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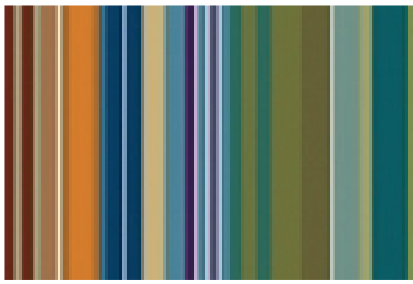

# DRIVING INTERNAL COLLECTION RESULTS WITH STATISTICAL-BASED CREDIT SCORING

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# INTRODUCTION

***Using statistical-based credit scoring for the development of risk-based collection strategies can Improve DSO, reduce write-offs and drive profits.***

During the past decade, credit scoring has become one of the most powerful tools available for automating the risk analysis necessary for evaluating the collectibility of a company's accounts receivable portfolio. One of the reasons for this is rapid technological advancement and the tremendous amount of downsizing that has occurred in corporate America, thereby requiring Credit & Collection departments to do more with less, to do it quicker and make better decisions in the process. Executive Summary

During the past decade, credit scoring has become one of the most powerful tools available for automating the risk analysis necessary for evaluating the collectibility of a company's accounts receivable portfolio. One of the reasons for this is rapid technological advancement and the tremendous amount of downsizing that has occurred in corporate America, thereby requiring Credit & Collection departments to do more with less, to do it quicker and make better decisions in the process.

The largest asset on most companies balance sheets is their accounts receivable and the goal of the Credit & Collections department is to manage this asset through the proper evaluation of customer risk and the timely collection of outstanding invoices.

Efficient collections ensure ongoing cash flow streams that meet a company's financial objectives including reduction of days sales outstanding (DSO), bad debts and write-off's.

To achieve these goals, many companies have implemented strategic plans that combine workflow automation technology with statistical-based credit scoring using the company's internal AR data as the critical risk evaluation factor, thereby allowing departmental labor to more efficiently manage inherent customer risk, internal resources and improve the performance of the receivables portfolio. We call this the Methodology of Statistical Risk Based Collections

## HOW ARE COLLECTIONS MANAGED IN TODAY'S CREDIT DEPARTMENT?

If your company has one internal collector for every 1,500 customers, how does the collector determine which customers they should focus on, what type of treatment should be used for a given customer, and when they should apply that treatment?

Today, in most Credit & Collections Departments, collection prioritization is based on aging. The customer who owes the most money, for the longest period of time, receives the highest priority in the collection process. Typically, an accounts receivable portfolio will be reviewed on a periodic basis and segmented and sorted based on dollars and age of the amounts due. Collectors will use these aging reports or aging information in an automated environment to develop and manage their collection strategies and activities.

The Credit Research Foundation's 2006 Credit Scoring Survey reported that of companies who are using credit scoring for risk analysis, almost 25% of them are also using credit scoring for collections, up from 21% in 2003.

The early adaptors of credit scoring focused on front-end analysis, making an initial credit decision or analyzing a credit line. However, the survey indicated that the trend is changing. On average only 10% of a credit department's time is spent on credit analysis and 90% is spent managing their customers and collecting money. This has resulted in more and more companies using credit scoring for their back-end analysis, thereby providing the basis for managing the day to day relationships with their customers, resulting in improved cash flow.

## WHY RISK BASED COLLECTIONS?

Based on industry analysis, using only aging to prioritize collection activities can often result in the wrong treatment being applied to the wrong customer at the wrong time. In addition, due to the primary focus on high dollar accounts under the aging method, high risk, low dollar accounts may be ignored. Accounts that may have higher Dollars at Risk (DAR) may become lower priorities because they owe lower actual dollars even though the percent of these dollars that are at risk is far greater than many higher dollar accounts. In fact, by not taking into account the customer's inherent risk the wrong strategy may frequently be applied.

If 90% of the Credit & Collections Department's time and resources is spent managing the customer portfolio and collecting money, shouldn't they be better allocating their time and more efficiently managing the company's largest asset by applying risk based credit scoring as the basis for developing optimal customer management strategies?

Risk-based collection methodology uses statistical-based credit scoring to determine inherent customer risk and uses that risk level as the primary driver for determining

collection strategies for the on-going management of the customer portfolio. Research has shown that the age of an account and the amount due are the wrong criteria to use if you want to optimize collection efficiency, improve DSO and reduce write-offs.

## WHY STATISTICAL BASED SCORING MODELS WITH INTERNAL DATA?

If the decision is made to use inherent risk as the key driver of your collection strategy then why use statistical-based risk and not judgmental-based risk? And why use only internal AR data, and not credit bureau data?

Let's first review what a statistical-based model is. Statistical-based credit scoring models are designed to predict the inherent risk of your customer, including the probability that the customer will become seriously delinquent, go to write-off or file for bankruptcy at some point in the future, usually within six month from the scoring date. Statistical models "quantify risk" by telling you what the odds or probability of the delinquency occurring is, thereby giving you the ability, from a dollar perspective, to know what the value of your risk is.

Judgmental-based scoring models only let you know what the "quality of risk" is with a customer, they are ranking systems where the company with the highest score is considered the lowest risk and the company with the lowest score is considered the highest risk. Judgmental scoring does not tell you what the probability or odds are that a given company will pay its bill within any particular time period. Also, when the two methods are compared to each other by analyzing the same set of customers over the same time period, statistical-based scoring always outperforms judgmental scoring in predicting those customers that will become serious credit risks.

In building a statistical model, for existing customers, the most important model variables are the internal AR data that is used to develop the model and score the portfolio. Specifically, the most valuable internal data is your payment experience with the customer. It has proven to be, by far, the most predictive data that is available. The best predictor of future customer payment performance is customer payment history. It is information that you have on every customer and comes at no cost.

This data alone, when used in a statistical model, will outperform any type of credit scoring model that is based primarily on credit bureau data and does not contain specific customer payment history. We are not saying that there isn't any value in bureau data, there is, specifically for new customers where you do not have payment history. And, we have found that if bureau data is blended with A/R data in a statistical model, there is typically a 5% to 10% improvement in the predictiveness of the model. However, is the additional predictiveness worth the incremental cost?

A very powerful argument on behalf of using statistical-based credit scoring driven by internal AR data for managing your collection portfolio can be made if by using only

internal AR data in your scoring model you achieve a 10% to 200% improvement over a model that uses only bureau data and, in addition, costs substantially less.

## HOW A STATISTICAL MODEL BASED ON INTERNAL A/R DATA IS BUILT

Another advantage of using statistical-based scoring for developing collection strategies is that statistical models are built through a validation process that documents the model's ability to predict a payment problem. Historical data is used where the result of the customer's payment activity is already known and the model's predictive ability can be accurately determined. With a statistical model you can be confident that the model works because of this validation process.

For a validation analysis, a company usually provides the modelers with 18 to 24 months of historical month-end AR information (aging data plus other internal data elements) on their entire customer portfolio. This data is split into two groups, a holdout sample (the most current 12 to 18 months of data) and the model development sample (the oldest six months of data).

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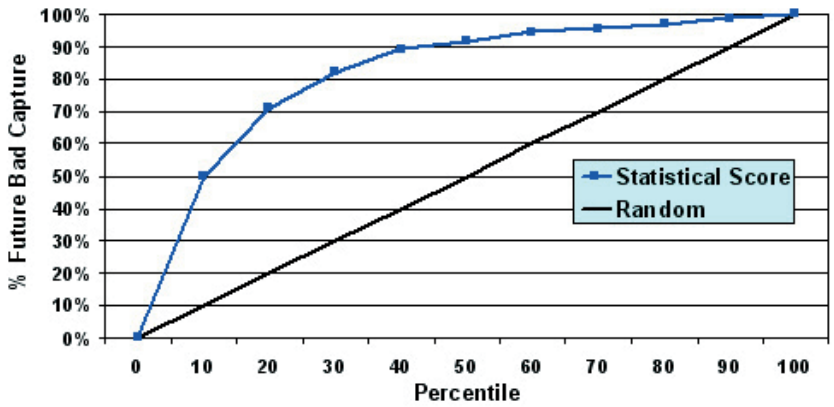
*Statistical score captured 82.1% of all future BADs through the 30th percentile*



*What statistical portfolio analysis can tell you*

DOLLARS AT RISK (DAR) - June 2005
ALL ACCOUNTS

| RISK CATEGORY | Score Range | Expected BAD Rate in Risk Category | Number of Accounts in Risk Category | % Scored Accounts in Risk Category | Cum % Scored Accounts Thru Risk Category | A/R in Risk Category | % A/R in Risk Category | DAR in Risk Category | % Scored Accounts DAR in Risk Category | Cum % DAR Thru Risk Category |
|---|---|---|---|---|---|---|---|---|---|---|
| Extreme Risk | =23.03 | 65.3% | 2,982 | 4.9% | 4.9% | $ 37,491,371 | 17.9% | $ 24,867,265 | 54.5% | 54.5% |
| Very High Risk | 23.03 to 44.44 | 32.6% | 2,742 | 4.5% | 9.5% | 54,617,944 | 26.0% | 17,385,786 | 38.1% | 92.7% |
| High Risk | 44.45 to 49.60 | 18.8% | 2,472 | 4.1% | 13.6% | 10,184,832 | 4.9% | 1,845,698 | 4.0% | 96.7% |
| Moderate Risk | 49.61 to 71.23 | 7.9% | 4,199 | 7.0% | 20.6% | 7,715,706 | 3.7% | 1,490,370 | 3.3% | 100.0% |
| Low Risk | 71.24 to 79.71 | 3.3% | 5,476 | 9.1% | 29.6% | (2,388,166) | -1.1% | - | 0.0% | 100.0% |
| Very Low Risk | >79.71 | 1.3% | 42,408 | 70.4% | 100.0% | (625,231) | -0.3% | - | 0.0% | 100.0% |
| Total Scored Accounts | | 7.2% | 60,279 | 100.0% | | 106,996,456 | 51.0% | 45,589,118 | 100.0% | |
| Percentage of Scored A/R Portfolio at Risk | | | | | | | | 42.6% | | |
| Bad At Score | 999 | 100.0% | 8,420 | | | 43,537,846 | 20.7% | 43,537,846 | | |
| Too Thin to Score | 998 | - | 5,153 | | | (13,151,643) | -6.3% | - | | |
| Other | 997 | - | 41 | | | 72,475,512 | 34.5% | - | | |
| Total Non Scored Accounts | | | 13,614 | | | 102,861,715 | 49.0% | 43,537,846 | | |
| Total All Accounts | | | 73,893 | | | $ 209,858,171 | 100.0% | $ 89,126,964 | | |
| Percentage of Total A/R Portfolio at Risk | | | | | | | | 42.5% | | |

The monthly statistical portfolio analysis of your customer's accounts receivable can provide a tremendous amount of information, not only to drive your internal collection strategies based on inherent risk, but to quantity the risk from a dollar perspective. The above Table represents a Dollars at Risk (DAR) Analysis for a scored portfolio of 55,000 accounts. This summary analysis tells you that the Extreme Risk Group contains 2,982 customers with an expected Bad Rate of 65.3%. These 2,982 customers represent 4.9% of the total portfolio and have a month-end AR balance of $37,491,371, which represents 17.9% of the total outstanding AR. Multiplying the Bad Rate of 65.3% by the AR balance of the group tells us that the Dollars at Risk of the Extreme Risk Group is $24,867,265 which is 54.6% of the total Dollars at Risk in the portfolio. So, 4.9% of the accounts, representing 17.8% of the AR, accounts for 54.4% of the DAR for the entire portfolio, a very significant segmentation. Identifying more than half of your risk within less than 5% of your portfolio allows you to develop more efficient strategies to manage your risk and internal resources by allowing you to focus on the real problems and not waste valuable resources on areas that are not really a problem.

Statistical-based credit scoring proves time and time again that your ability to get paid in a timely fashion is independent of the age or the amount of money due from a customer. Instead, your ability to get paid is based on the customer's inherent risk. Lets say you have two customers that need to be worked on, the first owes you $100,000 and is 30 days past due and is a Low Risk account with a 1.1% expected Bad Rate. The second customer owes you $10,000 and is only 10 days past due but is an Extreme Risk account with a 65% bad rate. If you compare these two customers you will find that the customer, who owes you less money, for a shorter period of time, represents a far greater risk to your company.

To illustrate this point, multiply the $10,000 by the Extreme Risk Bad Rate of 65% to get the DAR for this customer of $6,500. The customer that owes you $100,000 and is aged out further, but scores as Low Risk and has an expected Bad Rate of only 1.1% has a DAR of only $1,100, far less than the high risk customer. Using the aging method to prioritize collections, the customer who owes more money but has a lower DAR would have a higher priority in the collection process, while using a statistical-based risk strategy you would focus on the customer who owes lower dollars, for less time, but has a significantly higher DAR.

## INTEGRATING STATISTICAL BASED SCORING WITH WORKFLOW AND COLLECTION AUTOMATION APPLICATIONS

Many companies, today, are using credit & collection workflow and automation applications for the day to day management of their accounts receivable portfolio as well as their credit & collection personnel. Companies who have successfully implemented these solutions typically see substantial improvements in daily processes within 12 months of implementation.

Companies who use statistical-based scoring for developing collection strategies and also use some sort of automated collection workflow application that can build and implement automated collection strategies based on risk definitions achieve an even greater improvement from the utilization of credit scoring. Companies who are using credit & collection workflow automation application that also have judgmental scorecard capabilities can also leverage the power of statistical-based credit scoring by using the data variable outputs of the statistical model as data elements in a judgmental credit line scorecard. Data such as the customers risk category, probability of bad and dollars as risk can all be use to help drive credit line scorecard analysis bringing greater predictiveness to the model.

Workflow and collection automation applications provide companies with the technology infrastructure that is needed to more efficiently manage the day in and day out workflow of credit and collection professionals. Whether they are managing collections or credit analysis, statistical-based credit scoring integrated with these technology tools can have a substantial impact on the process of managing a company's accounts receivable. When statistical-based credit scoring is integrated directly into these types of applications, to help drive the application through the use of risk based collection strategies and risk based credit lines, users will see a substantial lift in system performance and potentially a 5% to 20% reduction in DSO.

## BENEFITS OF STATISTICAL-BASED COLLECTION SCORING WITH PREDICTIVEMETRICS

Founded in 1995, PredictiveMetrics (PMI) is a leading provider of statistical-based scoring solutions for the commercial market. PMI's signature product, Net30Score™, quickly and accurately predicts the likelihood that an existing customer will become severely delinquent, go to loss, or file for bankruptcy within six months of the date the customer was scored. Net30Score is used for the development of optimal risk-based collection strategies as well as risk-based credit lines.

Net30Score utilizes PMI's advanced statistical technology to develop a risk model that combines historical trade information with credit and collection policy rules, thereby providing a credit evaluation solution resulting in superior credit risk analysis and a substantial increase in credit and collection department productivity and efficiency.

Specifically, by knowing and using the probability and odds of the occurrence of specific credit and collection events, it is possible to optimize the allocation of the resources available, in a given credit and collection environment, thereby developing strategies that mitigate the possibility of negative results, while simultaneously increasing the credit lines of low risk accounts and providing the opportunity for additional revenues. Judgmental systems can not do this.

To prove that PMI's Net30Score can provide a better analysis of credit risk than any other method; PMI will perform a FREE "Net30Score Validation Analysis" based on a company's current AR data.

PMI's analysis compares the Net30Score predictions to the actual results and provides users with various outputs that lets them know just how well Net30Score did and what they can expect if Net30Score is implemented at their company. This validation analysis, using only a company's internal data, is prepared at no cost so that they can properly evaluate the applicability of Net30Score without any financial risk.

Using Net30Score will give an organization a superior risk management strategy and the benefits of:

- Reduced DSO and accounts receivable write-offs
- Successful automation of credit and collection department decisions
- Better allocation of internal collection resources
- Increased effectiveness of credit and collection policies
- Overall accounts receivable portfolio monitoring that provides the basis for more accurate estimates of bad-debt reserves and improved forecasts of monthly cash flow
- Consistent, documentable risk-based decisions that improve internal control and aid in compliance with Sarbanes-Oxley

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## ABOUT AVANTGARD

SunGard's AvantGard is a leading liquidity management solution for corporations, insurance companies and the public sector. AvantGard provides chief financial officers and treasurers with real-time visibility into cash flows and increased operational controls around receivables, treasury and payments. AvantGard helps companies drive free cash flow and reduce inefficiencies across the ecosystem of suppliers, buyers, banks and other trading partners. For more information, visit www.sungard.com/avantgard

## ABOUT SUNGARD

SunGard is one of the world's leading software and IT services companies. SunGard serves more than 25,000 customers in more than 70 countries, including the world's 25 largest financial services companies.

SunGard provides software and processing solutions for financial services, higher education and the public sector. SunGard also provides disaster recovery services, managed IT services, information availability consulting services and business continuity management software.

With annual revenue exceeding $5 billion, SunGard is ranked 472 on the Fortune 500 and is the largest privately held business software and services company on the Forbes list of private businesses. Based on information compiled by Datamonitor*, SunGard is the third largest provider of business applications software after Oracle and SAP. Continuity, Insurance & Risk has recognized SunGard as service provider of the year an unprecedented five times. For more information, please visit SunGard at www.sungard.com.

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