

## The Business Value of Significantly Increased Analytic Price/Performance for Financial Services and Insurance Companies



### Introduction

Deriving actionable insight from large stores of customer and operations data is an essential capability for financial services and insurance companies. As the price/performance of analytical processing continues to significantly improve, simply increasing the speed and reducing the cost of current uses of this data will be inadequate. Companies must continually develop innovative ways to use this capability to provide better service and maximize efficiency.

The ability to rapidly and cost effectively load, encrypt and analyze large amounts of data is steadily improving due to the increased price/performance of computing, storage and networking. In addition, purpose-built analytics appliances (e.g., DATAlegro, Netezza) provide even greater levels of price/performance for appropriate applications. This power enables financial services companies to generate more precise, in-depth and timely insights from analyses by:

- Utilizing many more types of data (see Table 1 for examples of types of data to be used in analyses at the market, personal, corporate and/or household levels)
- Expanding the amount of data used
- Increasing the span of time analyzed (e.g., months of historical data)
- Generating desired outputs more quickly and frequently

The end result is the ability to better understand, interact with, and service customers while improving the efficiency of operations.

**Table 1: Types of Data Used in Analyses**

Area	Example Types of Analysis Data
Status of products owned	Loans (mortgage, auto, business), deposits, insurance (life, auto, home, accident, liability)
Communications	Marketing, sales, service interactions via web (public and private click stream), phone, email, face-to-face
Transactions	Credit card, banking, claims
Personal customer data	Sex, age, home address, occupation, level of education, credit score, other members of household, employer
Business customer data	Company size, industry, functions, financials, information on individual employees
Operational data	Transaction rate, time to transaction completion, cost per transaction, data quality, conversion rate, retention rate

### Understanding the Customer

The foundation of any financial services strategy is a thorough understanding of the target customer, a requirement for differentiating services and generating high margins. Improved analytic performance will play a critical role in developing this understanding, enabling companies to be much

more precise and comprehensive in their analysis and use of customer information.

### *High-performance analytics enable companies to identify and understand the needs of the most desirable segments.*

A key marketing objective is to continually increase the granularity of the segments used to describe target prospects and customers. Broad macro-segments (e.g., sales professionals, adult couples, or small businesses) are being replaced by much more selective and descriptive micro-segments defined by detailed personal and demographic information (e.g., regional health care sales professionals, young military families on short-term relocation, small produce importers). High-performance analytics enable companies to identify and understand the needs of the most desirable segments.

Use of enhanced analytics also means companies can expand beyond customer background information to include comprehensive information about behavior. Ashish Gupta, a solution architect for Reveleus, the analytical applications division of i-flex solutions, describes one type of advanced analytics, behavioral analysis, now used by leading banks: "Month on-book analysis is used to tag each individual customer with the month that it first began service along with its demographic profile. The service purchasing behavior of these clients is tracked over time. This information is then analyzed and the resultant insights applied across a large set of customers and prospects to identify additional opportunities for both initial and follow-on business." The amount of people and the span of time included in the analyses determine the richness of the results on the one hand, and the performance demands on the analytics on the other.

### *This powerful capability places greater demands on analytical systems.*

Purchasing is only one of the behaviors that can now be factored into this type of an analysis. As Richard Winter of Winter Corporation notes, "behavioral analysis has evolved from tracking purchasing information to in-depth insight of the entire evaluation and purchase experience, as is now possible with the tracking of customer activity over the Internet, phone, e-mail, and face-to-face interactions." Although this is a very powerful capability, it places far greater performance demands on analytical systems.

In addition to much more information being analyzed, the scope of these analyses from the personal perspective will also expand from a focus on *individuals* to a focus on *households*. Offers that seem appropriate for an individual may not make sense when the entire household is considered. It is also important to avoid redundant and conflicting communications to the various members of a household. Neil Walsh, of the insurance industry practice of systems integrator Darwin Partners, further points out that the risk profile of a prospective customer, and therefore the appropriate pricing, can change significantly when the company understands more about the household environment. For example, the auto insurance risk profile for a 55 year old male is quite different than one for another male of the same age with two teenage children that drive. It is better to determine this at the time of application. Analytics can help discover this fact if it is not offered by the applicant.

The same aggregated approach is sure to be applied on the business side, evaluating the appropriate offers based upon information available on individuals that make up an organization, not just limited information available about the overall organization itself.

The sources of customer information and the means used to gather it will also vastly improve in the near-term. Instead of relying on the tedious error-prone process of gathering input from customers, application and risk assessment processes will draw information directly from ever expanding internal data warehouses and external customer data services. The result will be far more accurate input, reduced costs and a more user friendly process for customers. This automated approach can be an especially important differentiator for the wholesaler when third-party channels (e.g., agents) are involved, as it reduces the cost and effort for the third party to use a particular company's services.

## **Establishing Profitable Customer Relationships**

Understanding the characteristics and needs of target customers now can be used to establish an ongoing interaction with them. Innovative uses of analytics play a key role in maximizing both the relevance of the information provided to each customer and the cost-effectiveness of overall marketing spend.

Establishing a rich personalized dialog with customers is becoming a requirement, as customers

expect a high degree of relevance in the information that is thrust upon them. This means companies must provide information and promote services that are of value and interest to each of their customers at the time of the communication. Given the complex needs of these customers and the limited awareness they have of a company's services, this creates a real challenge that advanced analytics can help address. As Richard Winter notes, "customers don't want products, they want solutions. Solutions are not individual services such as checking, savings and credit cards, but a combination of services that meet a customer's specific needs at a particular point in time (e.g., household preparing to finance college, couple shifting assets prior to retirement, company planning a major overseas expansion). At the same time, customers have trouble navigating to the optimal solution on their own. Therefore the service provider must take on much of the responsibility of determining the combination of services that are appropriate for each customer and educate them about the value of their specific 'offering' and how it fits the customer's perception of its needs."

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The motivation for the financial services company to establish this highly relevant dialog is not only to increase the number of new customers acquired, but also to reduce the amount of incremental marketing expense needed to acquire them. As marketing becomes increasingly targeted, it is critical to establish a high conversion rate to achieve a satisfactory return.

Ashish Gupta identifies advanced analytics as crucial for determining the respective impact of the many different marketing campaigns influencing customers — and therefore the relative amounts that should be invested in them. To illustrate this, Gupta describes two campaigns run simultaneously: the first offers incentives for new customers, the second offers different incentives for existing customers. If new customers sign up (therefore becoming "existing customers") and use both offers, analytics can be used to determine the relative impact of the two campaigns on the customers' purchasing behavior, and therefore the amount that should be invested in the two campaigns going forward. Significantly improved price/performance provides a considerable advantage in this case, due to the amount of demographic, psychographic, and transaction information that should optimally be used.

Analytics can also be used to make proper decisions on a transaction-by-transaction basis to maximize the profitability of the overall customer relationship. The challenge is using the available information to determine which opportunities to pursue and which to reject. Analytics can be a critical asset in one of the most important decisions made regarding financial transactions: the risk vs. reward tradeoff. Financial services companies already use analytics extensively to assess risk/reward tradeoffs within individual product and service lines.

Significantly improved analytical price/performance enables the use of broader models that evaluate both service applications and client usage across all services, over a longer span of time. As a result, the entire financial status of the customer is assessed. For example, the outcome of approved loans can be analyzed to continually adjust the policies and procedures to be used in the future, increasing the profitability of loan services.

## Reducing Costs

High performance analytics can also play a key role in reducing some of the major costs of financial services companies. For example, their use can help reduce credit delinquencies and losses due to fraud.

*The most effective tracking requires use of extensive information about customers and their transaction history over many years.*

Tracking ongoing customer payment behavior and credit-worthiness to predict delinquencies is critical to profitability. The most effective tracking requires the use of extensive information about customers and their transaction history over many years. Increased price/performance enables these analyses to be run more quickly and frequently, providing information that can be used to significantly limit delinquency exposure.

Keeping up with fraudulent uses of services without impacting customer service is also a high priority for financial services companies. Large amounts of data about long periods of customer behavior must be rapidly analyzed to identify anomalies. Advanced analytics is invaluable to fraud mitigation teams as they work to identify indications of fraud, eliminate as many false positives as possible, direct follow-up teams to take action, and implement processes and mechanisms for avoiding similar incidents in the future.

*Significantly improved price/performance can be used to involve much more information in the analysis to identify situations that increase profitability.*

A related concept in the insurance industry is known as “rate recapture,” in which the comprehensiveness and accuracy of customer profiles are greatly improved, and this new data is used to recover service fees lost due to inaccurate information.

Household information, for example, can be used for rate recapture. As with the scenario described earlier, if a company discovers that there are now two new teenage drivers in a household for which only the adults are listed as drivers on the auto insurance policy, more research can be done to see if the policy rate should be increased. Significantly improved price/performance can be used to involve much more internal and external information in the analysis to identify situations such as these, increasing profitability.

Analytics can also reduce the costs of complying with regulations, such as anti-money laundering and Basel II. Compliance with these regulations requires extensive ongoing analysis within areas such as market, credit, and operations risk, interrelationships between corporate customers and financial transaction flows.

By applying high performance analytics to these challenges, companies can reduce the effort needed to achieve adequate compliance, while also reducing the penalties incurred for non-compliance.

## **Conclusion**

Customer and operations information is the lifeblood of financial services companies. To successfully compete in this industry, companies must continually develop innovative ways of using this information to meet the needs of target customers and maximize operating efficiency.

Due to the significant improvements in analytics price/performance, companies have increasingly powerful tools available to facilitate this innovation. The key question for financial services companies is how they will leverage these tools to create competitive advantage.

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