volumes, with millions of records being analysed on PC's and analytics software readily available.

Using this increased analytical power organisations are making more and more sophisticated decisions: not just yes/no decisions but determining the level, price and terms of products. The result is more complexity of implementation and even greater challenges to be able to respond to changing situations. Organisations have to try to manage these complexities of customer decisioning through balancing the effect of different decisions on business targets, constraints and profitability.

So, there are many factors to consider: risk, revenue, market share, capital adequacy, margins, bad debt levels and operational resource constraints. Modelling each of these elements is entirely possible with the advanced scoring techniques now available, but using existing technology it is not altogether clear how these elements should be combined to make the best decision.

Whilst components within the problem are more complex, the nature of the problem is the same as it was for bank managers 20 years ago; namely, how to factor all of these different influences when making a decision on a customer?

### 1.3 Third generation customer decisioning

Empirically based decision trees and automated decisioning have created substantial benefits for organisations worldwide - but there are limitations. Within each segment there are customers with a range of characteristics, however the action taken is the same. For example a credit limit is assigned to a group of customers within a segment, even though customers falling below the average may create more bad debt, with the organisation losing potential revenue on those above the average.

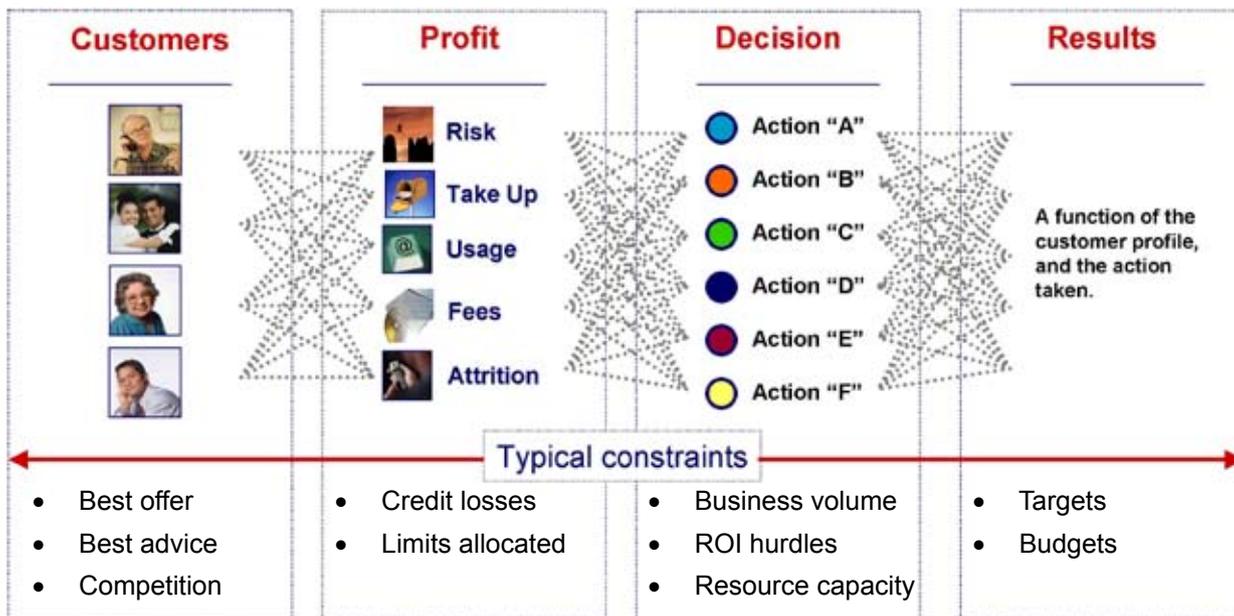
Of course, the number of segments can be increased to reflect the many dimensions to customer profit but it becomes more difficult to define and manage the rule base and to monitor the effects of the actions taken. In many strategy management systems, decision trees can grow into 'decision forests', which makes it even harder to implement and make changes to existing systems.

As a result, many organisations that use the latest technology still have the same business rules and scorecards in place that they had a number of years ago! Could it be that, while there is more data available, it is more difficult to determine how best to combine the information available to improve the decision? Perhaps it is time for businesses to reassess their processes and to use new technology to manage the complexity of customer decisions?

## 2. Strategy optimization – the next step

Strategy optimization marks the next step in the decisioning evolution. In the same way as 20 years ago the banks needed new technologies and approaches, today's credit strategists need greater insight. As the use of analytics has increased in sophistication to manage the ever more competitive business environment, the complexity of each decision process has increased and it becomes more difficult to juggle multiple, and often conflicting dimensions as part of the credit decisioning process.

Credit managers need to be able to see the 'big picture' and need to be able to make decisions which contribute to the overall success of the business. Conflict and complexity are ever increasing with other departments of the business making more demands to increase accept rates and limits, and reduce refers and the number of customers being passed into collections.



*An illustration of the credit decisioning dilemma*

## 2. Strategy optimization – the next step *continued*

This complexity means that in addition to a 'customer-by-customer' decisioning process, credit managers also need a top down process that optimises the value of all actions by assigning the best actions to each customer within the real world constraints such as budget, bad debt, overall credit granted and operational resources.

Strategy optimization enables an organisation to assess the effect of different actions, decisions, limits or terms on profit and other business metrics. It produces clear information on the trade-off between different decision scenarios so the business can understand the effect of different constraints on business profitability. It then enables the business to implement the results and gain the benefits in the minimum time period.

Strategy optimization enables an organisation to answer some of the questions that, until now, have been hard or even impossible to answer:

- How to segment customers across multiple dimensions using objective measures
- How to best combine different dimensions of customer behaviour
- How to manage complex multi-dimensional trade-offs
- How to decide which products, rates and terms to offer different customers

## 2.1 How does strategy optimization work?

Strategy optimization uses an approach called *constrained mathematical optimization* in order to maximise (or minimise) a function, such as profit, subject to a range of financial and operational constraints. The following elements are typically included in the optimization process:

- Customers e.g. costs, predicted responses, expected revenue outcomes
- Competing business goals e.g. profit vs. volume, response vs. revenue, risk vs. reward
- Conflicting operational constraints e.g. budgets, volumes, bad debt

As part of the optimization process, the effect of different actions on profit and the constraints are evaluated. Optimization then mathematically identifies the optimal mix of customer decisions and actions that maximises the value of the overall set of customer interactions, within the limits established by the constraints.

Credit scoring outperformed bank managers 20 years ago. Optimization significantly outperforms current best practice approaches by evaluating the entire set of actions and offers simultaneously rather than one at a time.

Until recently, the challenge of assessing and analysing many different actions for millions of customers was too great. Either the process did not get performed or organisations oversimplified the problem by optimising actions at the segment level. This resulted in inferior decisions, which while delivering the potential to increase profits, certainly left cash on the table.

However, this technology hurdle has now been overcome through the development of sophisticated and fully scalable optimization algorithms. This capability means that organisations can now maximise their overall business profit through determining the best strategy for each individual customer whilst still ensuring a minimum accept rate, minimum level of bad debt and capital exposure.

## 2.2 How optimization works: a simplified example

Explaining how optimization works would be very difficult across millions of customers and many different actions with several interacting constraints. In order to simplify this, an example 'organisation' has the decision challenge of accepting only 3 customers with one of three limits for a credit card portfolio: it can also decline customers.

The business's objective is to maximise profit, however it also has a bad debt constraint to manage. The example is based on predictions of profit and bad debt at the new business stage for each limit that could be assigned - the estimates are probabilistic.

Product Limit		€1000	€2000	€3000
Customer 1	Profit	€90	€100	€120
	Bad debt	€4	€6	€8
Customer 2	Profit	€70	€90	€60
	Bad debt	€3	€6	€8
Customer 3	Profit	€20	€200	€300
	Bad debt	€3	€12	€15

These are the three limits which could be assigned to each customer

The highest total profit is generated from identifying the highest profit from each customer

The profit line represents the expected value of profit based on all revenues minus costs (including bad debts) assigned for each customer/limit combination

The bad debt line represents the expected value of bad debt losses

Clearly the action which maximises profitability for each customer also generates the overall maximum profit for the organisation. In this scenario the maximum profit is €510 - but this generates a bad debt of €29.

Should the organisation have a constraint of €21 for bad debt (remember that there are only 3 customers in this example) then it would need to change the limits assigned in order to comply with this constraint or to increase its decline rate. Most organisations when faced with challenges of this nature would typically focus on reducing risk by decreasing limits on high-risk customers - however some of these customers may also be the highest revenue generating customers.

Optimization can be used to identify which combination would give the highest profit within this constraint (scenario 1). The result is, however, that customer 2 does not have a limit assigned, so is effectively declined. The business may be happy to accept this option as it is maximising profit, however the increase in decline rate may not be acceptable to specific areas within the business. In any event, optimization should be used to enable the business to assess the effect of different constraints on profit. Scenario 2 demonstrates that should all customers be allocated a limit within the bad debt constraint, the profit declines from €400 to €370.

Product Limit		€1000	€2000	€3000
Customer 1	Profit	€90	€100	€120
	Bad debt	€4	€6	€8
Customer 2	Profit	€70	€90	€60
	Bad debt	€3	€6	€8
Customer 3	Profit	€20	€200	€300
	Bad debt	€3	€12	€15

**Scenario 1 : €21 bad debt**

Customer 1    €2000  
 Customer 2    €0  
 Customer 3    €3000

**Profit            €400**  
**Bad debt        €21**

**Scenario 2 : €21 bad debt**

**and all accepted**

Customer 1    €2000  
 Customer 2    €1000  
 Customer 3    €2000

**Profit            €370**  
**Bad debt        €21**

Whether this trade off between accepted volume and bad debt is a price worth paying depends on the business's perspective of this trade off. The important element is that the business is able to make a decision based on a full understanding of the effect of changing its customer decisions on profit.

### 3. Applications of strategy optimization

Strategy optimization can be applied across the credit lifecycle, from new business, customer and account management decisioning through to collections and recoveries. Optimization can also be applied for customer acquisition, cross sell and retention.



Strategy optimization is particularly relevant to organisations that can answer “Yes” to several of the following questions:

- Do you have two or more actions that could be taken on the same customer?  
Do you use data-driven criteria (e.g. score, time since last action, time on book) to determine whether a customer is eligible for limit increases or other credit offers?
- Can the business agree a profit definition that can be applied to each customer (or segment of customers)?
- Can models be developed to predict how the components of profitability vary by the action taken?
- Do you have constraints in your decision processes such as credit limits, bad debt or operational resources?
- Do you vary the action taken on different customers based on different customer behaviour?

### 3.1 Using strategy optimization in new business

Using strategy optimization in the new business environment aims to answer the question: what is the best customer credit action to assign to customers to achieve our business objectives?

Typically organisations are driven by volume and bad debt targets, with each target being managed separately without considering other components of profit. These potentially conflicting targets can lead to weakened performance.

Optimization overcomes this problem by incorporating all profit components in the new business decision, including:

- Pricing the rate to maximise profit
- Tailored terms of business to maximise take up and usage
- Allocating limits to maximise revenue
- Optimising referral management for operational effectiveness
- Determining where efforts should be focused to cross-sell additional products and services, such as insurance.

#### Case study - Leading Personal Finance Lender

**Challenge:** To improve new personal loan customer profitability at the point of sale.

**Solution:** Credit Strategy Optimization was used to determine the optimal price (APR) to offer to new customers based on potential profitability, propensity to take up the offer and potential credit risk losses. Optimization was dynamically applied at the individual customer level to maximise decision performance and to facilitate rapid changes to market conditions.

**Results:** The organisation saw a **13%** increase in profit contribution with no decrease in lending amount or increase in bad debt.

### 3.1 Using strategy optimization in new business *continued*

#### **Case study - Top 5 UK Retail Bank**

*Challenge:* The organisation wanted to determine the optimal limit for new credit card applicants. With 7 different limits on offer the project was constrained to not increasing overall exposure or bad debt.

*Solution:* As the organisation wanted a rapid implementation, Credit Strategy Optimization was deployed into their existing decision rules system. A longer-term approach of individual level deployment would mean a further improvement in profitability.

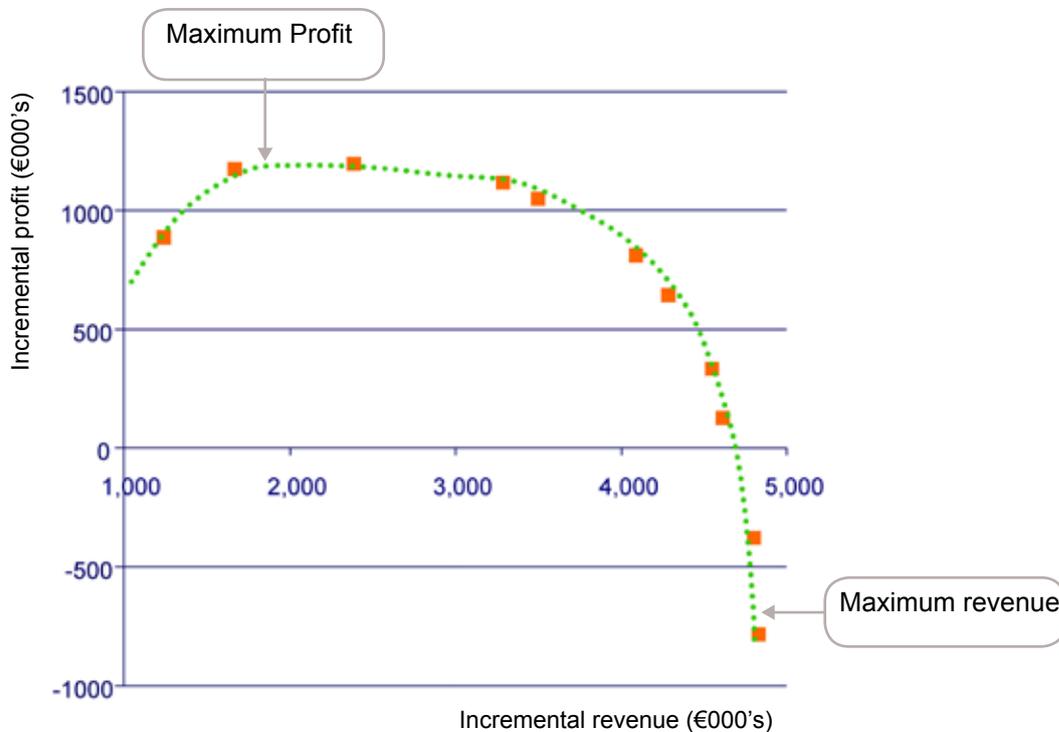
*Results:* The organisation saw an increase in revenues of **6%**, a **3%** reduction in bad debt and a projected increase in profit of **96%**.

## 3.2 Using strategy optimization in account management

Decisioning systems for account management aim to answer the questions:

- What is the best customer credit action to assign to customers to maximise profit?
- How do we set limits on existing customers?
- How do we improve pay/no pay decisions to maximise revenues?
- How do we set the correct terms for the cross-sell of loans to existing customers?
- How do we maximise revenues from fees through the payment of out of order items?

Current best practice uses predictive analytics to assign suitable limits based on measures of profitability with Champion/Challenger testing to enhance limit strategies. Strategy optimization identifies the optimal combination of actions that maximises the overall business objectives, whilst simultaneously satisfying the real-world constraints, such as the overall limits assigned, maximum credit loss and operational costs.



*Graph illustrating the trade off between profit and revenue*

### 3.2 Using strategy optimization *continued*

Specifically, it can be used for:

- Limit management - determining the best limit increases, decreases and action times to maximise profit through targeting increases at high usage revolving customers whilst managing credit losses
- Loan cross-sell pricing - proactively setting the cross-sell rates for loans to existing customers based on risk, propensity to respond and volume constraints
- Pay/no pay and authorisation decisions - maximising usage and fee revenues through making positive authorisation decisions whilst managing the level of bad debt and operational constraints
- Balance transfer - determining what offer to make to a customer about to come to the end of their low interest period on a new credit card application

Account management is probably the area where optimization has been most commonly applied so far, not only because there are significant benefits to be achieved in this area, but also because there is often a breadth of past experience, for example through offering different limits to different customers. This helps with the ability of an organisation to implement models to predict the effect of different limits on customers.

However, just varying the limit on existing customers is only part of the process: some organisations are starting to examine the frequency of limit increase and the effect of other promotional incentives to increase card utilisation.

## Case Study - International Retail Finance Company

*Challenge:* With a portfolio of 5 million customers the organisation wanted to determine the best increase in credit limit to maximise customer profitability based on retail spend and interest revenues. With 7 different percentage-based increases to consider, the challenge was to maximise revenues whilst not increasing the overall exposure, number of customers granted limit increases or levels of bad debt.

*Solution:* Credit Strategy Optimization was used during the monthly account management process. Based on the transaction level retail spend data, the limit was applied into the cycle scoring process assuming that the customer was still eligible. Individual level strategy optimization was used due to the complexity of the data and quality of the current strategies, with the potential to migrate to time-based optimization to determine the optimal timing of the limit increase.

*Results:* The organisation saw an **8%** incremental profit over the existing strategy.

### 3.3 Using strategy optimization in collections and recoveries

Using strategy optimization in collections and recoveries aims to answer the question, what is the best set of actions to assign to customers to maximise recoveries within the operational and financial constraints? With increasing consumer indebtedness the collections area is receiving a greater focus in many organisations trying to increase effectiveness and reduce losses.

The question is how to determine the best action to:

- Maximise recoveries
- Retain customers over the medium term
- Operate within existing budget and resource constraints
- Identify which customers to focus scarce and experienced resource on
- Determine not just the best action – but also the best timing

Current best practice uses predictive analytics to determine the best action based on the measured and analysed response of customers in the past. Risk score and simple criteria such as days past due are also used to assign action and reaction strategies which can be enhanced through Champion/Challenger tests.

This is potentially the area which has the highest returns for optimization, however, it is also potentially the area which requires the most thought. This is because the ideal implementation solution is to determine the best action to take on an individual customer.

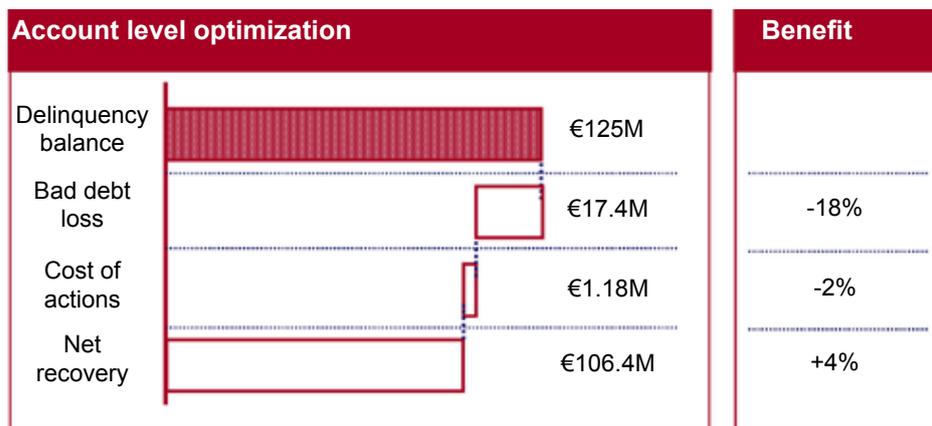
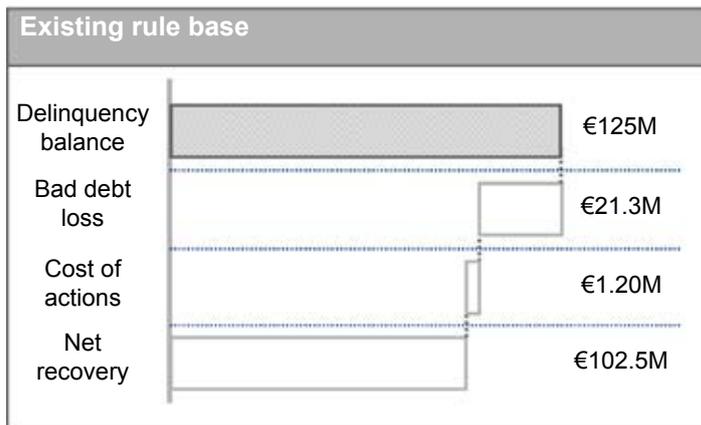
In order to do this, an assessment of the effect of different actions taken on each customer at different delinquency states is required. In addition, the operational constraints in collections are likely to be far more dynamic (as the number of customers in collections and the resource available to manage the collections process) varies over time.

## Case Study - Top 10 European Finance Company

**Challenge:** The organisation wanted to determine the best initial collections actions and the best timing for these actions. With 40 different actions and time periods to consider the project was constrained to not changing the level or type of resources required.

**Solution:** Credit Strategy Optimization was used to assign the initial collections activity, identifying which accounts receive which collections actions, using individual level optimization to manage the constraints complexity.

**Results:**



## 4. The components required to utilise optimization

Optimization techniques have been around for many years. However, they have not been deployed in credit management until recently and even then the technology has often compromised how optimization is best delivered. The key reason is the capability of the optimization software to manage complex optimization scenarios where there are multiple constraints applied at many levels within the business - for example, overall portfolio constraints, but also constraints applied to sources of business, scoreboards and channels. It is only recently that new optimization technology has enabled these solutions to be developed.

The key to optimization is being able to integrate analytics, decisioning and reporting into a seamless process that enables change to be evaluated and actions to be deployed in a minimum period. Strategy optimization requires four main functional processes, Analytics, Optimization, Deployment and Evaluation, which are built around an analytical customer decisioning database.



Predict the consequence of an action on key business measures (e.g. revenue, loss or profitability).



Select the action that maximises the overall goal (e.g. profit) subject to constraints.



Assign optimal decision strategies/ actions to individual customers.  
Batch, in-stream or real-time.



Measure the effect of actions with strategy evaluation reporting.

## 4.1 Analytics in optimization

In addition to advanced optimization mathematics, optimization also requires the development of sophisticated models to predict the effect or consequence of different actions, for example predicting sales, cash, interest and bad debt provision on a credit card for different limit scenarios. This will increase the demand on model developers, so it is important that accurate models can be built quickly, which in turn, requires easy access to 'ready-to-use' data.

At the heart of the analytics for optimization is the development of the *utility function* for the organisation, which is based on the business goals. Commonly this goal is to maximise profit and so the organisation must not only be able to define the components of profit, it must also be able to model the effect of different strategy actions on profit.

A key challenge is the core data requirements, which typically includes 12-18 months of observation point and performance data. But optimization requires not only raw data, in order to predict the effect of different actions, similar actions need to have been taken in the past. Ideally different sets of actions will have been taken on similar customer groups in order to effectively enable a valid comparison to be made. This data is used in conjunction with existing models, decisioning strategies, policy rules and Champion/Challenger test group results.

## 4.2 Optimization

Once models are developed, the optimization process enables the user to rapidly and dynamically evaluate the effect of different business goals and constraints to determine the best strategy. The business user needs to understand the implications of different business scenarios, constraints and situations to undertake 'what if' sensitivity analysis.

To determine the best set of customer decisions for the business, the strategy optimiser must be able to quickly evaluate the different constraints on business profitability and performance. Additionally, the strategy optimiser needs to be able to respond to changes in the business environment, competition and business demands.

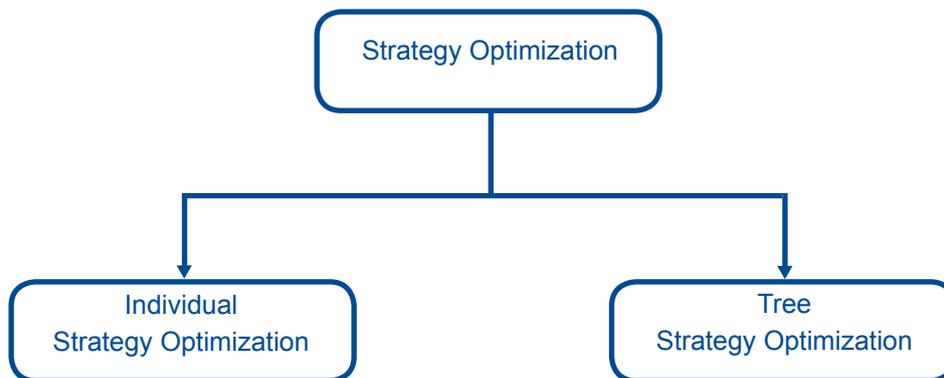
The outcome of each scenario provides an estimate of expected future performance that can then be tracked and evaluated. This not only provides data to enable the business to effectively assess the relative value of different decisions, but also to track and evaluate a set of actions against an agreed metric. This enables the business to predict future trends and to better modify its lending and business strategies.

Prior to deploying an optimised strategy, there are two other factors that need to be considered. Firstly, the business may want to compare the optimised strategy with the existing champion strategy. Secondly, it is important to create future data sets that will enable models to be developed to assess the effect of different actions on similar customers. This is commonly termed 'design of experiments'. As a result, optimization requires the ability to deploy multiple strategies on a Champion/Challenger basis.

## 4.3 Deployment

In order to respond to changes in the business, on a monthly, weekly and perhaps even daily basis (in the case of collections) once the optimal strategy has been selected, it is important to be able to deploy it rapidly. In order to do this, it is critical that the effect of different actions are evaluated prior to deployment. To do this on a daily basis requires a highly dynamic and flexible environment.

There are a range of approaches to deploying the optimization, which depend on the organisation's objectives, operational constraints and deployment challenges.



### Maximise business benefit

- Individual level deployment
- Implement and utilise new models
- Implemented using dynamic strategies tuned to business needs
- Integrated with Strategy Management
- Customer level models required

### Maximise investment in existing systems

- Deployed as strategy trees into existing business rules engine - such as Strategy Management
- Automated tree generation and optimised allocation of strategies to segments
- Optimization can be visualised as rules
- Segment level models may suffice

### 4.3 Deployment *continued*

#### **Tree based optimization**

For many organisations, the simplest approach to strategy optimization uses the existing decisioning environment through the deployment of decision trees into the operational environment.

This is most suited to organisations wanting a rapid solution implementation on an optimization problem with a smaller number of less complex constraints and a limited number of decision options. It maximises the organisation's investment in their decisioning solution by enhancing their rules and strategies. Whilst this approach minimises changes to the technical deployment environment, it has a number of limitations.

Firstly, individual customers are grouped into segments and averaged, which reduces the effectiveness of the action. Secondly, it can take significant time to develop a tree rule base – although to a degree this process can be automated. Thirdly, through having an interim step between optimization and deployment, there is potentially a 'disconnect' between the action recommended by the optimization planning environment and the deployment environment which may result in complications in evaluation and tracking.

### **Individual level optimization**

For organisations wanting to implement the full optimal strategy, the better approach is to allocate the optimised best strategy for each individual customer. The strategy can be allocated directly to each customer record, either in a batch process or through the generation of a decision cache that is executed in real time.

With this approach organisations can achieve the full potential profit improvement and achieve a solution to a complex business problem such as collections and risk based pricing with multiple and interacting constraints.

By having the integrated link between the analytical optimization environment and the deployment environment, predicting the effect of the implemented strategy is relatively straightforward.

### **Individual time-based optimization**

Some organisations have seasonal trends to their business and as a result, taking an action at a different time for the same customer generates a different return or cost. In collections, it can be critical to effectiveness and resource management that activities are taken at a specified time.

Using time-based optimization enables not only the action to be selected but also the best time to deploy that action. For example in limit management organisations would determine not only how much limit to grant but also the most effective time to change the limit.

## 4.4 Evaluation

Once the strategy has been deployed, the effect of customer action needs to be evaluated and compared to the existing champion and/or against the design of experimental challenger strategies.

The first step in evaluation is to measure the actual performance of each profit metric against the values predicted in the model development and optimization processes. This is similar to the bad debt reporting currently undertaken – but done over all relevant dimensions of profit.

Clearly, where there are differences between actual and forecast, this deviation needs to be assessed, understood and passed back into the optimization evaluation process.

## 5. Conclusions

### 5.1 Optimization is delivering real benefit

Organisations have to consider how best to address some of their key business challenges in customer decisioning. Strategy optimization is increasingly viewed as a key part of that change process.

Strategy optimization is a true 'game-changer' because it enables an organisation to work from a top-down perspective, rather than a bottom-up one. The business is able to understand the trade offs between different scenarios and measure the effect of applying constraints.

Strategy optimization enables an organisation to determine the best action for each individual customer and to manage its wider business goals and objectives. It can be applied to most customer decisions across the credit lifecycle. This increases profit because more dimensions can be incorporated into the customer decision.

Strategy optimization allows the management of business change to be directly addressed. Organisations can plan better how to incorporate credit decisioning

## 5.2 The challenges of optimization

into the wider strategic, operational and competitive environment.

Like the bank managers of 20 years ago the management of change will be critical. Moving from rule based decision processes that examine each customer one at a time and explaining the optimization process to senior management, underwriters, and potentially consumers will present significant change management challenges.

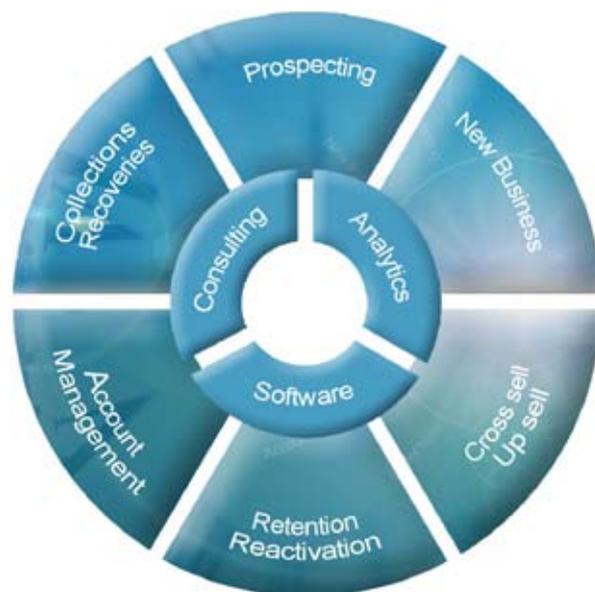
Data volumes will increase and whilst technology has facilitated this, the complexity and challenge of managing large volumes of data will not subside. Optimization will require a different approach to model building and more strategic focus as organisations will be able to simulate many different business scenarios and have to be able to comment on the merits of each.

Credit strategists will be able to understand the benefits of changing customer strategies and implement changes with a far greater degree of certainty, ultimately giving them increased status and influence in the organisation.

## 6. Optimization solutions from Experian Decision

Experian Decision Analytics offers a range of Strategy Optimization solutions that help organisations maximise the value of every action taken, across marketing and credit activities.

We believe that almost every consumer-facing organisation can benefit from Strategy Optimization. Each organisation will have a different range of model development and deployment challenges to overcome so we have developed a range of solutions to suit those different requirements to help organisations realise true benefit from the power of optimization.



### **Marketswitch software**

Experian Decision Analytics' patented, mathematical, constrained optimization technology.

It can be used on its own or as a component integrated with most analytical and credit automation applications.

### **Expert optimization consulting**

Optimization experts provide consulting for best practice design and implementation services.

### **Advanced analytics**

Experian Decision Analytics' specialist model development services incorporate data discovery and enhancement, analysis, solution monitoring and refinement.

## 6. Optimization solutions *continued*

Experian Decision Analytics' Strategy Optimization offers a complete solution, combining consulting expertise, advanced analytics and sophisticated Optimization technology.

Using an advanced Bayesian modelling approach Experian Decision Analytics has developed a methodology for model development to predict the effect of different actions. This, combined with world-leading Optimization technology, creates a complete solution for deployment within your Strategy Management or other decisioning platform.

Experian Decision Analytics consultants work closely with organisations to develop the business case for the deployment of Strategy Optimization. They identify the business problem, formulate the best solution, and recommend how the solution may be deployed within the operational process and how challenger strategies can provide data for future analysis.

Strategy Optimization can be deployed into your existing strategy management trees or as part of a Strategy Management Generation 3 solution for individual level deployment.

## 7. About the author

Richard Turner has worked with Experian for 20 years since graduating from Balliol College Oxford in Engineering, Economics and Management. He has been at the forefront of the development of Experian Decision Analytics' analytical and consulting business primarily involved in the design and development of new customer decisioning products and services.

He is currently responsible for the Strategy Optimization proposition at Experian Decision Analytics – working with key clients to develop next step solutions in Credit and Marketing Optimization solutions.

## 8. About Experian Decision Analytics

Experian Decision Analytics is a global leader in the supply of decision support solutions. Its solutions support billions of customer decisions annually for clients in more than 60 countries. Experian Decision Analytics solutions bring together predictive analytics, decision support technologies and strategy optimization to enrich customer data and allow organisations to proactively manage their relationships with their customers.

Used across the full customer life cycle, enterprise-wide decision support solutions enable organisations to increase income, manage and control credit risk and fraud, reduce operational costs and so increase overall profitability. Experian Decision Analytics works closely with clients across diverse industries, including financial services, telecommunications, retail, leasing, automotive, insurance and utilities.

Experian Decision Analytics solutions and services focus on extracting intelligence from all customer data sources in order to build a comprehensive picture of customer needs and financial stability. This customer level view and the ability to deliver customer level decisioning has proved to be particularly important in retail banking, where a customer may hold multiple products. For over 20 years, Experian Decision Analytics has provided these solutions to the majority of the world's largest retail banks to help them manage these complex relationships.

As part of the global Experian organisation, Experian Decision Analytics has more than 30 years experience of managing bureau data, adding intelligence to that data and delivering scoring solutions. Experian Decision Analytics maintains connectivity with over 70 credit bureaux worldwide and, with 30 offices around the world, it is uniquely qualified to support local, national, regional and global businesses.

Its global headquarters are in Nottingham, UK, Monaco, and Costa Mesa, CA, USA

For more information, visit the company's website on [www.experian-da.com](http://www.experian-da.com)

Experian Decision Analytics is an Experian® company. Experian's 12,000 people support clients in more than 60 countries and annual sales exceed £1.4 billion. For more information, visit the company's website on [www.experian.com](http://www.experian.com)



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