

Collect More for Less: Strategic Predictive Analytics Is Key to Growing Collections and Reducing Costs

Selectively targeting the right debtors with the right collection strategies at the right time increases unit yields, improves collector productivity and reduces costs.

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Executive Summary

This paper examines three methods of analyzing, prioritizing and managing delinquent accounts and implementing strategies to optimize collection results while minimizing expenses. These three techniques are the expert method, traditional predictive analytics and strategic predictive analytics. The paper will illustrate why strategic predictive analytics is emerging as a game changer in collections—showing how financial institutions and collection agencies that employ strategic predictive analytics can better target the right debtors at the right time with the most cost-effective collection strategies to improve collection rates and reduce costs. It takes money to collect money; focusing the most cost-effective strategies on those accounts that are more likely to pay can generate millions in annual returns.¹

Furthermore, the paper will outline how financial institutions and collection agencies can apply the right analytic models around data and leverage that information through the entire collections lifecycle. This exploration will also demonstrate how strategic predictive analytics can be used to fine-tune collection strategies to get the best results.

Note: When people talk about analytics, they often talk about rules-based engines. All of these methods use a rules-based engine; however, some methods use it more effectively and in conjunction with other tools.

Introduction

For years, financial institutions have competed with one another to provide mortgages, home equity loans, vehicle financing and credit cards, but today they are also competing to be the first ones paid back. According to *The Nilson Report*, credit card lenders expect to write off \$395 billion in loans over the next five years.² The outlook is similar for mortgage lenders; they expect an overall default rate of over \$300 billion for loans in-place in late 2007.³

The reason? There is less money to go around. Consumers are directing their financial resources to necessary and ever-increasing living expenses meaning

credit and mortgage lenders are taking a back seat. According to a recent poll in the U.S. regarding payment delinquency, of the people willing to complete the survey, 12 percent have a credit card payment that is 30 or more days past due. Eight percent have a loan 30 or more days past due, which is a 58 percent increase in the past 12 months. Six percent have a mortgage payment 30 or more days past due, a 67 percent increase in the past 12 months. The problem is worse for credit card issuers as consumers consistently report credit card bills as their lowest priority when settling monthly debts.

Given the current economic environment, many financial institutions and collection agencies are finding it more challenging and expensive to collect debt than ever before. In the past, troubled borrowers could take out a home equity loan, line of credit or tap into their retirement accounts to repay delinquent loans. Today, however, those retirement account balances have dwindled, credit is tight and home values have fallen so low that homeowners have watched their equity disappear. The result? They have less access to funds to repay their debts.

Since borrowers can't pay off their debts as quickly, financial institutions and collection agencies have had to adopt a "pay over time" model now more than in the past, which requires additional follow-up from collectors. This translates into increased costs and more effort trying to recoup delinquent payments. More money and time yield fewer funds collected, which means the cost per dollar collected is increasing. The amount of money involved is huge. For most organizations, even a small change in these numbers can mean millions and in some cases tens of millions of dollars to the bottom line. This puts a tremendous amount of pressure on collections management (the managers and analysts that support the decision making process) to find better ways to segment debtors and determine which accounts to work and how best to work them.

In a perfect world, financial institutions and collection agencies would know which debtors would pay, which accounts would become delinquent, how long they would be delinquent and the most effective way to contact the delinquent debtors. This would allow collections management to determine how to best allocate resources to maximize the amount collected while minimizing collection

expense. Collections management could increase unit yields and decrease time and financial resources wasted on those accounts that would not be impacted regardless of the treatment (i.e., accounts that will "self-cure"—pay whether they are contacted or not—or those that have no intention of paying at all.)

The good news: Companies can improve their optimization of resources.

The bad news: Most companies don't do this well.

Expert Method: Experience Is Important but No Longer Enough

Some financial institutions and collection agencies draw on management's historical experience and the most basic account information to prioritize or rank delinquent accounts for collection efforts. This method, known as the "expert method," relies on a manager's judgment and expertise to determine the most effective variable(s) to use and the best segmentation—or which accounts to work harder than others.

Using the expert method, collections management identifies a specific account attribute that affects performance to rank their accounts (i.e., a manager may believe, based on his experience, that a delinquent account with a balance exceeding \$500 for more than 30 days will not be paid). Collections management then determines where the point should be to take different actions on the prioritized accounts, again, based on their past experiences with similar accounts and with little mathematical or business analysis.

Results of Expert Approach Are Restricted.

The following example illustrates how the expert model is used.

Coach A is tasked with organizing a college basketball team, and his salary will be based on the number of games his team wins. There are no basketball tryouts; instead, he must select his team members based only on a single, structured data point in the college administration database. Using an expert model, Coach A decides the college population should be segmented by height and all students taller than 6 feet 3 inches will be recruited.

The coach selected this criterion because, in his past experience, the majority of good basketball players are taller than 6 feet 3 inches. The single variable and the segmentation point are based solely on the coach's experience; these decisions make up the strategy which the coach will use to pick his team.

Once the coach has made the "best" decision based on his experience, the athletic department must carry out the strategy. That includes using the database to identify any students over 6 feet 3 inches tall and then to recruit the identified students. This can't be done without the college's IT staff coding the athletic department's database system to use the rule (students over 6 feet 3 inches tall or not) to implement the corresponding action (contacting the student or not for recruitment).

There are significant shortcomings in this approach. The coach makes selection decisions based only on one factor and relies heavily on his personal experience. He completely ignores other performance-impacting attributes, such as skill levels and basketball experience. This is where the expert model for prioritizing collection accounts falls short. It is hampered by its lack of sophistication and limited data set. Strategy decisions are based on personal experience and are limited to the structured data that rarely change (i.e., data that is available in the master file, such as account balance, account opening date and phone number). Basing decisions on information that is not up-to-date compromises the accuracy of the decisions.

Still, using the expert method is better than using no analysis at all. The expert method of prioritizing delinquent accounts for collections is more effective than randomly selecting delinquent accounts to target. Experience yields insight: A collection strategy that worked for one delinquent account might work for other similar accounts. But when collections management needs to collect more for less, this method is no longer good enough.

Traditional Predictive Analytics: Kick It Up a Notch

The traditional predictive analytics method of optimizing collection efforts and results is a step up from the expert model and provides an alternative collection solution.

Traditional predictive analytics uses mathematical algorithms to analyze current and historic account data and the relationships between this data to generate a predictive behavior score. As with the expert approach, structured account data is used, but in traditional predictive analytics, statistical logic is used to find the correlations between the structured data fields and the desired outcome. To do this, tens of thousands of accounts typically are analyzed and a mathematical "model" is built by weighting each piece of structured data used based on its past relationship to the future outcome. The resulting behavior score based on weighted data is a faster and more accurate way to rank order accounts than what an individual could accomplish analyzing the same data.

Traditional predictive analytics is more accurate and efficient than the expert model because algorithms compare current and historical data from thousands of accounts to determine a behavior score. Additionally, the score is based on more of the structured data in the master file, and not just a single variable.

Back on the basketball court, Coach B uses traditional predictive analytics to create a "playability" score for all students based on all the structured factors in the college administration database. These factors include height, basketball experience/years played, points scored, rebounds, speed and physical fitness as included in the database at the time each student entered college. Using traditional predictive analytics, Coach B can rank the student population based on each student's likelihood to be a good basketball player based on these data and the correlation between the data. In other words, he uses traditional predictive analytics to develop a playability score. (This is better than the expert model used by Coach A, which weighed only one piece of the structured data, height, to rank the student population.)

What now? Even with this improved playability score, how does Coach B pick the "best" players for his new team? Coach B still can't make an effective decision without more timely and relevant information. Does the student show up for practice? Is the student a team player? Has the student recently suffered a sports-related injury?

Since Coach B doesn't have this information, he must make the decision regarding where to segment the population based only on his experience. The only difference between how Coach A and Coach B identify their respective strategies to choose players is that one makes his decision based on a single variable (everyone over 6 feet 3 inches tall) and the other bases his decision on a playability score (everyone over a score of "X", with "X" being determined at Coach B's discretion). Both segmentation decisions are expert-based and do not include cost-benefit modeling.

As with the expert model, once Coach B has made the "best" decision using his experience, he has to engage the IT staff to code the correlating action for each segment of the population so the athletic department can carry out the recruiting needed.

Compared to the expert model, the traditional predictive analytics method provides more insight into players' abilities than one variable alone. For collections, this means traditional predictive analytics gives collections management greater insight into debtors' account history providing the advantage of a traditional behavior score to more accurately rank order accounts for collection decisions.

Some Traditions Can—and Should—Be Improved Upon.

Traditional predictive analytics improves the collections process when compared with the expert model, but it also has limitations. While traditional predictive analytics uses algorithms to factor all structured variables into a collectability score, it has three significant disadvantages:

→ Inaccurate and untimely data: Structured data, such as account balance, account opening date and phone number, rarely change. Traditional behavior scores are generated based on the information entered into the master file, usually sometime in the past such as when the account was originally opened or when it initially went delinquent.

For example, the absence of a telephone number in the master file often results in a lower behavior score because customers without a valid telephone number have a low likelihood of paying when delinquent. However, it's possible that since becoming delinquent the account has been updated with a recent phone number. Since scores are generated infrequently, this change is not reflected. As a result, a collector doesn't have a timely view of that account.

- → IT resources required: Once traditional predictive analytics is used to create a behavior score, a financial institution's or collection agency's IT department must make changes to the rules system to implement the collection strategy, which can be time consuming and delay collection activity. Furthermore, should a collector decide to change this strategy after it has been implemented, IT must again be called in to make changes to the rules engine.
- → No cost-benefit analysis: Traditional predictive analytics offers no integrated way to determine the cost-benefit of a particular collection strategy. This makes it difficult to determine which segmentation points and which communications strategies are the most cost-effective. As a result, financial institutions and collection agencies end up making "expert" decisions about segmentation points. They have little way of knowing if their collection strategy is the most advantageous and tend to find the break-even point through separate testing which is both time- and IT resourceconsuming.

Strategic Predictive Analytics: Tradition Mixed with Innovation Changes the Game

Traditional predictive analytics is an improvement over the expert model, but a new approach—strategic predictive analytics—has emerged as a more efficient and cost-effective method to prioritize collections efforts. And it has the potential to change the collections industry. Strategic predictive analytics leverages traditional predictive analytics' ability to generate enhanced-value behavior scores using algorithms, but it goes further, by enabling more current and free-form data sources, using simulations to determine break-even points and dramatically improving ease of operational integration. This allows collections management to target the right debtors at the right time, with the right communication strategies, all with less need for scarce IT resources.

How Do Strategic and Traditional Predictive Analytics Differ?

There is one dramatic difference between strategic predictive analytics and traditional predictive analytics:

Strategic predictive analytics software integrates the tools needed to make better decisions throughout the collections lifecycle into a single package. The software incorporates multiple tasks that traditionally require several software systems, a mass of IT resources and scores of hours from collections management—all of which are conducted more simply, quickly and accurately than with a traditional predictive analytics tool.

Two important value-added features of the combined strategic predictive analytics solution are the integrated real-time cost-benefit analysis tool and the straightforward, strategy execution process, both of which require little to no IT resources to employ. With a robust business analysis tool included in the software package, collections managers can experiment with various segmentation options to identify the point where collection strategies are no longer profitable for specific accounts. They can then get those more intelligent strategies into production quickly and focus their efforts where the return is the greatest.

Implementation is the unmatched delineator between strategic predictive analytics and traditional predictive analytics. With the integrated predictive analytics software package, production, execution and changes throughout the campaign are virtually trouble-free and require little to no IT resources. An uncomplicated execution process is critical: If the appropriate collection treatment isn't going to be applied to the right accounts.... Well, then there's no reason to have built a better model in the first place.

Traditional predictive analytics, on the other hand, requires several software platforms, along with laborious manual decision making and execution, to maximize the amount collected while minimizing collection expense.

For example, traditional predictive analytics does not include an integrated method to complete the business analysis of a particular segmentation point and identify the resulting strategy. Collections management has to put the data into another software product to find the break-even point through separate testing which takes up time and IT resources. Because of this, cost-benefit business analyses are often not carried out. Thus, financial institutions and collection agencies often end up making "expert" decisions about segmentation points without any non-judgmental supporting knowledge. They might have a better way to rank the accounts but decisions about which collection and communications strategies are the most profitable end up being based on educated guess work.

Then there's the considerable need for IT resources. With traditional predictive analytics, IT resources are required to code the split points and actions for each segment of the population into the rules engine. This can be time consuming and delay collection activity.

Accurate and timely execution can be difficult also when using the traditional predictive analytics collection method, and, therefore execution—arguably the most important step in the collections process—often falls through the cracks. Generally this is because production in the other systems requires additional coding and IT resources, which can be a lengthy and complicated process.

Finally, once the campaign is in place, performance results or changing priorities will inevitably dictate changes to the strategy. IT must again be called in to make changes to the rules engine.

What Strategic Predictive Analytics Offers.

Strategic predictive analytics can increase revenue up to 15 percent over financial institutions' and collection agencies' current collections process. Additionally, these entities can decrease collection costs 10 to 25 percent by reducing the number of collectors working accounts, reducing costs for letters and dialing efforts and using less IT resources when placing predictive analytics strategies into production. Specifically, strategic predictive analytics can help accomplish the following objectives:

- → Prioritize collection accounts based on accurate, timely and relevant data
- → Predict which delinquent accounts will self-cure
- → Understand which customers are unlikely to pay no matter how much time and financial resources are invested
- → Identify the point where collection strategies are no longer profitable for specific accounts
- → Determine when a more cost-effective contact method such as e-mail is as likely to get the same response as a more costly contact method such as a phone call
- → Optimize resource allocation through more intelligent strategies and focus efforts where return is the greatest
- → Predict the right settlement offer to make and when to extend the offer

Strategic predictive analytics is built on the principle that what collections management does with a model "score" is as important, if not more important, than the accuracy of the model. Other predictive methods (expert or traditional predictive analytics) only help to rank order debtors; collections management can have the most accurate score in the world, but it is essentially useless if they don't know how or are not able to put that rank ordering to work. With strategic predictive analytics, the cost-benefit analysis and the ability to easily and quickly get from a decision to action is critical to increase the amount collected and reduce collection costs. Using strategic predictive analytics, collections management can create better models, make more informed and accurate decisions and execute those decisions faster, cheaper and with fewer resources.

Strategic predictive analytics: Following through on the action is as important, if not more, than the model's accuracy

To complete the basketball example, if Coach C uses strategic predictive analytics to select his basketball team, he can create an enhanced playability score based on the same structured data Coach B used in the traditional predictive analytics example (height, basketball experience/years played, points scored in past games, rebounds per game, speed and physical fitness). Coach C's strategic predictive analytics method also allows him, though, to include in the playability score more information from the database—including free-form text from the "Comments" field. For example, a talent scout might have made a note last week in the database that a certain player received an All-American award in high school which is likely to impact the player's ability to enhance the team's success. Including this timely, free-form text in the analysis results in a more accurate and useful score.

Whereas traditional predictive analytics creates a playability score based on these attributes at the time the students entered college, strategic predictive analytics can analyzethisinformationatanypointinthestudent's college career. It can take into account any changes in physical fitness, speed and skills learned week to week or whenever the database is updated, including those nuggets of free-form text information.

Greater still, using strategic predictive analytics, Coach C can run simulations that go beyond the score and use various metrics to appraise the success of the team. In these simulations the coach, in real time and any time before or after committing to a strategy, can see the effect of changing the segmentation points. Once Coach C makes the best decision using more accurate, timely and relevant analytics and having run the results through the integrated playability analysis tool, he can assign the correct action in the database correlating to the rule determined for each segment. This allows the athletic department to carry out required recruiting without having to engage the IT staff every time the Coach makes changes to the scoring model.

Reviewing these three examples, Coach C has the best tool to predict and select the most qualified college basketball team. Similarly, collections management using strategic predictive analytics has the best tool to prioritize delinquent accounts and analyze the most cost-effective collection strategy and then put it into action.

How Strategic Predictive Analytics Works.

Using a strategic predictive analytics software package, collections management can prepare and transform more timely and complete data—along with the free-form text that often is included in some database fields. Collections management then uses the data to create, in a matter of minutes, a model using the metrics that the management team cares about most. This results in enhanced-value behavior scores, and the software ranks the accounts based on those scores.

Collections management can run real-time simulations to identify the position in the rank at which returns are optimized, allowing operations to focus resources on the accounts that are most likely to pay. This also ensures collections management does not use strategies that cost more to implement than they stand to collect. Because the software allows action codes to be put onto the accounts in each segment, the simulation leads to a strategy which can be implemented immediately.

The next step is essential—ensuring the right accounts receive the appropriate collection treatment. This is the real point of differentiation between strategic predictive analytics and other collection methods. Execution is critical and gets to the key principle behind strategic predictive analytics: What you do with the model is as important, and maybe even more important, than the accuracy of the initial model.

With predictive analytics software, moving a decision into production is automated because the software allows for the correct "action code" used by the downstream system to be placed on each account. The downstream systems only need simple coding to execute the action codes already provided. After this initial coding is done to put the decision into production, no IT resources are required for additional coding. Thus, it takes only a few minutes to move the strategy into production, helping to ensure a smooth implementation and minimizing opportunities for human error. Accurate and timely execution can be difficult when using other collection methods, and, therefore, it often falls through the cracks. Generally this is because production in the other systems requires additional coding and IT resources, which can be a time- and resource-consuming process.

Finally, collections management can measure the effectiveness of their campaigns and make any strategy changes as needed. Using strategic predictive analytics software, collections management can quickly make these changes themselves instead of having to enlist IT resources to implement changes.

Remember, all of this is done in a single, integrated strategic predictive analytics software package.

Strategic predictive analytics is a game changer.

- → Simple implementation: Initial coding is required to put the decision into production, but this effort is significantly reduced as the coding only needs to execute on the action codes provided. Further modeling and changes to the decisions at any point post-implementation are simple to make and require little or no IT resources. Lastly, automated implementation takes the decision through downstream systems and ensures the decision is executed accurately and within the operations timeframe.
- → Real-time simulation: Collections management can establish segmentation points (based on the rank produced by the system earlier in the process), and then run real-time simulations of various potential segmentation points through the integrated modeling tool. By understanding the cost-benefit of various potential segmentation points, collectors can better determine which strategies are most profitable. Strategic predictive analytics is the only method that provides immediate business analysis through an integrated modeling tool. Every other method requires additional software.
- → Access to more data: Whereas the expert model and traditional strategic analytics use only structured data, strategic predictive analytics uses structured data, as well as more timely and relevant account data: free-form text, such as notes or comments in the file, is gleaned from previous call center or collections contacts noted in the database.
- → *Minimize human error:* Because strategic predictive analytics uses automation, collections management can reduce the likelihood for human error throughout the collection lifecycle.

Because free-form text changes often (and because production changes are simple and convenient), collections management can score more often and make more timely decisions. The newer data used in the enhanced scoring better reflects current marketplace status, trends and debtors' situations. Additionally, it allows collections management to make short-term decisions based on any specific circumstances noted in the database. Making campaign changes based on recent information can have much more impact than long-term decisions based on general account factors.

Side-by-Side Comparison of the Three Collection Optimization Methods

The differences between the expert model, traditional predictive analytics and strategic predictive analytics can be seen in the comparison below.

	Expert Model	Traditional Predictive Analytics	Strategic Predictive Analytics
Variable/Score and Data	Segmentation variable chosen by collections management based on their historical experience with a limited number of accounts Collections management uses, as additional input to their decision, the most basic structured account information, which is usually outdated	Traditional behavior score based on mathematical algorithms that describe the correlations between the input data and the outcome using tens of thousands of accounts Algorithm uses structured data only; scores are based on outdated and often inaccurate data	Enhanced-value behavior score also based on mathematical algorithms and correlations between data from tens of thousands of accounts Algorithm uses structured data as well as free-form text; scores are based on more up-to-date, relevant data
Segmentation Point	 Segmentation point chosen by collections management based on their judgment and experience Involves no mathematical analysis or business modeling 	Segmentation point also chosen by collections management based on their judgment and experience Involves no mathematical analysis or business modeling; additional software is required in order to conduct a cost-benefit analysis	 Segmentation point based on real-time cost-benefit analysis of various options Conducted through integrated modeling software
Execution	Requires IT resources to code downstream systems based on segmentation decisions	Requires IT resources to code downstream systems based on segmentation decisions	Requires fewer IT resources to code simple rules to execute "action codes" in downstream systems
Post Implementation Changes	IT resources required for recoding of any post- implementation strategy changes	IT resources required for recoding of any post- implementation strategy changes	Collections management can make post- implementation strategy changes directly in the system in minutes; no IT resources needed

^{*}See Appendix A for visual comparison of methods.

Real-World Results of Strategic Predictive Analytics

Financial institutions and collection agencies have used the First Data PREDIGY® solution, a strategic predictive analytics system, to increase collector performance, reduce collection costs and increase overall profitability. Here are two success stories:

Saved \$2.1 million in losses: One financial institution wanted to improve returns in early stage settlement offers to cycle 3 and 4 delinquent accounts and to operationalize this process as an integrated strategy within its existing collections workflow. First Data helped the financial institution build and benchmark a strategic predictive analytic model against an existing custom model. Both models were designed to predict cycle 3 and 4 bad accounts.

The financial institution needed to minimize their need for IT resources. Using the PREDIGY® solution they found that, based on a fixed number of settlement offers, the integrated strategic predictive analysis software package was able to target an additional 11 percent of bad accounts while reducing the incorrectly targeted good accounts by 27 percent. More accurate scoring provided annual returns for cycle 3 and 4 accounts exceeding \$2.1 million per year. The bottom-line results drove a 50-basis-point reduction in net credit loss due to targeting early-stage settlement offers.⁷

Increased collector performance by 18 percent: An accounts receivable management agency had older accounts that had already been worked by other collectors. In addition, commission fees were decreasing, so wasted effort translated into monies lost.

The agency quickly and easily implemented the strategic predictive analytics solution to determine which groups of customers within a portfolio were most likely to pay. Once those accounts were segmented, the company focused its resources on the most promising groups of accounts. As a result of using this collection method, the company increased collections on its portfolios by 18 percent starting in the first month of production and reduced wasted effort (and costs) on accounts unlikely to produce results as compared to the expert method they had been using.⁸

Selecting a Strategic Predictive Analytics Platform

All financial institutions and collection agencies should use some form of analytics, and it's clear that the benefits of strategic predictive analytics make it a superior choice.

While the majority of financial institutions and collection agencies use analytics on some level, First Data's experience shows that some creditors use predictive analytics primarily in the early stages of collections, especially for the self-cure decision. As the delinquency period increases, predictive analytics usage drops off dramatically and collections management falls back on expert models to prioritize collection efforts.

This drop in usage might be the result of the predictive analytics platform they're using. Just as not all debtors are created equal, neither are predictive analytic platforms. For the best results, select a platform that meets the following criteria:

- → Supports analysis of all structured data, transactional data and free-form text
- → Automates the modeling process, reducing the potential for human error in the execution phase
- → Simulates scenarios in real time to identify the cost-benefit of each decision
- → Requires simple coding to execute new models or strategies
- → Post-implementation model/strategy changes require few IT resources
- → Provides codes for use in downstream systems or that of a call center/letter shop
- → Is hosted in a secure, Web-based environment

Getting the Most from a Strategic Predictive Analytics Tool

As noted earlier in this paper, the key principle of strategic predictive analytics is this: What you do with the results of the model impacts your success as much as, and maybe even more, than the accuracy of the initial model.

To be most effective, collections management should incorporate the strategic predictive analytics platform throughout the entire collections lifecycle. Perhaps most importantly, the tool should be leveraged for all downstream systems to ensure that the right accounts receive the appropriate collection strategy.

Lastly, it's important to have the ability to track collection performance to determine which action was most effective (i.e., letter, phone call, SMS/text, e-mail, etc.) in order to further enhance model performance and then put that information to use by immediately incorporating it into the automated strategic predictive analytics tool.

Conclusion

In today's economy, consumers have less money to pay their bills and they are prioritizing the bills they have, including mortgage, insurance, loans, utilities, healthcare, phone and credit cards. This situation has resulted in rising delinquencies across the board. Financial institutions and collection agencies are competing with one another to collect their piece of the shrinking pie, and they need to compete harder than ever before to collect their share or face even more charge-offs. But it takes money to collect money, and the cost of wasted effort (i.e., working harder on those accounts which are not as likely to pay) is high.

Of the three commonly used decisioning methods (expert model, traditional predictive analytics and strategic predictive analytics) strategic predictive analytics has emerged as a game changer in the collections industry. It offers collections management a mathematically-driven method to prioritize collection accounts and determine the most cost-effective collection strategies and facilitates putting them into action. Additionally, it requires minimal IT resources, offers real-time cost-benefit analysis, provides access to more data and minimizes human error.

Using strategic predictive analytics tools such as First Data's PREDIGY® solution, financial institutions and collection agencies can generate millions in annual returns, increase dollars collected up to 15 percent and decrease collection costs by 10 to 25 percent.

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²New York Times, "Willing to Deal," January 3, 2009.

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⁴Online Resources Corporation case study, "Short on Money, Will Your Customers Pay Your Bill?" December 2008.

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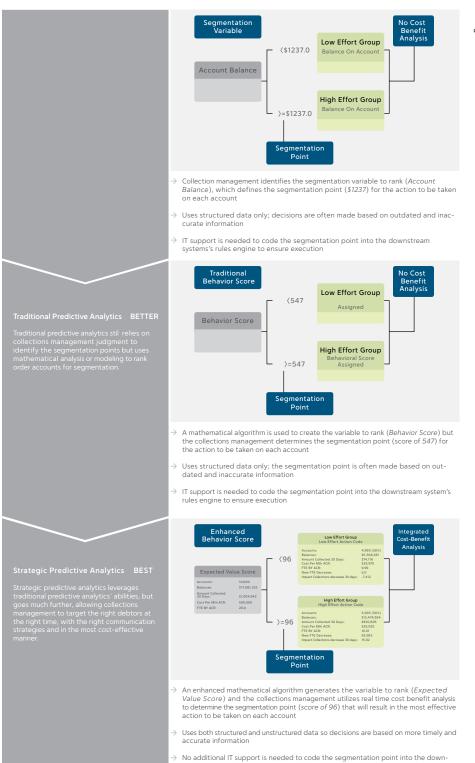
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Appendix A:

Visual Comparison of the Three Collection Optimization Methods



stream system's rules engine to ensure execution



About The Author

As Director of Professional Services Receivables Management, Don Davey helps operations increase performance and reduce cost using analytics and other technologies. He also works closely with First Data's product team to combine and design solutions that suit the evolving needs of the accounts receivables industry. Don has nearly 20 years of experience in the collections industry, ranging from running a collection call center operation in Germany to helping develop cutting-edge collection analytics and decisioning products. Don has served in senior positions at Intelligent Results (acquired by First Data in 2007), Citicorp, Nationwide Credit, GE Capital, Asset Management Outsourcing, Fair Isaac and Regions Financial. He earned his bachelor's degree from the University of Idaho and served six years as an officer in the United States Marine Corps.

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