

MANAGEMENT

STRATEGY

MEASUREMENT

MANAGEMENT ACCOUNTING GUIDELINE

Customer Profitability Analysis

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CUSTOMER PROFITABILITY ANALYSIS

INTRODUCTION

In Charlotte, North Carolina, the customer service center of First Union Corporation, the sixth largest bank in the United States, handles 45 million calls per year. The center's computer system, "Einstein", determines the ranking of a customer – profitable or unprofitable – in 15 seconds. Customers are assessed with respect to minimum balance, account activity, branch visits, and other variables. At the service desk, the computer screen displays a color – red, green, or yellow – to signify the customer's profitability rating. Thus, when a customer requests a lower credit card interest rate or a waiver of account service fees, the service representative

is able to respond quickly according to the customers' rating.

A company can outperform rivals only if it can establish a difference that it can preserve. It must deliver greater value to customers or create comparable value at a lower cost, or do both.

Michael E. Porter. 1996. "What is strategy?" *Harvard Business Review* (November-December).

First Union recognizes that not all customers are the same. Though customer satisfaction is important, the goal is to increase customer and corporate profitability. Customer profitability analysis is evolving as a basis for determining the level of service

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EXECUTIVE SUMMARY

Strategic cost management and activity-based costing have caused companies to look more closely at the drivers of their costs. Increasingly, companies have been focusing on the causes of costs and profits to enable better management of those costs and profits. First, companies focused on product profitability and more recently on customer profitability.

Companies recognize that though "exceeding customer expectations" is a worthy goal, exceeding those expectations profitably is necessary for long-term corporate viability. Thus, an understanding of corporate profitability necessarily relies on an understanding of what drives shareholder value in organizations. Increasingly, companies are focusing on the relationships between employee satisfaction, customer satisfaction, and corporate profitability. They are focusing on the drivers of corporate profitability and this requires an understanding of how to increase customer revenues and how to decrease customer costs. This management accounting guideline provides a discussion with examples of both the analysis of customer costs through activity-based costing and the development of long-term customer relationships for increased revenues and profits through the measurement of customer value.

that customers receive and the level of their fees. First Union estimates that its “Einstein” system will add at least \$100 million to its annual revenue. About half of that will come from extra fees and other revenue from unprofitable customers, while the rest will flow from pampering preferred customers who might otherwise leave the bank. First Union is not alone in this effort; an increasing number of companies employ the same procedures to determine profitable and unprofitable customers and manage customer relationships to improve corporate profits.

The example above is one of many that demonstrate the increased corporate focus on customers and their profitability. This guideline presents a discussion of the state of the art and of best practices in determining customer profitability with respect to:

- understanding and analyzing customer profitability.
- maintaining and increasing customer profitability.
- turning unprofitable customers into profitable ones.

The guideline does not present a detailed examination of an all-inclusive analytical tool for determining customer profitability. It does, however, provide the tools that permit the analysis of customer profitability and the implementation of programs to improve these profits.

Over the last ten years, strategic cost management and activity-based costing (ABC) have created a framework for companies to more closely examine the drivers (or causes) of their costs in order to improve management decisions and corporate profitability. Companies initially focused on product profitability are now using ABC and other models to further examine the profitability of distribution channels and customers. Simultaneously, many companies are exploring the drivers of profit and success through the use of the balanced scorecard. Whichever model is used initially, determining customer profitability requires a clearer understanding of the causes of the revenues and the costs. This guideline provides details of company experiences in examining the causal relationships between the drivers of customer satisfaction and customer revenues as well as in measuring the profitability and costs of servicing existing customers. Comprehensive systems that identify, measure, analyze and manage customer profitability and its drivers are

only now being developed (Epstein, Kumar, and Westbrook 1999).

Expanding global competition is one reason behind the increased concern for customer profitability. Companies worldwide are being pressured to become more customer focused and to increase shareholder value. Customer profitability analysis is a useful tool in both areas.

Increasing Customer Focus

Many companies are convinced that improving corporate profitability requires more customer contact and closer customer relationships. Further, many marketing professionals have directed recent attention to increasing customer satisfaction, primarily examining the links between overall satisfaction and revenues. Meanwhile, accountants have traditionally focused on cost reduction. Customer profitability analysis attempts to bring together marketing and accounting professionals to analyze, manage, and improve customer profitability.

Companies are attempting to better understand and satisfy present and future customer demands. However, the goal is to increase customer satisfaction profitably. The analysis presented here, relying on ABC and other tools, can direct managerial attention to areas of improvement that can lead to greater customer and corporate profits. An ABC system is not the only means to measure customer profitability, but merely one of several tools that can be used.¹

Since ABC provides a better understanding of the profitability of products and services, companies have started to use the same approach to understand the profitability of customers. Following an ABC analysis, companies can examine the customer profitability information and determine how to manage customer relationships in order to increase customer satisfaction and the profitability of both individual customers and customer segments. The ABC analysis often provides information leading to such improved relationships that the profitability of both the company and its customers is increased.

Companies have been using improved information technology and large databases to help refine marketing efforts. Marketing tools and IT systems now permit companies to target individual customers and customer groups with pinpoint accuracy and to

determine whether or not a customer spends enough to warrant the marketing effort. At Federal Express, for example, customers who spend a lot of money but demand little customer service and marketing investment are treated differently than those who spend just as much but cost more to maintain. In addition, the company no longer markets aggressively to those customers who spend little and show few signs of spending more in the future. This change in strategy has substantially reduced costs.

Fed Ex also analyzed the profitability of the 30 large customers that generated about 10% of the total sales volume. The company found that certain customers, including some that required a lot of residential deliveries, were not bringing in as much revenue as they had agreed to initially when they negotiated discounted rates. The company increased the rates for some customers and lost those who would not agree to the rate hikes. In this case the focus is not merely on customers, but on profitable customers. When Federal Express says "100 percent customer satisfaction, by performing 100 percent to our standards, as perceived by the customer", what do they really mean? Do they always want to satisfy all customers? With customer profitability analysis, increasingly companies like Fed Ex are saying that they do want to satisfy customers, but they want to do it profitably. They are also anticipating and creating new customers for their products and services; for example Federal Express created the overnight package delivery market and is now creating another market for same-day delivery. This is another way that Fed Ex satisfies customer demand and maintains profitability.

Another company that has benefited from customer profitability analysis is Scotland-based Standard Life Assurance, Europe's largest mutual life insurance company. The company was stunned when the first results of a profitability survey showed that the insurer was selling policies primarily to those who held little potential for making money for the company. Instead of attracting the affluent customers Standard Life wanted, its direct mail marketing campaign was encouraging older couples and stay-at-home mothers to sign up for costly home visits by sales agents. Revenues were higher, but they were the wrong kind of revenues; these were customers who typically bought only one policy and the margins were small. Standard Life was focused on customers, but was not

paying attention to the profitability of each customer.

Increasing Shareholder Value

As the interest in increasing customer satisfaction has grown, so has the interest in increasing shareholder value. Companies are competing globally not only for customers, laborers, and suppliers, but also for capital. This has caused companies to concentrate on satisfying investors and lenders through an increase in shareholder value.

First Union is but one example of a company that has adopted new strategies to increase shareholder value. Although exceeding customer expectations is a worthy goal, companies recognize that exceeding those expectations profitably is necessary for long-term corporate viability. To improve corporate profitability and shareholder value, companies must have a more complete understanding of the drivers of value in their organizations. To do this, companies increasingly focus on the value drivers and on the causal relationships among employee satisfaction, customer satisfaction, customer profitability and corporate profitability. Improved corporate profitability requires a deeper understanding of ways to increase customer revenues and decrease customer costs. Essential components of improved customer profitability include:

- the analysis of the cost of customer service through ABC;
- the measurement of the lifetime value of a customer; and
- the development of long-term customer relationships for increased revenues and profits.

An important challenge for companies is to manage customer relationships in order to make each customer profitable. Bank of America calculates its profits every month on each of its more than 75 million accounts; this permits the company to focus on the 10% of its customers that are the most profitable. Since it launched the program in 1997, customer defections are down and account balances in the top 10% have grown measurably. Calls from preferred and unprofitable customers are routed to different operators. A personal identification number entered by each caller allows the bank to determine, among other things, the customer's profitability ranking. The level of attention and service will then differ accordingly. Bank of America still values customer service, but also understands that

there must be a balance between customer service and customer profitability.

At First Chicago Corporation, a part of Bank One, profit and loss statements were prepared for every client, and a \$3 teller fee was imposed in 1995 on some of the money-losing customers. Thirty thousand of them, about 3% of the bank's total clients, closed their accounts. Some customers became more profitable by increasing their account balances to avoid the fee or by visiting ATMs instead of the tellers. While First Chicago lost some customers, it was also able to improve the profitability of most. Understanding customer profitability requires an understanding of the costs of customer service.

Paging Network, Inc., a paging service provider located in Dallas, initially gave away its pagers to increase market share. After analyzing data on individual customers the company determined that many customers were too costly to service profitably. It sent letters to marginal customers increasing the rates and subsequently lost 138,000 customers in the third quarter of 1998. Of

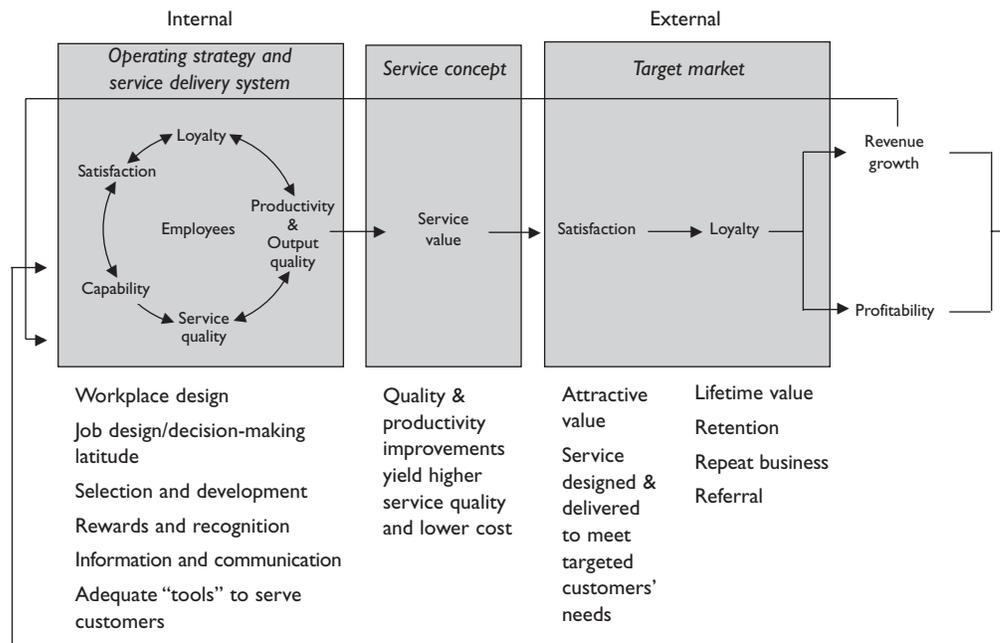
the remaining 10.2 million subscribers, it expected to lose another 325,000 customers before the end of 1998. The company determined that the cost to service these customers was greater than the revenue being generated and decided to cut its losses.²

Customer Satisfaction, Loyalty, and Value³

Recently, many companies have looked to the service profit chain model (See Exhibit 1) to help them understand the causal relationships between employees and customers and the impact on revenue growth and firm profitability. Among the relationships that have been documented and measured in this model are:

- customer satisfaction and loyalty;
- the value of services and goods delivered to customers;
- employee satisfaction, loyalty, and productivity; and
- employee capabilities that aid in delivering outstanding results to customers. (Heskett, Sasser, and Schlesinger 1997:18)

Exhibit 1 – The Service Profit Chain



Adapted and reprinted by permission of Harvard Business Review. An exhibit from 'Putting the Service Profit Chain to Work,' by James L. Heskett, Thomas O. Jones, Gary W. Loveman, W. Earl Sasser, Jr., and Leonard A. Schlesinger, March -April 1994, p.166. Copyright © 1994 by the President and Fellows of Harvard College, all rights reserved.

Source: Heskett, Sasser and Schlesinger 1997: 19.

Finance and accounting professionals must understand these relationships to associate:

- the human resource focus on employees;
- the production focus on operations;
- the marketing focus on revenues; and
- the traditional accounting focus on costs.

The integration provides significant value to marketing and general management executives as they try to improve customer and corporate profitability. Some of the relationships between customers and employees are self-reinforcing: satisfied employees contribute to customer satisfaction, and satisfied customers contribute to employee satisfaction.

To a customer, value involves the expected benefits and costs of a product or service, and the customer's perception is of significant relevance. The expected benefits are derived from the product and service attributes and the expected costs include the transaction costs, the life-cycle costs, and the risk. Transaction costs are typically the immediate financial outlay, which includes the price, delivery, and installation costs. The life-cycle costs are the additional expected costs that the customer will incur over the life of the product. The risk is associated with the life cycle costs (SMAC 1995:3).

Conceptually, the profit levels generated by customers due to retention, related sales, and referrals are shown in Exhibit 2.

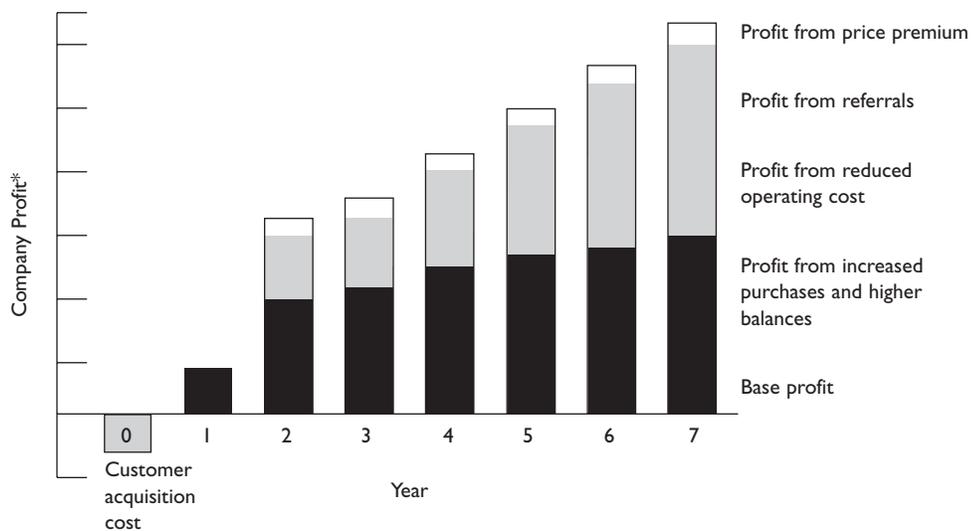
Customers do not determine corporate strategy, but their values and expectations for the company's products and services are influential. Organizations place great value on their customers and depend on them for long-term viability. Five fundamental customer value axioms apply to most companies and help explain a customer's value to the firm:

- The customer defines the product quality, service quality and acceptable price.
- Customers form their expectations relative to competitive alternatives.
- Customer expectations change, usually upward.
- Product and service quality must extend throughout the value chain.
- Maximizing customer value requires that the whole organization be involved. (SMAC 1995:7-8)

Customer Satisfaction

Customer satisfaction is the perception that the products or services received meet or exceed the expectation of the product or service. This is not an isolated phenomenon and is often considered within the context

Exhibit 2 – Why Customers are More Profitable Over Time



Source: Heskett, Sasser and Schlesinger 1997: 64.

Reprinted by permission of *Harvard Business Review*. An exhibit from "Zero Defections: Quality comes to Services" by Frederick F. Reichheld and W. Earl Sasser, Jr. (September-October 1990), p. 108. Copyright © 1990 by the President and Fellows of Harvard College; all rights reserved.

*This pattern is based on our experience in many industries.

of loyalty, retention, and profitability. Researchers have shown that a causal relationship exists between customer satisfaction and customer loyalty and that this relationship often leads to increases in profitability.

Many companies have long held the view that customer satisfaction is a prerequisite for long-term profitability. Increased competition and maturing markets have made the issue of customer satisfaction more significant. Further, the focus of sales and marketing has often shifted from an offensive strategy of finding new customers to a defensive strategy of retaining current customers and increasing the volume of their purchases (Fornell, Ryan, and Westbrook 1990:14).

A study by American Express Travel demonstrated the relationship between customer satisfaction and profitability. After establishing that business travelers from large companies were the most profitable customers, American Express determined that what these customers valued most was fast service, professional treatment, experienced agents, and accurate ticketing. They also found that those offices that delivered the fastest, most accurate ticketing were among the most profitable (Heskett, Sasser and Schlesinger 1997:20).

However, satisfied customers can also be unprofitable, as reported by Federal Express and Page Net, and previously discussed. Individual customer satisfaction does not necessarily lead to customer profitability. Customer retention, customer loyalty, and customer service costs must also be examined.

Customer Retention and Customer Loyalty

Customer retention is the ongoing customer relationship that yields revenues from the sale of additional products or services. The revenues become more profitable as the customer becomes easier to serve. Since the customer is buying again it is assumed that less sales effort is required, customer service costs decrease, and the costs of acquiring customers decline.

Ford Motor Company recently estimated the value of customer retention (i.e., the percentage of the firm's customers buying a Ford as the next car). Ford's stated goal was to increase customer retention from 60% to 80% as the company was convinced

that each additional percentage point of customer retention was worth \$100 million in profits.

Software producer Intuit found the worth of a customer to be far greater than the customer's original purchase of Quicken software. The revenue is \$30 initially, but increases to several hundred dollars or more as satisfied customers buy additional products. The revenues continue over time while the costs of customer service decrease.

Customer loyalty encompasses customer retention but also includes the customers' recommendation of the product or service to other potential customers. Word of mouth recommendation is important to Southwest Airlines, whose reservation system has never been accessible to travel agents. It has relied on advertising and customer loyalty to spread its message to potential customers. The airline, which began flying in 1971, has consistently been profitable. Convinced that customer loyalty is a more important factor in increasing profitability than is market share, Southwest Airlines strives to build customer loyalty by providing at low fares dependable, frequent service over relatively short routes, delivered by friendly employees.

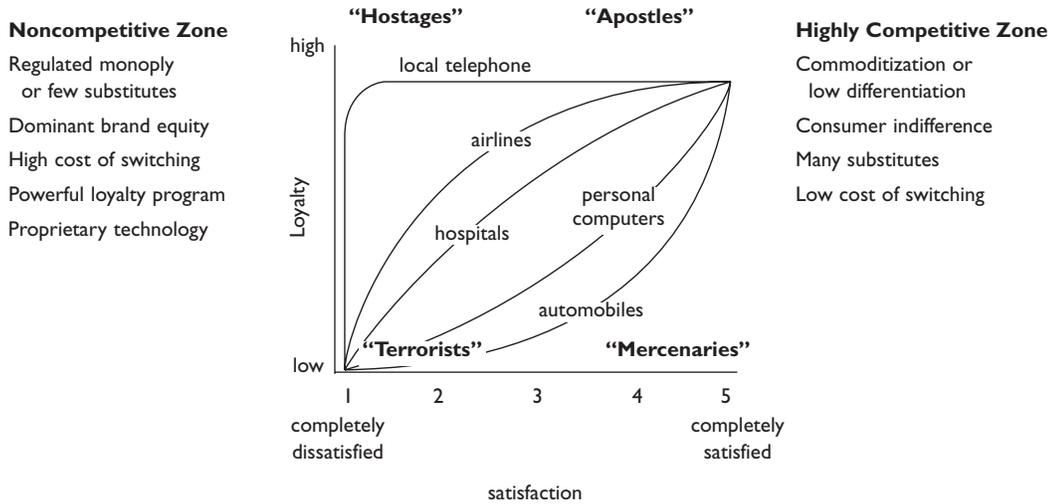
The relationship of customer loyalty and customer satisfaction can be seen in the following categorization of customers; it is important to understand fully the environment which the customer is working, as extrinsic factors may drive them from one category to another:

- *Apostles*. Customers who are loyal and satisfied and recommend the service to others.
- *Mercenaries*. Customers who may switch service suppliers to obtain a lower price, but are highly satisfied.
- *Hostages*. Customers who are highly dissatisfied but have few or no alternatives.
- *Terrorists*. Customers who have alternatives and use them, and also try to convert other customers by expressing their dissatisfaction. (Heskett, Sasser, and Schlesinger 1997:85)

The model in Exhibit 3 shows the relationships between satisfaction and loyalty for these four groups in different competitive environments.

This model also suggests strategies for investing in customer satisfaction improvements for the greatest amount of profit improvement. The "apostle" group of

Exhibit 3 – How the Competitive Environment Affects the Satisfaction-Loyalty Relationship



Note: Words in quotation marks have been added by the authors to describe customers exhibiting varying degrees of satisfaction and loyalty.

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Source: Heskett, Sasser and Schlesinger 1997: 85.

customers and those who are close to being ‘apostles’ should be cultivated and maintained as a valuable resource. This group includes satisfied customers who also tell others about the product or service, and can be considered a part of the sales force and a valuable marketing tool. On the other end, the “terrorist” group can have a detrimental effect on the company, since they are vocal in their dissatisfaction. Efforts to turn this type of customer around often prove very beneficial.

Balanced Scorecard and the Value Proposition

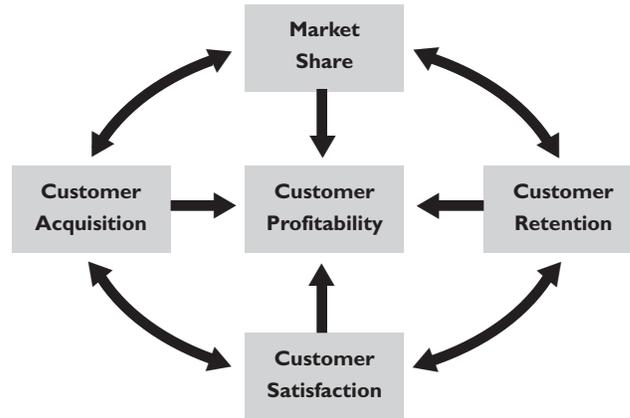
The balanced scorecard is a strategic management system that focuses on the drivers of profit, success, and value in organizations. It looks at four organizational perspectives and the causal links among them. In the balanced scorecard, companies identify and measure the drivers of future performance through the identification of key success factors, and then develop key performance indicators to link to corporate, business unit, and functional strategies. The balanced scorecard includes financial and non-financial

metrics that incorporate both lagging and leading indicators of performance. The four perspectives of the balanced scorecard are:

- i) *Financial*. To succeed financially, how should the organization appear to its shareholders?
- ii) *Customer*. To achieve its vision, how should the organization appear to its customers?
- iii) *Internal business process*. To satisfy shareholders and customers, at what business processes must the organization excel?
- iv) *Learning and growth*. To achieve the vision, how will the organization sustain its ability to change and improve? (Kaplan and Norton.1996: 9)

In the customer perspective (See Exhibit 4), the organization identifies the customer and market segments that will deliver the revenue component of the company’s financial objectives. The customer perspective enables the firm to fine-tune its core customer outcome measures – satisfaction, loyalty, retention, acquisition, and profitability – to targeted customers and market segments.

Exhibit 4 – The Customer Perspective Core Measures



Market Share	Reflects the proportion of business in a given market (in terms of number of customers, dollars spent, or unit volume sold) that a business unit sells.
Customer Acquisition	Measures, in absolute or relative terms, the rate at which a business unit attracts or wins new customers or business.
Customer Retention	Tracks, in absolute or relative terms, the rate at which a business unit retains or maintains ongoing relationships with its customers.
Customer Satisfaction	Assesses the satisfaction level of customers along specific performance criteria within the value proposition.
Customer Profitability	Measures the net profit of a customer, or a segment, after allowing for the unique expenses required to support that customer.

Source: Kaplan and Norton 1996: 68.

Exhibit 4 suggests that there are causal relationships within the core measurement group. The relationships among customer satisfaction, customer retention, and customer acquisition have a direct effect on the profitability of the firm, reducing customer costs and increasing revenues.

The balanced scorecard relies on the value proposition – that set of unique products and services that differentiate the company and provides value to its customers. Analysis of the value proposition is essential for understanding how customers are retained, what will satisfy them, and how they can become more profitable.

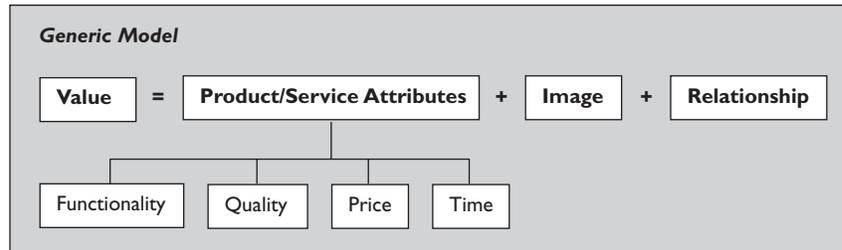
The proposition defines what is unique or valuable about the company’s product or service. From the customer’s perspective, this includes the attributes of the products and services that create satisfaction and loyalty among the customers. The value

proposition (see Exhibit 5) is the primary concept for understanding the drivers of satisfaction, retention, acquisition, and market share. While these propositions will vary significantly for different organizations, typically the following common attributes are included:

- product and service;
- customer relationship; and
- image and reputation.

The product and service characteristics of the model include functionality, price and quality (Kaplan and Norton 1996:73). How well does the product work? Is the quality good enough to keep the customer satisfied? Is the price too high or too low? A price that is too high will detract customers from buying the product in the long run. Perhaps they will buy it once, but they will not be repeat or loyal customers.

Exhibit 5 – The Customer Value Proposition



Source: Kaplan and Norton 1996: 74.

The relationship aspect includes the delivery of the product or service to the customer and how the customer feels about purchasing from the company. This relationship between the firm and its customers is important to maintain and often includes post-sale service. Some companies choose to end the relationship between them and their customers at the point of sale, such as in the case of computers and appliances purchased at discount stores. If these customers are unhappy with the product, they must contact the manufacturer directly.

The image and reputation aspect reflects those intangible factors that attract a customer to a company, such as loyalty to a brand name. This aspect provides the company an opportunity to define itself for its customers.

The customer value proposition communicates throughout the organization the expectations for customer satisfaction, customer loyalty, and consequently customer profitability. The proposition is a compilation of what the company believes the customer values and how the firm can deliver this value, as well as a statement about how the company adds value to its customers through its products and services. An understanding of the customer value proposition is critical for both the balanced scorecard model and customer profitability analysis.

Benefit of Increasing Profitability Through Understanding of Causal Relationships

In 1992, Sears, Roebuck and Company, the large retailer, lost almost \$4 billion. By 1997 it reported a profit of \$1.5 billion. While there are many reasons for the change, the Sears managers believed that it was due primarily to a change in the culture of their business. Sears believed that there was a gap between strategy and day-to-day operations that left employees uncertain about how they could contribute to the company. Sears

developed an employee-customer-profit model and examined how direct and specific effects of improvements in employee satisfaction would improve customer satisfaction, and ultimately profitability. After an initial design, analysis of substantial data, and testing and modifying the original model the managers made specific measurable conclusions: "a 5 point improvement in employee attitudes will drive a 1.3 point improvement in customer satisfaction, which in turn will drive a 0.5% improvement in revenue growth" (Rucci, Kirn and Quinn 1998:91).

The Sears model was based on the organizational objectives that were developed to begin a transformation of the company. The desire was for Sears to be "a compelling place to work, to shop and to invest". The initial model included objectives and measures (see Exhibit 6). Total Performance Indicators (TPI) were developed to test and refine the model and assumptions about causal linkages between employee attitude and customer satisfaction and profitability were refined. As a result of this process, a new model was developed and tested, and became operational company-wide with the 300,000 Sears employees.

Sears' management believed that this revised model (see Exhibit 7) indicated measurable causal linkages in the relationship of employees to customers, and that these linkages resulted in increased profit. Sears managers continued to seek detailed information from individual customers regarding their "shopping experiences" in order to learn more about customer satisfaction and retention, which they believed directly affected profitability. When employees saw how their actions with customers mattered to the company, positive attitudes were reinforced and the linkage was identified between improved attitude towards the firm and its customers and overall improved profitability of the company.

In the five-year period from 1992-1997 management changed the profitability of Sears by accomplishing the following:

- trained the workforce to understand the business;
- held town-hall meetings to explain competitive reality to employees;
- built commitment to a new vision: "To become a compelling place to work, shop, and invest";
- created a measurement and reward system to support the vision; and
- substantially improved customer satisfaction and net margins (3.3% vs. 1.2% previously). (Rucci, Kirn and Quinn 1998: 97)

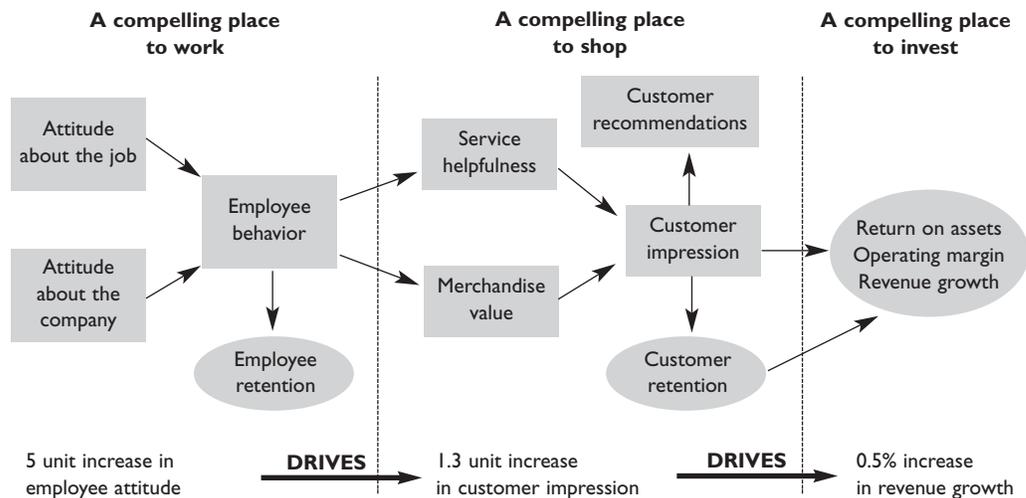
Though it is often difficult, there is a need to continually measure customer satisfaction, loyalty, and value along with the causal relationships among employees, customers and profits in order to provide for continued corporate profitability. This analysis is fundamental to understanding the revenue and cost components of customer profitability as well as the drivers of profits and success in organizations.

Exhibit 6 – The Initial Sears Model: From Objectives to Measures



Source: Rucci, Kirn and Quinn 1998: 89.

Exhibit 7 – The Revised Sears Model: The Employee-Customer Profit Chain



Source: Rucci, Kirn and Quinn 1998: 91.

ANALYZING CUSTOMER PROFITABILITY

How ABC Improves Understanding of Product and Customer Profitability

Traditional cost accounting assumes that products and services cause costs to occur. Therefore, direct labor, direct material and other direct costs are traced directly to products. All other costs are considered indirect costs and allocated to products on arbitrary bases, such as product volume or direct labor hours. This costing system can work well as long as indirect costs and product diversity are minimal. As the product mix becomes more diverse, it becomes more difficult to accurately allocate overhead costs.

Activity-based costing assumes that activities cause costs and that product, services and customers are the reasons for the activities. ABC focuses on determining what causes costs to occur rather than on merely allocating what has been spent. ABC traces costs to activities in the production process using resource drivers and activity drivers based on cause and effect. There are five primary steps in the ABC costing process:

- i) identify activities;
- ii) identify resource measures (inputs) from the consumption of resources by the activities;
- iii) identify activity measures (outputs) by which the costs of a process vary most directly;
- iv) calculate the driver rate; and
- v) trace activity costs to cost objects such as products, processes and customers based on the usage of activities.

ABC has developed into a broad-based tool that provides information on many aspects of company functions in addition to product cost data. ABC can show how products, brands, customers, customer groups, facilities, regions or distribution channels both generate revenue and use company resources (Cooper and Kaplan 1991:130). Though not a complete solution to all business problems, a good ABC system provides useful information that, in conjunction with other management information, can facilitate improved business decision making.

ABC offers a new way to analyze the allocation of costs to non-production activities such as marketing, selling, distribution and administration. Customer profitability is more easily determined through the use of ABC, since the costs can be driven directly

to individual customers, some of whom place more demands on the company than others. Some may require special orders, purchase just-in-time inventory, or have special delivery requirements; each of these has a cost that can be allocated to the specific customer using activity-based drivers. Understanding the needs and costs of each client, and how each impacts corporate profitability, can help to determine the level of customer service that will benefit both the customer and the company. The special needs of both large and small customers can be accommodated through a better understanding of the drivers of both the revenues and the costs associated with each customer (Kaplan and Cooper 1998:181).

Customer Profitability Analysis

Typically traditional cost accounting is not able to identify product and service costs or distribution and delivery costs for individual customers. ABC can help identify customer activities and track those costs that are allocated to specific customers. This can provide management with unique information about customers and customer segments. The benefits include:

- protecting existing highly profitable customers;
- repricing expensive services, based on cost-to-serve;
- discounting to gain business with low cost-to-serve customers;
- negotiating win-win relationships that lower service costs to cooperative customers;
- conceding permanent loss customers to competitors; and
- attempting to capture high-profit customers from competitors (Kaplan and Cooper, 1998:181).

Customer profitability analysis has become an important new management accounting tool based on a recognition that each customer is different and that each dollar of revenue does not contribute equally to the firm's profitability. Customers utilize company resources differently; thus customer costs vary from one customer to another. The following issues should be considered when analyzing customer profitability:

- how to develop reliable customer revenue and customer cost information.
- how to recognize future downstream costs of customers.
- how to incorporate a multiperiod horizon in the analysis.

- how to recognize different drivers of customer costs. (Foster, Gupta and Sjoblom 1996:10)

This requires a broader examination of the costs associated with customer service. For example, post-sale customer service costs must be included in any analysis of customer costs. Some customers require substantially more post-sale service than others. In addition, future environmental liabilities related to the sales of current products are additional downstream costs that must be included. With management's increased focus on customers, this analysis can provide forward-looking information about individual customers and customer segments and more broadly examine both the revenues and costs related to customer transactions. Revenues can vary among customers due to variations in volume levels, and differences in price structures, products and services. Costs can also vary depending on how customers use the company's resources such as marketing, distribution, and customer service. Unless a complete analysis of the benefits and costs of customer relationships is undertaken, companies will unknowingly continue to service unprofitable customers. Only after a thorough analysis of the costs and benefits can a firm decide which customers to service and strategically price its products and services.

There are many costs that are often hidden within the production, support, marketing, and general administrative areas. To better understand customer profitability these costs should be examined and assigned appropriately using ABC methods. These currently hidden customer costs may include items such as:

- inventory carrying costs;
- stocking and handling costs;
- quality control and inspection costs;
- customer order processing;
- order picking and order fulfillment;
- billing, collection and payment processing costs;
- accounts receivable and carrying costs;
- customer service costs;
- wholesale service and quality assurance costs; and
- selling and marketing costs. (Weinberg 1999:28)

ABC was recently used by a telecommunications company to improve customer profitability. The company developed a process for identifying the cost drivers of

training costs, which is an important component of the company's contract bids. The company's activities included the submission of bids to large organizations for the installation of telecommunications systems. The bids were reasonably accurate in estimating the cost of the equipment hardware, the installation cost of the new equipment, and the programming costs. However, the cost of training the customer's employees about the new equipment was more difficult to determine. Exhibit 8 represents an outline of the customer profitability reporting system developed for one business unit of this company (Ortman and Buehlmann 1998). This is an example of a detailed, comprehensive, and somewhat costly approach. As always there must be a balance between the benefits of collecting additional data and the associated cost. The availability and timeliness of data are also significant issues in implementing customer profitability systems based on ABC.

The major marketing activities were identified and the resources that these activities consumed were detailed. Employee time was the major resource driver, and was traced by an employee log to specific activities. The company found that training costs were significant but difficult to calculate. Customer service representatives, who were at the front line in the training function and formed a liaison between the company, its customers and the engineers who designed the systems, were interviewed. The company was then able to identify seven different training activities and resource uses, along with potential cost drivers. The estimation of customer service training costs through the use of ABC improved the company's understanding of the profitability of its different customers.

Whether customer-specific costs are necessary and/or can be determined depends on several factors, including the fragmentation of the customer base, the cost structure of the company, and the existence of the necessary information infrastructure. Analysis can be crude and simple and even incomplete, yet still effective at providing valuable customer profitability information.

Some customer models have been developed to provide companies with a framework to analyze the pricing of different services for different types of customers. An example of such a model can be seen in Exhibit 9.



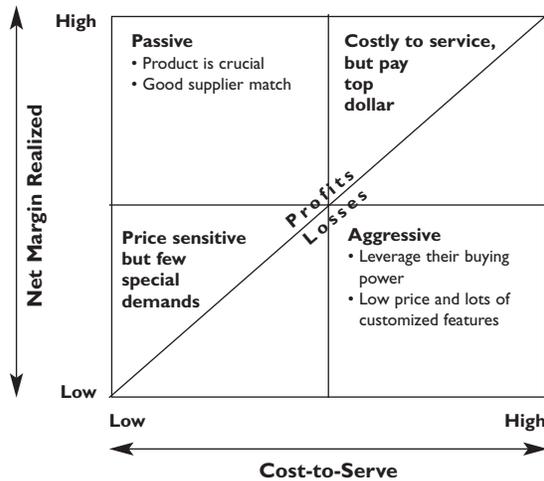
Exhibit 8 – Outline of the Customer Profitability System

Marketing Resources	Resource Drivers	Method of Tracing Resources to Activities and Customers	Activities
I. Selling			Selling Activities
1) Account Executives' (AE) Salaries and Benefits	time spent	log	1) Maintaining current customer relations
2) Account Executives' (AE) Commissions	sales closed	commission report	2) Generating new customers
3) Presentation Materials (brochures, videos, CD Roms)	items given away	log	3) Making customer presentations
4) Depreciation on Presentation Equipment	time used	log	4) Conducting demonstrations
5) Demonstration Facilities Expense	time used	log	5) Entertaining customers
6) LD Telephone Expense	calls made	invoice	6) Forming support teams to prepare an RFP
7) Automobile Expense	mileage	log	7) Attending new product training seminars
8) Travel Expenses	distance & time	invoice/log	
9) Entertainment Expenses	entertaining done/time spent	invoice/log	
10) Sales Support/Occupancy Cost Allocation	none	[allocation using AE's [traceable time	
11) Sales Manager's Salary & Benefits	none		
II. Technical Support			Technical Support Activities
1) Technical Design Specialists' (TDS) Salaries and Benefits	time spent	log	1) Determining the customer's hardware & software needs; installation procedures and cost estimation thereof
2) LD Telephone Expense	calls made	invoice	2) Researching new products
3) Travel Expenses	distance & time	invoice/log	
4) Computer Costs Including Software	time used	log	
5) Sales Support/Occupancy Cost Allocation	none	[allocation using TDS's [traceable time	
6) TS Manager's Salary & Benefits	none		
III. Customer Support			
1) Customer Support Representatives' (CSR) Salaries and Benefits	time spent	log	1) Estimating customer training costs
2) Training materials: • Development Costs • Duplication Costs	time spent # printed	log	2) Conducting customer training
3) Automobile Expense	mileage	log	3) Collecting data needed for software programs
4) Travel Expenses	distance & time	invoice/log	4) Analyzing customer needs for options and upgrades
5) LD Telephone	calls made	invoice	5) Handling customer complaints
6) Sales Support/Occupancy Cost Allocation	none	[allocation using CSR's [traceable time	6) Attending new product training seminars
7) CS Manager's Salary & Benefits	none		
IV. Customer Service			Customer Service Activities
1) Service Specialists' (SS) Salaries and Benefits	time spent	log	1) Installing new systems; adding options and upgrades to existing systems
2) Service Specialists' Commissions (on service contract sales)	value of contracts sold	commission report	2) Selling maintenance contracts on new equipment & renewals on existing equipment
3) Automobile Expense	mileage	log	
4) Travel Expenses	distance & time	invoice/log	
5) Telephone (LD)	calls made	invoice	
6) Sales Support/Occupancy Cost Allocation	none	[allocation using SS's [traceable time	
7) CS Manager's Salary and Benefits	none		
			4) Learning how to service new products

Marketing Resources	Resource Drivers	Method of Tracing Resources to Activities and Customers	Activities
V. Sales Support			Sales Support Expenses
1) Clerical Staff's Salaries including benefits 2) Occupancy Costs • Lease, utilities, telephone • Cleaning contract expense • Leasehold improvement amortization 3) Equipment Depreciation • Computers • Fax/Copying Machines • Office Furniture • Software amortization 4) Office Supplies 5) Receptionist's Salary & Benefits 6) SS Manager's Salary & Benefits	time spent none none none none none	log Allocated to four areas above in proportion to the CS' time traceable to those areas	1) Maintaining office facilities 2) Providing word processing, copying, faxing services 3) Providing receptionists services 4) Providing facilities for staff training 5) Providing facilities for customer demonstrations 6) Providing payroll input data 7) Preparing budget for corporate 8) Distributing incoming mail, preparing outgoing mail

Source: Ortman and Buehman 1998:8.

Exhibit 9 – Customer Profitability



Source: Adapted from B.P. Shapiro, V.K. Rangan, R.T. Moriarty, and E.B. Ross, "Manage Customers for Profits (Not Just Sales)," Harvard Business Review (September-October 1987), 104. Reprinted by permission of Harvard Business Review.

Source: Kaplan and Cooper 1998:193.

This customer-based ABC model facilitates company analysis of how to be a provider to customers that desire low cost products and minimal service and also how to provide services to high margin, high cost-to-service customers. Thus profitable customers can be acquired and retained in many different ways. Increasingly, companies are utilizing menu-based pricing where the

cost to the customer is determined by both the amount and type of products purchased and by the delivery method and customer service costs. Menu-based pricing is based on an ABC model that determines the customer service costs and delivery costs (Kaplan and Cooper, 1998:193-194).

Pillsbury, the giant food distributor, used information from its ABC customer

and store level profit and loss statements to determine what its customers valued and wanted and then developed “menu-based pricing”. The company began charging fees for special services that were desired by some but not all customers. In this way it developed a base level of service that all customers received, plus service-based pricing for specially desired services. Further savings to consumers were obtained through negotiations with retailers for lower prices on Pillsbury products and for special merchandising and promotion of its products (Kaplan and Cooper 1998:198).

Swedbank, part of the largest bank group in Sweden, resulted from a consolidation of several government-owned banks. There were 4.5 million individual accounts and 100,000 business accounts. This is an example of a customer service company that made use of customer profitability analysis to identify its unprofitable customers and to become more profitable overall. Through ABC analysis and customer surveys, the bank determined that approximately 80% of its customers were satisfied but unprofitable, while the remaining some 20% of the customers were dissatisfied with the bank’s services but very profitable – contributing more than 100 percent of the bank’s profits. As a result, the bank began investing all new capital in profitable customers. Front line employees were given more latitude, new products were introduced, employee training was increased, and a new management information system was introduced to customer and corporate profitability. Some unprofitable customers left and the profitable customers increased their usage of the bank’s products and services.

Swedbank proceeded to examine the relationships and results of three related dimensions of performance: customer value added, people value added, and economic value added (profitability). This combination of an ABC analysis with a balanced scorecard type model provided the framework and the information to improve customer and corporate profitability.

Customer Profitability Analysis in a Manufacturing Company

The Kanthal case provides an excellent example of how ABC can improve the measurement and management of customer profitability. Kanthal, the largest division of Swedish manufacturer Kanthal-Hoganas, had sales in excess of \$50 million per year.

Most sales, about 95%, were exports from Sweden. Kanthal manufactured and sold heating alloys for electric resistance heating elements, heating elements for industrial furnaces and thermo-bimetals for temperature control devices. The company was organized into three divisions, two of which held substantial global market shares in their particular products and the other had developed a fully integrated manufacturing system to produce the thermo-bimetals.

The president of the company, Carl-Erik Ridderstale, saw the need for a strategic plan to increase profits while maintaining an annual return on employed capital in excess of 20% (Kaplan 1989:2). His Kanthal 90 Strategy detailed profit objectives by division, product line, and market share. Ridderstale’s plan was to achieve this growth without the need for additional sales or administrative staff to handle the expected increase in sales volume.

Ridderstale was also concerned that selling and administrative expenses formed the largest cost category in the company and were growing. They accounted for 34% of total expenses and were treated as period costs rather than allocated to either products or customers. Ridderstale wanted a new costing system that could determine how much profit was earned every time an order was placed. He also wanted to find the hidden profits and hidden costs in each order. Further, he believed that Kanthal had low profit and high profit customers depending on the demands that the customer placed on the administrative and sales staff and that these customers should be readily identifiable.

Kanthal had about 10,000 customers and produced over 15,000 items. It stocked 20% of those (3,000 items) which represented 80% of the company’s sales. After assigning costs to customer orders, it became apparent that the sales of stocked items were significantly more profitable than the processing and manufacturing of non-stocked items. Since the existing system did not differentiate between orders for stocked and non-stocked items the difference in profitability had not been apparent. The costs to produce non-stocked items was greater than the costs to produce stocked items since special scheduling was required for the purchase of the raw materials and the production process. It was also more costly to produce the items in small quantities.

With the aid of consultants, the financial manager of Kanthal, Per O. Ehrling, developed an Account Management System to analyze production, sales, and administration costs using ABC. Two new cost drivers were added to the analysis: the additional cost of producing non-stocked items, and, the normal expense associated with any customer order such as pricing, scheduling delivery, invoicing, and collecting.

The company then accumulated, for each customer, the profit and loss figures from each individual order placed by that customer (See Exhibit 10). The results of the ABC analysis showed that while gross margins for different customers may be the same, the additional costs to produce special small orders and to fill stocked items on small orders significantly reduced the profitability of these customers. Kanthal now realized that it had a few extremely profitable customers and a few extremely unprofitable ones (Kaplan and Cooper 1998: 185) and was surprised by the wide variation in customer profitability. Exhibit 10 graphically portrays select Kanthal customers and how they add or detract from profitability. Generally, the first few customer sales vs. cost of sales contributed the most profit, while the last few customers generated the largest losses due to high selling or post-sale costs.

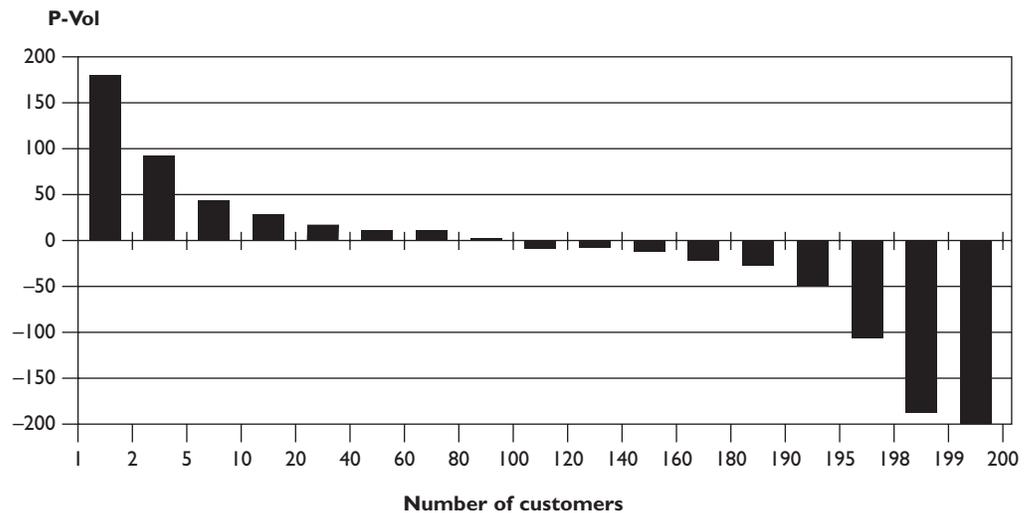
Even more surprising to Kanthal was that some of the customers with the most sales were the most unprofitable. Two very

unprofitable customers were in the top three in terms of sales volume. One of these unprofitable high volume customers had moved to just-in-time (JIT) ordering from its suppliers, placing orders weekly and sometimes twice a week. Variations in the profit margins on individual orders ranged from -179% to +65% as shown in Exhibit 11.

The company also discovered that 40% of the Swedish customers generated 250% of the profits. Finally, it also discovered that the most profitable 5% of the customers generated 150% of the profits. This was a shocking discovery as it had been thought that most customers contributed to profit. This phenomenon of a few customers being the most profitable is present in many companies.

Traditional cost accounting often supports a 20-80 rule that 20% of the largest customers, who purchase the most products, contribute 80% of the profits. Using ABC, analysts have often found that 20% of the customers generate 300% of the profits. The remaining 80% of the customers are actually unprofitable and can result in a loss of 200% of the profits. When plotted on a graph, (See Exhibit 12), the “hump” of this “whale curve” indicates the profit earned by the company’s most profitable customers. The remaining customers are break-even or unprofitable and bring the overall profit back down to 100%. The goal is to make each customer profitable.

Exhibit 10 – Customer Profitability: Ranked from Most to Least Profitable



Source: Kaplan 1989:13.



Exhibit 11 – Customer Order Analysis

Standard order cost: SEK572

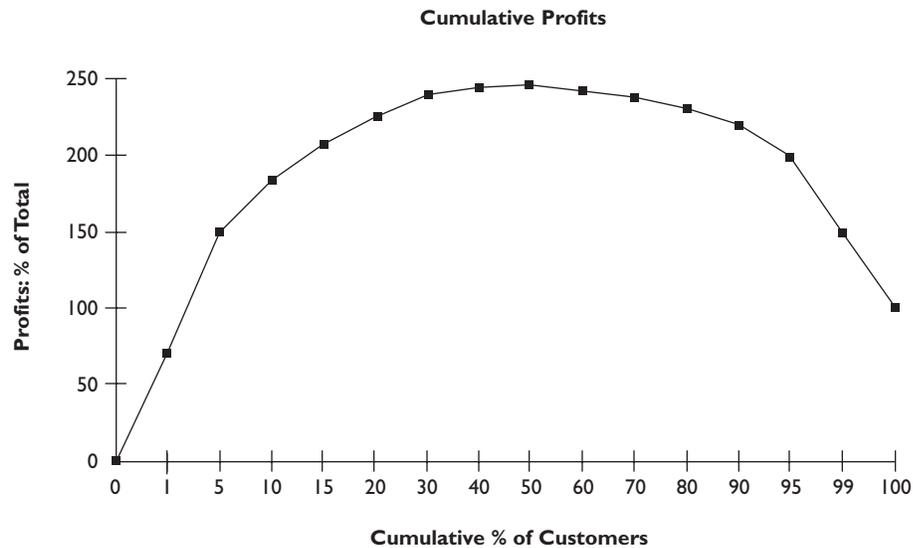
Manufacturing order cost for non-stocked products: Foil Elements: SEK1508
 Finished Wire: SEK 2340

Country Customer	Order Lines	Invoiced Value (SEK)	Volume Cost (SEK)	Order Cost (SEK)	Non-Stocked (SEK)	Operating Profit (SEK)	Profit Margin
Sweden							
S001	1	1,210	543	572	0	95	8%
S002	3	46,184	10,080	1,716	4,524	29,864	65
S003	8	51,102	50,567	4,576	12,064	(16,105)	-32
S004	9	98,880	60,785	5,148	13,572	19,375	20
S005	1	3,150	1,557	572	2,340	(1,319)	-42
S006	5	24,104	14,889	2,860	4,680	1,675	7
S007	2	4,860	2,657	1,144	4,680	(3,621)	-75
S008	1	2,705	1,194	572	0	939	35
S009	1	518	233	572	0	(287)	-55
S010	8	67,958	51,953	4,576	12,064	(635)	-1
S011	2	4,105	1,471	1,144	0	1,490	36
S012	8	87,865	57,581	4,576	12,064	13,644	16
S013	1	1,274	641	572	2,340	(2,279)	-179
S014	2	1,813	784	1,144	0	(115)	-6
S015	2	37,060	15,974	1,144	3,016	16,926	46
S016	2	6,500	6,432	1,144	3,016	(4,092)	-63

Note: All financial data reported in Swedish kroner (SEK).

Source: Kaplan 1989:11.

Exhibit 12 – Cumulative Profitability by Customers



With a new understanding of which customers were profitable and which were not, Kanthal became dedicated to turning unprofitable customers into profitable ones. The company developed ways to retain the customers and decrease their administrative and selling costs (Kaplan and Cooper 1998: 188). In the short term, Kanthal tried the

following: reduce the size of its product lines, accept orders only for stocked items, use external distributors to reduce the cost of small accounts, change compensation to salesmen to emphasize profit rather than only sales volume, and engineer to reduce set-up times and improve operational efficiencies.

In the longer term, the following are some of the actions taken as a result of the new ABC system:

- involvement of salespersons was increased in discussions with management and customers;
- prices were increased for small, customized orders;
- product managers were encouraged to reduce proliferation of sizes and variance in product line;
- salespersons emphasized standard products; and
- customers were persuaded to make larger orders of stocked items.

With one particular customer, Customer #200 (see Exhibit 10), Kanthal devised an excellent solution that would make the company profitable and satisfy the customer. The company went to the customer, shared the ABC analysis, and explained the implications for profitability of producing only small orders of non-stocked items. Kanthal offered a new pricing structure that granted the customer a 10% discount on high volume orders of stocked products and charged a 60% price premium for small orders of non-stocked items. The results of this new pricing structure were reviewed one year later; Kanthal found that Customer #200 gave the company the same volume of business but placed orders half as many times per year, and for half as many different products. Customer #200 changed from the most unprofitable customer into one of the most profitable in the course of one year (Kaplan and Cooper 1998:188).

Kanthal's approach was to work with its customers for the benefit of both the firm and the customer. The company provided some customers with computer terminals directly linked to the Kanthal office so the customers could order directly without any sales effort being employed. Another customer, who had placed several small orders for many different types of products, was converted to a distributor. Kanthal sold larger quantities to the customer that stocked the items for its own use. This customer also added a profit to some of the products and resold them to other small companies. Thus Kanthal was thus able to reduce its service costs to this one customer and better service other small companies.

In these instances, Kanthal discovered, like many other companies, that rapid improvements in information technology could simultaneously provide substantial

benefits to both customer service and customer profitability. Further, companies have recognized that customer behavior, customer satisfaction, and customer profitability can all be increased when this new information on customer profitability is shared directly with the customer.

The ability to determine customer profitability on an individual basis can add value to the company-customer relationship. As in the case of Kanthal, the customer can be helped to reduce its costs and the company can become more profitable. Increasingly with ABC, management of activities is the focus - cost accounting becomes more about managing costs (rather than cost accumulation), knowing what causes costs to occur, and making changes to reduce expenditures. Kanthal was able to work with its existing customers for their mutual benefit.

Using customer profitability analysis to determine the causes of costs and subsequently making changes to reduce those costs are important lessons to be learned from the Kanthal case. Customer profitability can only be increased by reducing costs or raising revenues. Ways to increase that profitability through better management of customer costs are facilitated by improved cost analysis. In this case, an ABC analysis was critical. The managers were unwilling to take any action until they were presented with the data that indicated the profitability of products and customers.

Customer Profitability Analysis in a Service Company

The Co-operative Bank was founded in England in 1872 as a department in a cooperative wholesale society, which was the central organization formed by cooperative societies throughout the country. Cooperative societies were formed to aid working class people in obtaining goods and services at lower costs through trade and cooperation. The bank's main function was to serve the banking needs of the wholesale cooperatives and thus had few personal accounts. It expanded to serve many of the upcoming and growing cooperative societies around the country.

In 1971, an Act of Parliament established the bank as a separate legal entity. The cooperative movement had declined along with deposit and loan accounts due to competitive pressure from private businesses.

Reorganized, the bank began to aggressively pursue deposits from personal customers and by the 1990s had deposits of approximately 3 billion pounds sterling. As the bank grew, it also broadened the range of products and services for personal and corporate customers. Increased competition from other banks and customer demand led to new products being introduced including credit cards, high-interest bearing current accounts, ATM cards, telephone banking and independent financial advice.

Under new management, the Co-operative Bank issued both a mission statement and a statement of ethical policy. These documents declared the bank's responsibility to its customers, its employees and its communities, and promoted the cooperative values established at the founding of the bank in 1872. In the early 1990s, Co-operative Bank found itself in the midst of an economic recession and was forced to make changes to its operations in order to be more competitive and efficient. It consolidated some of its operations and reduced employment through voluntary retirement. However, it also increased its cross-selling activities to existing customers and began to offer a much wider choice of products. While the bank believed it had an array of excellent products and services for its customers, its cost-to-income ratio was

higher than its competition. Traditional responsibility accounting was being used to measure expenses for geographic and departmental cost centers but the bank was unable to track costs to customers or to products.

In 1993, the Co-operative Bank began an ambitious project to improve its profitability and customer service. The new Project Sabre's goal was to improve the cost-to-income ratio and the service to customers. In order to accomplish this, the bank needed additional information for making changes that related to five corporate needs:

- overhead reduction;
- re-engineering of business processes, particularly those that did not add value to customers;
- product profitability;
- customer profitability; and
- segment profitability (Datar and Kaplan, 1995:5).

The bank began an ambitious project of implementing ABC. It identified 210 cost pools and 235 activities/tasks. The bank then asked employees from different areas of the bank to match resource costs to the activities by identifying the amount of time that they spent on various activities. A sample of the activities, cost drivers, quantities, and rates are displayed in Exhibit 13.

Exhibit 13 – Personal Sector Products: Activity Cost Drivers Quantities and Rates*

Activity Description	Activity Cost Driver	Total Activity Cost	Quantity of Activity Cost Driver	Cost Per Unit of Activity Cost Driver
Provide ATM Service	ATM transactions	£ 490,302	1,021,963	£0.48
Clear Debit Items	Number of debits processed	1,022,140	5,110,299	0.20
Branch Operations for Debit Items	Number of branch counter debits	684,100	762,111	0.90
Issue Personal Cheque Book	Number of books issued	263,949	40,628	6.50
Clear Credit Items	Number of credits processed	218,001	871,004	0.25
Branch Operations for Credit Items	Number of branch counter credits	548,168	512,986	1.07
Lending Control and Security	Number of interventions	1,380,763	765,591	1.80
Customer Inquiries	Number of telephone minutes	1,298,801	7,205,560	0.18
Customer Correspondence	Number of customer letters	726,206	221,204	3.28
Marketing and Sales Activity	Number of accounts opened	2,562,046	62,120	41.24
Computer Processing	Number of computer transactions (electronic impulses)	1,641,247	16,112,471	0.10
Statementing and Postage	Number of statements issued	477,200	1,724,285	0.28
Advise on Investments and Insurance	Hours of advice given	1,159,943	32,956	35.20
Process VISA Transactions	Number of VISA transactions	1,174,207	5,125,248	0.23
Issue VISA Statements	Number of VISA statements issued	443,107	1,714,258	0.26
Open/maintain Handyloans	Number of Handyloan accounts	846,806	201,521	4.20
Open and Close Accounts	Number of accounts opened/closed	493,599	57,951	8.52
Administer Mortgages	Number of mortgages	196,082	18,609	10.54
		<u>£15,626,667</u>		

*Numbers disguised to maintain confidentiality.
Source: Datar and Kaplan 1995: 16

The total costs of each activity were determined by combining all of the resource pool costs assigned to each activity. The costs of each activity were then traced to the various bank products by defining activity cost drivers for each activity. The activity cost driver represented the event that triggered the performance of each activity, such as a deposit that was processed or an account that was opened. The bank was then able to distribute the activity costs to various bank products. Some banking expenses, sustaining costs representing 15% of the total costs, were not allocated to activities or bank products. These costs were spread over the entire product and customer service range of activities. An analysis of product profitability was one of the results, as set out in Exhibit 14.

The profitability analysis provided the bank with vital information to make decisions about product offerings, strategy and future growth. The analysis showed that the Independent Financial Advice/Insurance product considered by the bank to be a highly profitable business was actually losing money. Current Account Plus, the basic core product of the bank, was not profitable. The bank now had a wealth of information about the cost of each activity (the cost to process cheques and, credit card transactions, open and close accounts): with this information the bank could reassess its product and service offerings. The bank realized that it had the highest cost-to-income ratio of United Kingdom banks and had to cut its costs and services in order to survive. A weakness of the product profitability analysis was that it ignored the cross-selling opportunities of the different products that the bank offered. For example, the Independent Financial Advice/Insurance product while unprofitable may be attractive to wealthy account holders, help to retain those customers and ultimately increase their lifetime profitability.

The initial analysis was limited to product profitability and the bank's team wanted to extend the ABC analysis to customer profitability by examining individual customers with current accounts. Specific assumptions were made in the allocation of the costs of the customer accounts. The team allocated 55% of current account expenses to transaction costs and 45% to account maintenance. Customers were segmented into Low, Medium and High based on the turnover of funds in their accounts

in order to allocate the transaction costs. On the revenue side, the bank determined the income earned from the balances and fees for individual customers. By matching income with the allocated costs, managers were now able to estimate the profitability of each customer. This revealed that up to half of all current accounts, particularly those with low balances, were unprofitable.

In service organizations such as Co-operative Bank, costs are usually committed far in advance. Thus there is little incremental cost or savings from reducing or increasing customer service or activity. Each customer uses each bank product differently, so it is important to have substantial customer analysis information. For a chequing account, some customers write a lot of cheques and some do not; some customers maintain high balances and some maintain only minimal balances.

Once the information on product and customer profitability is obtained, what should management do with it? The bank devised new strategies for profitability such as:

- cross-sell more profitable products;
- distinguish between new customer and mature accounts;
- switch unprofitable customers to ATM transactions;
- set pricing for minimum balances, ATM fees, overdrafts; and
- outsource ATM network, computer operations and cheque clearing.

The Co-operative Bank used ABC to better understand the costs of its wide range of products and its diverse customers. Prior to the ABC implementation, bank management was unable to agree on which were the profitable and unprofitable products and customers. The information from both the product profitability analysis and the customer profitability analysis for individual customers and customer groups was essential to improving customer and corporate profitability.

Customer Profitability Analysis in a Small Company

Customer profitability analysis applies to small companies as well. When Mahany Welding Supply, a Rochester, New York distributor of welding supplies, examined customer profitability, there were some surprises. The company employs only

Exhibit 14 – Profitability Analysis of Personal Sector Products*

Activity	Current Account Plus	Freeflow	Personal Loans	Mortgages	VISA Classic	VISA Affinities	VISA Gold	Handyloan /Fastline	Independent Financial Advice/ Insurance	Pathfinder	Deposit Products	Total
Net Interest	£5,283,472	£1,041,384	£ 4,530,763	£ 331,027	£2,856,713	£ 463,204	£ 808,592	£1,811,526	£ 0	£ 261,717	£960,437	£18,349,035
Net Commission	3,593,898	358,867	780,608	147,909	2,101,002	686,117	1,562,720	65,987	1,549,634	4,284	(1,141)	10,849,885
Bad Debts	(782,000)	(130,000)	(1,192,000)	(274,000)	(882,000)	(182,000)	(508,000)	(274,000)	0	0	0	(4,224,000)
Gross Profit	8,095,370	1,270,251	4,119,571	204,936	4,075,715	967,321	1,863,312	1,603,513	1,549,634	266,001	959,296	24,974,920
Activity Costs (from Exhibit 13)	7,157,339	225,472	1,342,626	144,092	1,914,764	439,753	1,031,437	983,569	1,601,707	426,767	359,141	15,626,667
Direct Profit	938,031	1,044,779	2,776,945	60,844	2,160,951	527,568	831,875	619,944	(52,073)	(160,766)	600,155	9,348,253
Allocated Infrastructure Costs	1,014,145	36,845	204,822	4,213	156,768	22,086	81,053	20,864	263,078	65,066	59,685	1,928,625
New Profit	£ (76,114)	£1,007,934	£ 2,572,123	£ 56,631	£2,004,183	£ 505,482	£ 750,822	£ 599,080	£ (315,151)	£(225,832)	£540,470	£ 7,419,628

*Numbers disguised to maintain confidentiality.

Source: Datar and Kaplan 1995: 18.

seven people. However, Mahany found a wide range in the profitability of both customers and employees.

Mahany identified four distribution methods for its products:

- walk-in trade and customer pick-up calls;
- a delivery truck that services customers within the city;
- a delivery truck that services the area within a 40-mile radius of Rochester and visits one of five different geographic areas each day; and
- UPS and common carrier shipments (Krupnicki and Tyson 1997:40).

Employee profitability was analyzed. Since there were only seven employees, jobs were cross-functional; employees often had more than one job, and no set time to do a particular job. Possible causal relationships among the costs the activities and the drivers of the activities were identified. Activities were analyzed based on the time spent per employee. Other expenses such as advertising, telephone, legal and accounting, insurance, rent and utilities were also tracked and included in the analysis.

The analysis, though not precise, has provided the company with substantially improved information for decision making, and changed the way the company looks at alternatives for servicing customers and pricing services to make them more profitable.

The ABC analysis indicated that 15 different activities caused costs to occur in the company. Once the activities were identified, time studies performed, a causal link found between activities and costs, allocation rates computed, and the data put into a contribution margin format the desired cost numbers were obtained. The analysis provided valuable information to improve cost management by more carefully identifying the costs of servicing different customers. It also illustrated some important lessons related to the use of ABC and customer profitability analysis:

- information, though not precise, can provide the company with substantially improved support for decision making and greatly improve its understanding of customer profitability;
- a company does not necessarily need excellent ABC analysis to make great improvements; and
- no ABC information/analysis is perfect. Good judgment and additional qualitative information are necessary before final decisions are made.

IMPROVING CUSTOMER PROFITABILITY

Improving the Measurement and Management of Customer Profitability

ABC and customer profitability analysis provide the basis for managerial decision making and actions. The information avail-

Exhibit 15 – Company Profitability by Employee

Old Method	Customer A	Customer B
Sales	\$79,320	\$79,320
Product Cost	(50,000)	(50,000)
Service Costs	(16,100)	(16,100)
Profit	<u>\$13,220</u>	<u>\$13,220</u>
Profit %	17%	17%

Activity-Based Analysis	Customer A	Customer B
Sales	\$79,320	\$79,320
Product Cost	(50,000)	(50,000)
Service Costs	(10,510)	(30,093)
Profit	<u>\$18,810</u>	<u>(773)</u>
Profit %	24%	Negative

Source: Krupnicki and Tyson 1997: 44.

able from these analyses can be utilized to further corporate goals and strategies and maintain profitability. An important outcome of customer profitability analysis is the understanding of how to better manage customer profitability. The success of profitability systems can be measured as much by the awareness they raise as by the decisions they directly impact. Thus, in addition to the substantial benefit of directly increasing customer and corporate profitability, the process of analysis, discussion, and understanding of the drivers of customer-related costs can motivate employees to improve their own performance and their customer relationships.

The examples of Kanthal, Co-operative Bank, and Mahany Welding Supply illustrate how ABC can provide information to support the implementation of strategic and tactical changes in organizations. In these cases the ABC analysis provided improved information on the wide variation in the profitability of individual customers. This information and analysis facilitated strategic and tactical decisions regarding whether to “fire” unprofitable customers or to change the pricing structures, customer service, and customer behavior to improve individual customer profitability.

An ABC analysis of the unprofitable customers is just as important as that of the profitable ones. The fixed costs of unprofitable and “fired” customers often remain after the customers have departed. The

contribution margin will thus need to be allocated and absorbed by the remaining customers. Companies must then analyze the change in projected operating expenses as customers are added and deleted (see Exhibit 15). The analysis of continuing fixed customer-related costs often influences decisions regarding investments in customer relationships and attempts to convert unprofitable relationships into ones that are healthy and profitable for both the customers and the company. Before an unprofitable customer is permitted to depart, all avenues should be explored to turn the customer into a profitable one, including an assessment of the “word of mouth” consequences. In addition, management should consider the lifetime value of a customer, cross-selling opportunities, and both the short-term and long-term profitability. Finally good judgment by management and other qualitative information should be included in any decision to “fire” unprofitable customers.

Customer profitability measures often reveal that some newly acquired customers, are unprofitable due to large customer acquisition costs. In early periods, this cost has not yet been covered by the margins earned through selling products and services to the customers. In these cases lifetime profitability analysis becomes the basis for retaining these customers. Customers that are unprofitable in the short-run often



become very profitable as their purchases increase and their cost to service decreases. Likewise, customers that are unprofitable in the long-term may require immediate action to turn them towards profitability. This may include promoting more cross-selling opportunities to broaden the product range of customer purchases. Finally, other customers may be prestigious to retain, even if they are unprofitable, since they may add reputation and credibility to the company and improve the ability to sell to others.

Much of the customer profitability analysis has focused primarily on one type of product or service for an individual or group of customers. ABC customer profitability analysis is increasingly flexible and forward looking, and can incorporate a wide amount of variability. ABC analysis proposes to:

- cut across the entire value chain;
- focus on multiple rather than single transactions of a customer;
- focus on multiple products bought by a single customer;
- accumulate costs related to a customer rather than to a specific product or service; and
- structure the analysis to be narrow in focus or broad to include all customers (Foster, Gupta and Sjoblom, 1996:10).

It is the variability and adaptability of ABC implementations that makes them very attractive to companies. The use of ABC will rapidly increase as information technology continues to make vast amounts of data and information readily available to management.

Information Technology

Just as Kanthal improved both customer profitability and customer satisfaction by providing computer terminals to customers, many other companies are realizing that information technology can produce significant improvements. Monumental advances in information technology are providing managers with improved quantity and quality of information concerning customer profitability. Previously, management had not been able to track which customers were profitable and which were not. Developing customer profitability databases has improved decision making regarding the cost of new customers and the cost of keeping existing customers. Customer retention rates can also be analyzed to provide management with information about whether it is the

profitable or the unprofitable customers that are being retained.

Earlier this guideline provided examples of banks and other service companies that have developed sophisticated customer information and profitability systems. These databases can instantly provide information about the profitability of an individual customer or a customer segment. Using this information some service companies encourage unprofitable customers to leave by raising prices on their services to very high levels. The information is also used to develop marketing strategies to attract the proper profile and mix of customers in the future. Companies can then develop advertising programs to attract customers that will purchase the services within minimum costs and maximize customer profitability.

Banks have been in the forefront in utilizing this new information technology. About half of banks with more than \$1 billion in deposits use profit data to make customer decisions. These firms spent \$500 million on computer technology and software, and it is expected that banks will continue to spend \$500 million per year in the near future as more of them see the need for this information. To a bank, the difference in profitability between a good and bad customer can be substantial, as determined by the account balance and the amount of services and interactions with bank employees that the customer demands. According to an Atlanta bank consulting firm, the top 20% of typical bank customers produce as much as 150% of overall profit, while the bottom 20% of these customers drain about 50% from bank profit (Brooks 1999:A12). Similar results were seen in the other examples cited earlier including Kanthal.

Customer profitability models can be designed for any type of business and for different customer characteristics. Data can be aggregated by size of customer, size of order, complexity of service, post-sale requirements, delivery distance, etc. The information technology is currently available to provide detailed information and analysis on individual customers or groups of customers. First Union and many of the other banks discussed here have developed profitability models from their large databases. Customer service representatives can then obtain instant customer profitability rankings from the computer.

A problem can arise from reliance on

customer profitability profiles that focus on a single transaction type or on a single transaction period. Some customers may be unprofitable for a particular time period, and highly profitable for another. Further, customers may be profitable on some company products and services, and unprofitable on others.

The success of customer profitability analysis depends on the information reaching those who make and influence decisions. Though the modeling and raw profitability data are important, a user-friendly, multi-dimensional OLAP (on line analytical processing) interface is equally necessary. In addition to the proper data delivery device, training in the interpretation of the customer profitability information is critical.

Barriers to Implementation

People often feel threatened by change, do not understand it, and are opposed to it within a company. Commission salespersons will try to protect customers even though they may not be profitable to the company. At Kanthal, there was a genuine concern for retaining customers and trying to improve the profitability of unprofitable ones. Sharing cost and profit information with the customer can produce a better relationship between customer and supplier; when a customer has a better understanding of the price and profitability structure of the supplier and the reason for the price increases, there is often a change in customer service demands and costs.⁴

Customer profitability analysis can be a large undertaking for an organization in terms of the resources used and the costs to complete the initiative. Barriers to implementation can include:

- convincing management that potential organizational improvements justify the resource allocation;
- obtaining the significant required resources that include information technology, equipment, and staff for analysis and preparation;
- changing the sales incentive system to reward customer profitability rather than sales volume;
- obtaining buy-in from employees within the company who are often reluctant to change; and
- training employees in the use of customer profitability analysis and its measurement and rewards.

At Kanthal, the salespersons felt threatened with the new emphasis on bigger orders, more profitable orders and orders for stocked items only. The employees were previously rewarded based on volume, had been indifferent to ordering patterns, and had no interest in individual customer profitability. Subsequently, the salespersons were urged to raise prices through surcharges and handling charges for small, customized orders. In the near term, sales increased 20% with an employment reduction of 1%; overall corporate profitability increased.

However, management must be sensitive to required change within the organization and be sure that employees are included in the decision and change processes. Sears did an excellent job of change implementation. While the new Sears vision began with top management, the implementation of the changes began with changing employee attitudes, obtaining employee buy-in, and increasing training costs for new and existing employees.

After Co-operative Bank obtained the detailed information on customer and product profitability there was some resistance to change and management needed to address some strategic issues. Should the bank discourage unprofitable customers by charging them higher fees? Should the bank phase out unprofitable products such as Independent Financial Advice/Insurance?

The Co-operative Bank was faced with an additional conflict. Founded more than 100 years ago, the bank had a history of commitment to individuals, the community, and the cooperative movement. The guiding principle of the cooperative was that it "should exist for the benefit of the people it served, sharing its profits among them in proportion to their purchases." (Datar and Kaplan 1995:1) The bank reinforced these beliefs with a Mission and Ethical Statement in 1988. The values, culture and mission of Co-operative Bank constrained the decisions it made; in trying to decide whether to "fire" unprofitable customers, the bank was limited by the mission statement. As a result the bank continued to work with these customers to convert them into profitable ones.

With the new information about the profitability of customers, the bank faced some core value decisions. Should it discourage unprofitable customers? Should it charge profitable and unprofitable cus-



tomers differently? What effect should its Mission Statement of ethical values and its belief in the principles of cooperation have on its decision to implement change that affects the customers? Clearly the bank had conflicts between its economic goal of profitability and increasing shareholder value, and its social goals and commitments to the cooperative movement. However, with the new information on the profitability of both products and customers, more informed decisions could be made.

CONCLUSION

The development of ABC in the 1980s prompted managers to look more closely at the causes of costs. More recently, increased business pressure to become “customer-focused” and oriented toward “shareholder value” has increased the use of activity-based costing to better understand product, customer, and corporate profitability.

Similarly, the development of the balanced scorecard in the 1990s has prompted managers to look at the causes (or drivers) of profits and success. Through a careful identification and articulation of strategy, the development of key success factors, and the development of key performance indicators, the balanced scorecard has helped companies implement strategies and translate strategy into action.

Both of these models – ABC and the balanced scorecard – rely on an improved understanding of the drivers of value in organizations, including a specification of

leading and lagging indicators of performance, the relationships between them and their measurement. The models rely on the identification, measurement, and understanding of the drivers and causal relationships of employee satisfaction, customer satisfaction, customer profitability and corporate profitability. Only with the specification and measurement of these relationships can the costs and revenues related to improving corporate performance be properly managed. The goal of business is not to improve employee or customer satisfaction at any cost, but rather to manage those relationships to improve long-term corporate profitability. Managers need to understand these relationships and the drivers of customer profitability so they can better manage and improve corporate performance.

Managers must constantly make decisions that involve trade-offs. They need to determine how much to invest in human resources and in customers. To make these decisions they need to analyse the returns that are likely from those investments, the costs of those investments, and the managerial incentives in place to make those investments. This guideline offers an improved understanding of the analysis of customer profitability in order to assist managers in the allocation of corporate resources.

Measuring customer profitability and understanding the drivers of customer and corporate value can lead to the improvement of overall corporate performance.

ENDNOTES

- ¹ For more information on ABC, see Society of Management Accountants of Canada, The 1995b, revised 1999.
- ² The examples in the first part of this guideline are drawn primarily from Judge 1998; Brooks 1999; and Foster, Gupta and Sjoblom 1996.
- ³ For further discussion of the components and measurement of customer value see Society of Management Accountants of Canada, The 1995a, revised 1999.
- ⁴ See also, Society of Management Accountants of Canada, The. 1995, revised 1999. *Managing the Human Aspects of Organizational Change*. Management Accounting Guideline. Mississauga, ON: The Society of Management Accountants of Canada.

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NOTES

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