SAS® BUSINESS REPORT

Dear Readers,

It's the last issue of 2006, and we want to leave you with some points to ponder for the New Year:

- Many firms are missing opportunities because they don't fully understand the dynamics of customer value. Is your organization one of them? (find out in our lead article below).
- If business intelligence can keep the world's largest machine running strong, what can it do for your organization?
- Leading retail banks are beating the competition by delivering dynamic, customized bundles of products to consumers. Could the same technology and principles apply in your industry?

The answers to these questions could hold the key to a successful 2007 for your business, so read on to learn more – and I'll see you next year!

Happy holidays to you and yours,

Anne-Lindsay Beall

Anne-Lindsay Beall
Editor, *SAS Business Report*

Maximizing Asset Value One Customer at a Time

Derive a deeper understanding of customer value

by Don Peppers & Martha Rogers, Ph.D.

Regardless of the business you are in, your customers are your most important financial assets. As with other financial assets, customers need to be efficiently valued in order for you to increase the profitability of your customer portfolio over the long term. Yet, firms often fall short of realizing this goal because they don't fully understand the dynamics of customer value and the drivers of customer growth. What's a decision maker to do?

Assigning value to customers

Let's look at how one might arrive at a deeper understanding of customer value. Similar to other financial assets, a customer's value is determined by the profitability the customer will deliver in the future. It follows that you want to know when the value of your customer asset increases or decreases, and what kinds of events or situations drive these changes. This may sound simple conceptually, but it can be challenging to put into practice. You have to identify the dynamics that drive the future profitability of your customers in order to arrive at a meaningful measure of customer value.

This leads some decision makers to employ the concept of lifetime value (LTV) to measure a customer's value to the enterprise. At its most basic, LTV refers to the future economic worth of a customer and can be further defined as the net present value of the likely future income stream generated by an individual customer. For instance, LTV might be the expected number of purchase transactions from a customer each year times the number of years the customer is expected to remain loyal times the discounted net present value of the margins on those purchases each year. Ideally, lifetime value would capture all the various behaviors of a customer that have any bearing on the enterprise's profit from that customer. Technology is obviously a key part of the process. Customer transaction databases along with sophisticated analytics used by decision science professionals help to quantify LTV, in effect modeling your customer's behavior in the past to predict your customer's behavior (and value) in the future.

Regardless of the formula a company uses to calculate lifetime customer value, it's not enough to simply measure it and identify high value customers. You need to understand what constitute the "leading indicators" of value change so that you can take action to increase the profitability of your customers.

Growing customer profitability

Customers with high value scores have some things in common. They have a high total revenue or profit over their lifetime with your company. And, they score near the top of your customer value measurements in the areas of recency, frequency, etc. However, it's the differences in the needs of your high value customers that will inform the value creation strategies you implement.

Consider the case where we want to increase the value of the top 10 percent of customers of, say, a cruise line. Analysis shows that the cruise line's high value customers can be segmented into three groups. Customers in the first group are frequent cruisers but otherwise not very big spenders. They go on three or four cruises per year, but stay in the lowest cabin classes and spend little onboard. A second group is made up of customers who go on a cruise less frequently – maybe every other year – but they live it up when they do, staying in a high-end suite and spending lavishly. A third group goes once a year, stays in middle-tier cabins and spends a respectable amount on board.

What's the lesson here? The cruise line's marketers learned that not all high value customers are created equal. Each of the three high value customer segments is driven by different motivations. They have similar values, as customers, but they have radically different needs from the cruise line and will respond to different types of offers. It's up to the cruise line to capture the needs insight and use it to drive customer value higher.

Valuable financial services customers

Financial services, even more than the cruise industry, is a high transaction business where customer valuation and differentiation are crucial to the efficient allocation of resources aimed at increasing customer profitability. This certainly proved true for Toronto-based Canadian Imperial Bank of Commerce (CIBC)* when it implemented a new data warehouse and faced the challenge of managing its more than 9 million personal and business customers across independent lines of business. Historically, CIBC had been account-focused rather than customer-focused. And as a result, a customer with multiple accounts was treated as if he were multiple customers.

Using technology and analytics to achieve a customer-centric approach, CIBC learned to effectively segment its customers by needs and preferences, as well as by profitability and potential. The bank actually creates a monthly P&L for each customer in order to monitor changes in customer value. This also allows CIBC to ensure that each customer receives product offers that meet individual needs, such as second mortgages for homeowners and retirement saving plans for working couples. The bank is constantly trying to understand what factors drive value creation for specific types of customers.

What are the results? Intelligence-driven campaigns for pre-approved credit cards are generating astounding acceptance rates of 20 percent to 30 percent. Some personalized campaigns reaching out to new customers generate a 300 percent return on investment! And these are just a few success stories out of many. As a result of such successes, CIBC has become deeply committed to managing customers in a very analytical way.

Owing in large part to its ability to identify factors that drive value across distinct customer segments, CIBC is able to implement campaigns that meet customer needs and increase customer profitability.
As we have seen, savvy decision makers understand their customers' individual needs and the value each customer represents to their enterprise. Using this knowledge, these decision makers are better able to efficiently allocate marketing, sales and service resources to increase the value of their most important financial asset: each individual customer.

A Tune-Up for the World's Largest Machine

How can BI help with telco upgrades?

by Rob Mattison

Just think about it for a minute. What is the biggest machine in the world? Is it some huge strip-mining earth mover that chews up the ground and extracts valuable minerals? What about an oil tanker, those huge ships that sail the oceans and deliver fossil fuels to people everywhere?

No, the largest single machine in the world – by a wide margin – is the global telecommunications system. This system combines millions of miles of cable, millions and millions of switches, routers and other network devices, and billions of handsets into one huge coop-erative communications machine.

Like no other, the individual pieces of this machine are managed by a variety of companies in different parts of the world. On the other hand, just like any other complex piece of machinery, it is in constant need of fine tuning and adjustments. Where do you go when you have a network that needs tuning? There is no local repair shop that specializes in circuit switch overhaul. There is no shop where you can get an oil change for your routers. When it is time to tune up the network – or the part of it you control – you need to know how to do it yourself.

Specialists

Keeping a network tuned up is no easy task. In fact, most telcos employ hun-dreds of highly specialized engineers who make it their business to ensure that the phones keep ringing and the SMS messages keep zipping around the globe. Keeping networks in top shape is a big job, and one that comes with its own set of complications. For example, with so many different devices and transportation loads to keep track of, you might think that network engi-neers would be organized like a pool of auto mechanics: One person works on engines, another on the gearbox, another on the bodywork, while yet another takes care of the tires.

No, this environment is far more complicated than a simple little device like a car or a truck. If you needed a specialist for every type of network device or network component, you would need hundreds of specialists. In fact, there are just two main catego-ries of specialist charged with keeping track of the telecommunications network.

One group focuses on the perfor-mance of the network. These engineers are commissioned with the job of making sure that each of the network devices is working as close as possible to full capacity. The other group concentrates on errors, known as network faults. These engineers are concerned with identifying where network errors have occurred (or predicting where they are most likely to occur in the future) and fixing the problems to keep the network running 24/7.

The network maintenance deluge

Unfortunately for most network engineers, there are several factors conspiring to make their jobs more and more difficult on an almost daily basis. For one thing, new network devices are constantly being invented that carry hundreds and thousands of times the amount of traffic that old-fashioned devices used to handle. Not only that, but these devices are being pressed to do more and more different types of jobs. The "good old days" of POTS (plain old telephone service) are no more.

Today's networks have to handle voice, data, video, audio and a plethora of other media, all at speeds never before imagined. More traffic, more types, more often: The net effect is that those faithful repairmen devoted to keeping your network running are swamped. And of course, you still need to track and tune performance, and track and manage faults, only a lot more than ever before.

Getting some help

The good news, as many network engineers are coming to realize, is that they don't have to deal with this new situation with the same old toolbox. Along with the new devices, there are new tools and methods that make the job easier.

For example, in the "good old days" all of the information managed by network devices was unique and proprietary to the device. This meant that keeping track of the performance and faults had to be done on a painstaking device-by-device basis.

However, in the modern world, more and more devices use a standard set of protocols and languages. The ocean of data is becoming standardized and easier to manage. This has allowed the development of powerful tools that would have been unusable until very recently.

Business intelligence (BI) tools in particular have discovered a new life is in the world of network performance and fault monitoring. Many vendors of operations support systems (OSS) performance-monitoring products are incorporating business intelligence capabilities into their software. Other network performance-monitoring groups are installing their own databases and using traditional BI tools to do their analysis.

Engineers who have spent decades struggling with massive volumes of performance and fault data loaded into spreadsheets, which then had to be sorted and merged in order to perform the analysis they required, are now discovering the power of business intelligence software.

Even more interesting is the fact that they have discovered the power of statistical analysis. Predictive data mining techniques are helping network engineers to forecast system loads and to anticipate network device failures. As a result they are doing their jobs more effectively, and sleeping more soundly.

Network intelligence: the new frontier

What all of this means is that network intelligence presents an exciting new discipline for telco engineering groups to explore.

These groups are under tremendous pressure to keep incorporating new and improved products and services into their infrastructure, while continuing to drive down costs and improve productivity. So the ability to leverage the knowledge of a few bright engineers and escalate their reach through these powerful new tools is an extremely appealing prospect.

As the discipline matures, there is no doubt that network engineers will discover what many other business functions already know: that business intelligence can help keep any business machine running smoothly, whether it is a bank, a retailer or even the biggest, most powerful and most pervasive machine in existence in the world today.

There is no doubt that we will be hearing more and more about network intelligence as time goes on.

Brigham and Women's Hospital Improves Patient Care with SAS®

SAS® Performance Management for Healthcare helps this Harvard affiliate gain national recognition for breakthrough results.

When patients check in to Brigham and Women's Hospital (BWH), a nonprofit teaching affiliate of Harvard Medical School in Boston, they are often treated with the latest medical technology, from 3-D diagnostic imaging to robotic cardiac surgery. Advanced technology, in the hands of BWH's skilled healthcare professionals, helps improve patient health and deliver positive results.

So when BWH needed to improve the health and quality of its own internal operations, it was natural that technology would play a key role. BWH has turned to SAS to power its acclaimed performance management efforts. Using SAS® Performance Management for Healthcare, a software solution that specifically targets the needs of healthcare providers, BWH has created a culture of data transparency, increased accountability and improved performance.

Award-winning performance

BWH has also received national recognition for its SAS performance management system. The hospital was recently named to the prestigious Balanced Scorecard Hall of Fame for Executing Strategy by the Balanced Scorecard Collaborative. The Hall of Fame award cited BWH's breakthrough performance results using the Balanced Scorecard process. It follows BWH's receipt earlier this year of the 13th annual National Quality Healthcare Award, presented by the National Committee for Quality Health Care.

"Brigham and Women's Hospital is using dashboards, scorecards, BI and analytical technology from SAS to achieve meaningful improvements in the quality and safety of patient care, in patient and employee satisfaction, and in its overall financial performance," says Melissa Fitzpatrick, RN, MSN, FAAN, Chief Healthcare Strategist at SAS. "We are pleased to partner with such a world-class, Hall of Fame organization and to contribute to its overall success."

Turning data into strategy

From front-line care providers to the board of trustees and the CEO, data drives conversation, decision making and strategic alignment at BWH. SAS Performance Management for Healthcare serves as the vehicle for reporting and communicating metrics that were carefully and collaboratively agreed upon by all key stakeholders. "The SAS system at Brigham and Women's, currently in its fifth year, has become a single source of the truth for the entire organization," adds Fitzpatrick.

The hospital's Center for Clinical Excellence uses SAS to measure and monitor key performance indicators across all inpatient areas using nearly 200 scorecards. A specific quality outcomes scorecard is used by the Board of Trustees to monitor clinical improvements and performance against established targets. And more than 200 surgeons can view their own scorecards, comparing their outcomes against established benchmarks in their specialties.

SAS helps BWH turn data from more than 80 sources – and based on 50,000 patient encounters each year – into strategy for operations throughout the hospital, whether in a patient-care setting or in the business office. SAS integrates, analyzes and distributes information to executive management, physicians and front-line employees, helping BWH's more than 1,200 employees and physicians see how their actions, individually and as a whole, affect patient satisfaction and the bottom line.

New Solution to Help Banks Customize Products and Pricing

A joint solution from SAS and Amdocs aims to increase customer loyalty and bank profitability through tailored offers.

What makes you choose one bank over another? A free toaster for opening an account doesn't cut it with today's savvy consumers, and banks worldwide are struggling to set themselves apart from an overcrowded sea of competitors.

Now, there's a way: the Dynamic Pricing and Profitability Management (DPPM) solution from SAS and Amdocs.

This joint offering from SAS and Amdocs will help retail banks differentiate themselves by delivering customized bundles of products to consumers. As a result, banks will build more profitable customer relationships and increase customer loyalty.

Value for both bank and consumer

"Banking customers need tangible economic incentives for increasing the business they award to your bank," explains Susan Landry, Managing Vice President at Gartner Research and Advisory Services. "Financial institutions continue to take CRM seriously as reflected in IT investment in channels, branches and customer intelligence. However, breakthrough solutions in dynamic pricing and product configurations will drive the next wave of mutual economic and relationship value for both the customer and the provider."

"By allowing banks to incorporate valuable customer data into their own product management software, this solution will give banks a whole new way of delivering bundles of products," says Mike Blum, President of the Financial Services Division at Amdocs. "Banks that adopt this solution can stand out among the competition and ultimately enjoy increased profitability."

How it works

By integrating with core banking and other enterprise applications such as customer relationship and risk management, the DPPM solution will help banks craft bundles of products and price them in real time. As part of the solution, banks will have an enterprisewide view of customers by leveraging the SAS® Banking Intelligence Architecture. They will also be able to offer flexible pricing plans and deliver consolidated statements by leveraging Amdocs' dynamic pricing engine and product catalog. While banks today can create product bundles, they are extremely difficult to change and customize.

"SAS' best-in-class, integrated analytical banking intelligence platform and Amdocs' product catalog and dynamic pricing engine give banks the required flexibility to change pricing and product bundles so they can develop and sustain a personalized approach for customers," says Ellen Joyner, Global Financial Services Marketing Manager for SAS.

The DPPM solution's full product management platform will also offer mutual economic benefits for banks and their customers. For example, the bank will be able to create a bundle that includes free checking with a savings account with a $2,500 minimum, but if you add a car loan you get a 0.25 percent bonus for the savings account. The additional incentive pricing is determined by analyzing behavior and profitability by customer, product, branch and line of business.

"SAS and Amdocs have joined forces to develop a unique solution which not only will offer the level of flexibility and customization financial institutions require for long-term success with their customers but also will support the tracking of increased profitability as it occurs," says Greg Nolan, CEO of GJ Nolan & Co., a management consulting firm specializing in profitability measurement and management.

SAS Positioned in the Leaders Quadrant for Basel II

SAS also announces an increase in Basel II customers by 40 percent.

SAS continued its momentum in the enterprise risk management space through strong customer growth and analyst rankings. Currently, more than 140 financial services institutions use SAS® for credit risk and operational risk management – up 40 percent from March 2006. In addition, SAS was recently positioned by Gartner Inc. in the Leaders quadrant of the "Magic Quadrant for Basel II Risk Management Application Software, 2006" report.

Taking the Leaders Quadrant
According to the report, "leaders" are "vendors with integrated Basel II software application suites covering all the risk disciplines that have achieved a high level of market acceptance. These suites contribute to developing a common architectural approach and enable a consistent view of risk across the organization as compared to separately designed and implemented risk-calculation engines or reporting tools.

Such vendors are beginning to approach the market with a more comprehensive approach to ERM and its linkage to corporate performance management. They have robust organizational structures and professional services resources." Gartner's report evaluated SAS software's ability to execute and its completeness of vision.

SAS' customer list includes institutions such as:

- Bankdata (Denmark)
- Barclays (UK)
- BB&T (USA)
- Caisse Nationale des Caisses d'Epargne (France)
- Commerzbank (Germany)
- Grupo Santander (Spain)
- HypoVereinsbank (Germany)
- Kookmin Bank (Korea)
- Landsbanki (Iceland)
- National Australia Group (Australia)
- Northern Rock (UK)
- Raiffeisen Zentralbank (Austria)
- Standard Bank (South Africa)
- Volkskreditbank AG (Austria)
- Vseobecna Uverova Banka (Slovakia)

From compliance to competitive advantage
Financial services firms are adopting risk management systems in response to government regulations and industry standards. SAS helps its customers to go beyond compliance and manage risk strategically through risk-based performance management. By doing so, firms can derive real business value from their compliance initiatives and exploit risk for maximum competitive advantage. Implementation of regulations such as the Basel II accord should be viewed as a step in the continuing process of improving risk management as part of an overall enterprisewide risk management initiative.

What SAS customers are saying
"Erste Bank has decided in favor of the SAS Risk Management solution," says Günther Krähan, Program Manager at Erste Bank. "With its standard industry solution, SAS delivers about 85 percent of our specific requirements for the risk-weighted assets calculation. Also the accompanying SAS support during implementation is most professional."

“SAS’ customers supplied information to Gartner for its Magic Quadrant report,” says Peyman Mestchian, SAS’ Director of Risk Management in the Europe, Middle East and Africa (EMEA) region. “We believe the results testify to SAS’ vision, execution and long-term vendor viability. We feel that we are best positioned to service this market with our comprehensive risk management offering, which includes both platform and application levels that delivers integrated, enterprisewide risk intelligence.”

"The SAS credit risk framework allows us to measure and manage our risk data faster and more accurately,” says Peter De Neer, Risk Manager at Fortis Lease (Belgium). “And this is fully in line with both the Basel II accord and our pan-European scope.”

Source: David Furlonger and Douglas McKibben, “**Magic Quadrant for Basel II Software Applications, 2006**” Gartner Research, November 22, 2006.

AutoZone Revs its Engines with SAS®

Find out why this auto parts giant selected SAS for advanced merchandise planning and forecasting.

It's about to get easier than ever to find the parts you need at AutoZone, thanks to SAS. The nation's No. 1 auto parts chain is enhancing its product assortment mix by using several powerful SAS retail software products. SAS has already begun implementing Marketmax, its powerful integrated merchandise planning solution, at the auto parts retailer.

"We felt comfortable deepening our relationship with SAS because their approach to our business lined up with our long-term strategic vision of advanced planning and forecasting," says Ken Brame, AutoZone CIO. "After looking at several vendors, we decided that SAS offered us the best functionality, ease of use and scalability. SAS has tremendous retail domain expertise, and it's a stable company that's been around for more than 30 years. We're confident they'll be able to help us better plan our business and enhance customer service."

AutoZone's investment gives the company access to:

- SAS® Base and Performance Analysis.
- Financial Planning.
- In-Season Management.
- Forecasting for Merchandise Planning.

AutoZone already uses SAS predictive analytics for demand modeling, forecasting and business intelligence.

"We're confident that these merchandise intelligence solutions from SAS will help AutoZone's merchandise planners better leverage the company's forecasting capability," says Lori Schafer, Vice President of the SAS Global Retail Practice. "Our industry expertise and our experience with merchandise planning and forecasting met AutoZone's expectations and helped push SAS over the edge to win the confidence of the AutoZone team."

Events:

Credit Scoring Solutions and Modeling for Basel II Using SAS
This course, part of the Business Knowledge Series, will be offered in New York and San Francisco in January 2007. Seats are limited, so register today.

NRF Annual Convention & Expo
Jan. 15-16, New York
SAS will be at the National Retail Federation conference to show you how SAS retail solutions improve profitability.

GARP 2007
Feb. 27-28, New York
Be sure to stop by the SAS booth at the Global Association of Risk Professionals conference.