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Calculating and Reporting Customer Profitability at:

Wachovia

Site Visit Summary

Site Visit Date: September 26, 2005

Site Visit Location: Charlotte, N.C.

Site Visit Hosts:

- Bob DeAngelis; managing director, CART

- Doug Williams; finance leader, profitability measurement

- Jim Bonevac; director, CART consumer group

- Greta Lovenheim; team leader, GBC segment analysis

- Rick Welsh; director, CART CRM foundations

- Chris Albertson; director, CART cross enterprise group

I. General Overview of Calculating and Reporting Customer Profitability

Company Snapshot[1]	
Industry:	Financial services
Revenue:	$28.1 billion (2004)
Employees:	96,030 (2004)
Headquarters:	Charlotte, N.C.
Web Site:	www.wachovia.com

The Wachovia Corporation ("Wachovia") is the fourth largest bank holding company in the United States with total assets of approximately $500 billion. It has approximately 3,000 banking financial centers located throughout the eastern part of the country; branches range from Connecticut to Florida to Texas. In September 2005, it announced a merger with a West-coast bank headquartered in Orange County, Calif. The company has brokerage offices in every state except North Dakota.

Wachovia serves 14 million households and businesses through its wholesale and retail organizations; its retail consumer business is divided between brokerage and banking.

Wachovia is an amalgam of more than 100 mergers made since the 1980s. A significant merger occurred in 2001 when Wachovia joined First Union and created the Wachovia Corporation. The climate of mergers has forced the company to manage issues such as maintaining a continuous view of customer relationships.

Company Profile
Wachovia has four lines of business, each with a particular area of customer focus.

- **The General Bank (GBG)**—The General Bank focuses on retail and wholesale banking services centered around Wachovia's financial center network. This network consists of more than 3,000 branches ranging along the eastern seaboard west to Texas. The GBG offers deposit and credit products and also provides distribution of investment services in partnership with Wachovia Securities.

- **The Capital Management Group (CMG)**—The Capital Management Group (CMG) provides a comprehensive range of investment products and services. CMG includes the retail brokerage business which is the third largest retail brokerage in the United States.

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[1] Source: www.wachovia .com and www.hoovers.com (retrieved June 2005)

- **Corporate and Investment Banking Group (CIB)**—CIB focuses on large corporate customers and offers a range of investment banking and corporate banking services. Included in CIB is Wachovia's Treasury Services business.

- **Wealth Management**—Wealth Management offers a full range of financial advisory and banking services to wealth relationships (i.e., customer relationships with more than $2 million in investable assets). Wealth also oversees Wachovia's Personal Trust and Insurance services businesses.

Although each line of business focuses on specific groups of client relationships, customers may cross groups. For example, a wealthy individual (in the wealth group) owns a business (in the wholesale group) and has a son in college who does not live at home (in the consumer group).

Each line of business has its own sales force responsible for increasing the revenue to the business. The CEO holds each business head responsible for revenue and each business has its own P&L (profit and loss statement). Within each business, each department also has its own P&L.

The deposit system is the centerpiece of many of Wachovia's customer relationships, and Wachovia has a single deposit system. Customers in the branches often begin their relationship with the company through a deposit, and the organization deepens the relationship from that point.

Governance and Structure
The customer analysis, research, and targeting group (CART) is a corporate resource that is positioned to support revenue-generating and customer contact units across the corporation and provides dedicated analytical, market research, and targeted marketing capabilities. It is a sister organization of corporate marketing, and it helps Wachovia understand customers and markets. The managing director of CART reports to the head of HR and corporate relations. The chart in Figure 1, page 4, shows CART's complete organizational structure.

Figure 1

The following is an organizational chart with the following structure:

- Lines of Business → Segment Strategy
- Director
  - Consumer Group Leader
  - Wholesale Group Leader
  - Wealth Group Leader
  - Customer Network Group Leader
  - Cross Enterprise Group Leader
  - Statistics/Modeling
  - CRM Foundations
  - CART Foundations

Under Consumer/Wholesale/Wealth/Customer Network Group Leaders:
- Targeted Marketing
- Backend Analytics
- Strategic Decision Support
- Market Intelligence
- Reporting/ Analysis

Under Cross Enterprise Group Leader:

Customer Contact Management:
- Lead Delivery
- Contact Mgmt. Guidance/ Coordination
- Lead Tracking
- Privacy Coordination

Cross Enterprise Analysis:
- Cross Enterprise Analytics

Metrics:
- Customer Metrics Reporting
- Market Metrics
- Merger Metrics

Information/ Vendor Management:
- CDMG/ CART Coordination
- Prospect/ Customer Mart User Coordination
- 3rd Party Customer Information Coordination

Under Statistics/Modeling:
- Statistics
- Modeling

Under CRM Foundations:
- Sr. Technical Consultant
- Relationship Grouping User Requirements
- Customer Profitability User Requirements

Under CART Foundations:
- Sr. Technical Consultant
- CART Analyst Development/ Coaching
- End User Certification
- Metadata/ Documentation
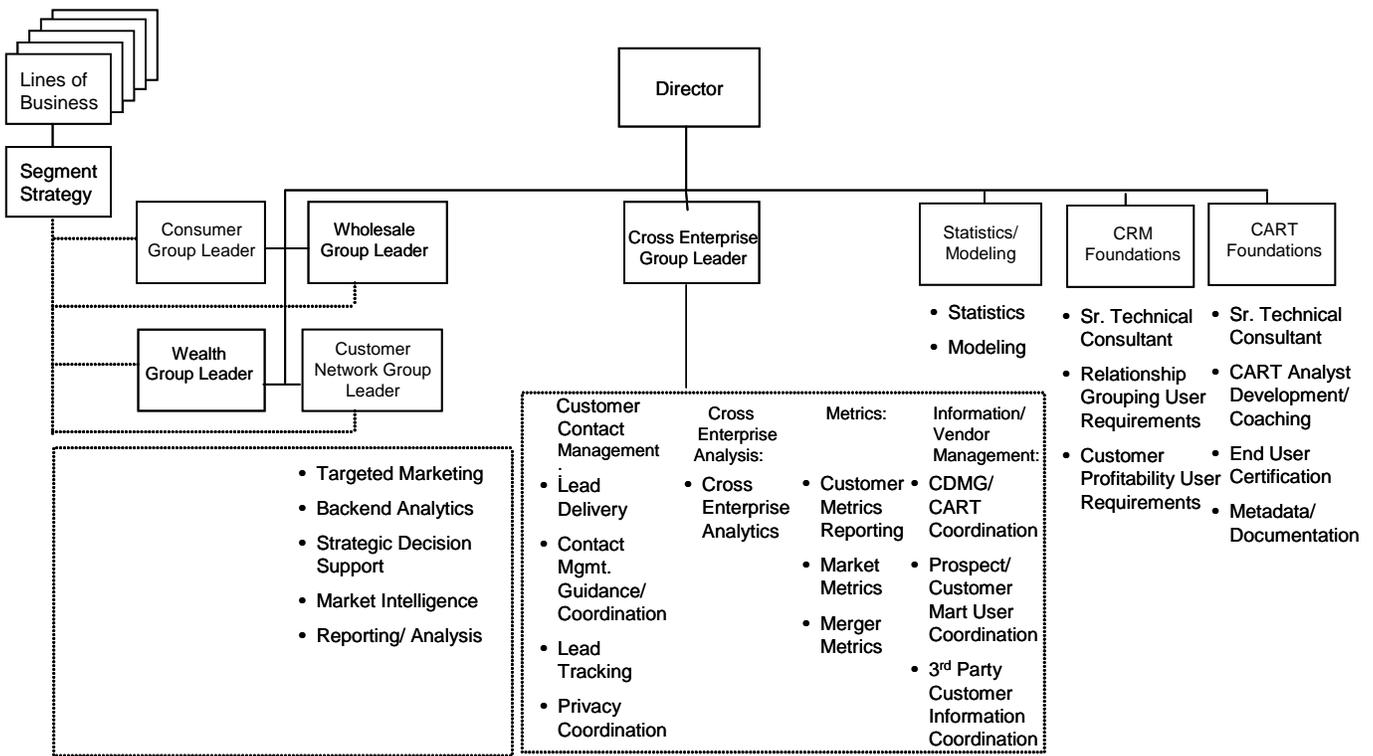
For all of the businesses, CART is chartered to provide:
- strategic and customer analysis,
- targeted and integrated customer contact management,
- market research and competitive analysis, and
- statistics and modeling.

CART is considered a center of excellence[2] for customer analytics and helps deploy actionable information company-wide. Because it has only 100 employees in an organization of 96,000, it is challenged to remain relevant to all lines of business. It has developed teams, each one of which understands one of the four businesses. The teams work closely with senior management in each of the businesses to help the units go from their strategies to the deployment of marketing programs.

Evolution of Customer Profitability
The predecessor of CART was active in First Union in 1995. It concentrated on direct marketing to the retail side of the business and overseeing the bank's marketing customer information file (MCIF). The group was a part of the corporate marketing

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[2] Wachovia defines "center of excellence" as an entity that provides a deep functional skill to an entire organization.

organization; it was driven more by products and transactions and was less focused on customer relationships and managing relationships through the customer life cycle. The group's growth was catalyzed by the Signet merger in 1997, the formation of EIM (Enterprise Information Management) in 1999, and the Wachovia merger in 2001.

In 1998, First Union created SIGMA, a marketing data mart and a corporate data warehouse that replaced the MCIF capability. The company leveraged SIGMA through Harte-Hanks, a third party vendor. Harte-Hanks did the grouping (or "householding") and built out the monthly databases. It typically operated 60 days in arrears and was limited in the amount of information it could use. Harte-Hanks cut extracts from all the company's legacy systems; it would identify, for example, the households that had a checking account and a credit card account, but not a mortgage.

SIGMA had its antecedents in Signet, a company that was focused on customer database marketing and information-based decision making. With the merger of First Union and Signet, that logical data model was adopted by First Union.

In the late 1990s, the entire financial industry underwent merger-mania. Regarding the merger climate, the former chairman of First Union was quoted as saying, "I kept putting billion-dollar bills on the table until we closed the deal." The mergers were not driven by effective customer management and retention practices—"Organizations were getting big for the sake of creating scale," says DeAngelis. "It finally caught up with us in two ways: (1) The share price of companies became unattractive, and (2) the customer experience suffered." Mergers involved large premiums that were often paid at the expense of customer service. First Union began to suffer customer attrition in 1999, following its merger with CoreStates, a company that served Pennsylvania and New Jersey.

Reality set in. Corporate leaders asked themselves, "If we could build this large service company from scratch, would it look the way it does now?" The answer was "No." The company began to re-think key processes, which led to CART transitioning from a marketing group that served retail customers to a corporate-wide group that supports the entire organization.

The customer was moved to the center of the business model, and CART became responsible for the standards and requirements of customer analysis. Once the organization had been chartered, it was given 20 FTEs (full-time equivalents) to interact with the entire organization. It was the beginning of the corporate center of excellence, but it certainly did not have the level of staff that it needed to support a customer-centric business model.
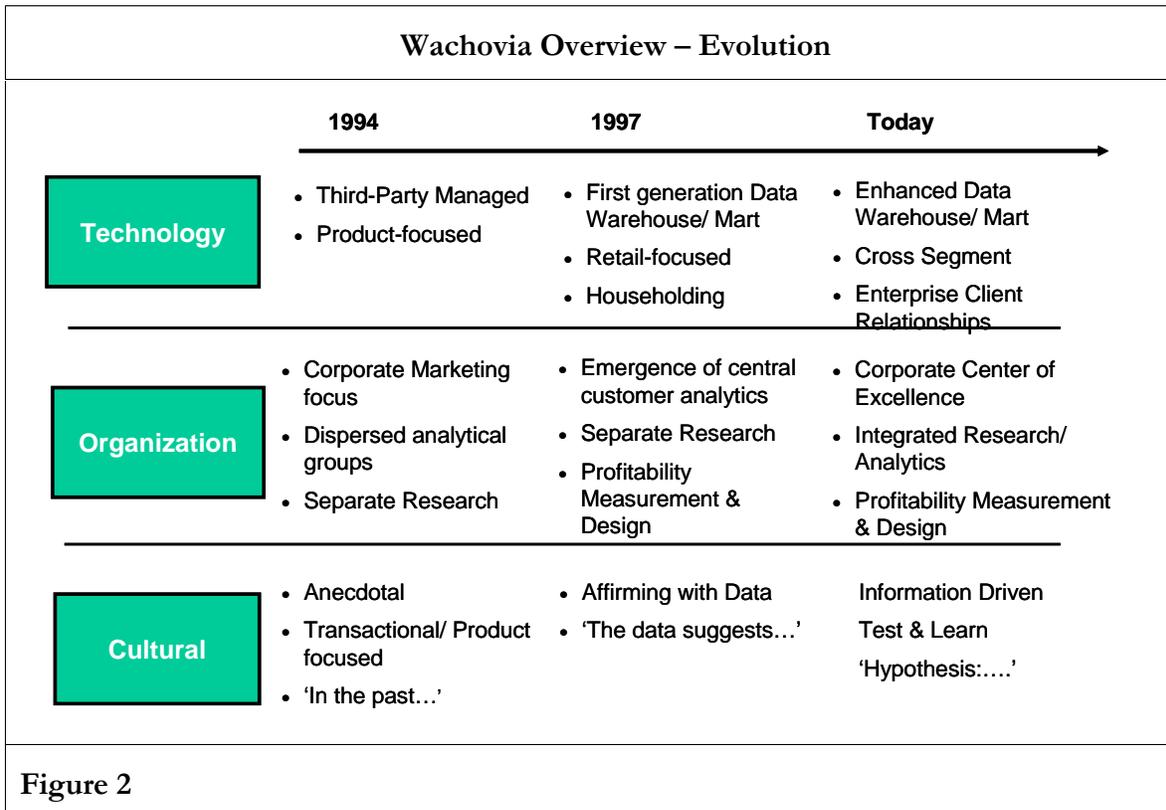
In 2001, CART began to establish standards, implement customer management programs, and measure the results; it began to show the economic benefit of a more disciplined approach to customer management.

CART developed internal markets. One business would see another be successful working with CART and contact the group for assistance. CART's increasing success coincided with First Union's merger with Wachovia. Two factors made the merger between First Union and Wachovia different from the rest.

1. The merger involved only a small premium (7 percent), so the new organization did not have an immediate need to reduce expenses to minimize earnings dilution. The companies had two and a half years to integrate.

2. Wachovia had a much more traditional customer-focused banking culture that was not as involved in a strategy of mergers as First Union had been. The Wachovia culture combined with the new CART caused the entire organization to shift toward customer-centricity.

Figure 2 below provides a summary of technological, organizational, and cultural evolution during the past decade at Wachovia. According to DeAngelis, it is difficult to over-emphasize the role that cultural change has played in Wachovia's transformation. The company has moved from making decisions based on anecdotes to making decisions based on information. Although Figure 2 may suggest that the evolution has been linear, it has not. Various areas of the company are ahead of other areas. DeAngelis says, "Increasingly the senior leaders of the company are on the right side of the cultural change; increasingly those who work directly for the senior leaders see this is the way to run the business."

Wachovia Overview – Evolution		
1994	**1997**	**Today**
Technology • Third-Party Managed • Product-focused	• First generation Data Warehouse/ Mart • Retail-focused • Householding	• Enhanced Data Warehouse/ Mart • Cross Segment • Enterprise Client Relationships
Organization • Corporate Marketing focus • Dispersed analytical groups • Separate Research	• Emergence of central customer analytics • Separate Research • Profitability Measurement & Design	• Corporate Center of Excellence • Integrated Research/ Analytics • Profitability Measurement & Design
Cultural • Anecdotal • Transactional/ Product focused • 'In the past…'	• Affirming with Data • 'The data suggests…'	Information Driven Test & Learn 'Hypothesis:….'

Figure 2

Businesses conduct prospecting independent of CART; however, CART provides a central source for leads both for new customers and for deepening the relationship with current ones.

One of Wachovia's challenges is that it serves 10 million households but does not have full share of wallet of the households—some customers use other financial institutions for services. The opportunity for deepening relationships and attracting new ones is tremendous.

The businesses network with various organizations such as chambers of commerce and buy lists to reach new customers through direct mail. CART helps from a compliance standpoint to make sure that the mailing campaigns are compliant with federal and state regulations and Wachovia's privacy policy.

DeAngelis believes that the company is on the right track. During the last five years, it has moved from a "wild west" type of marketing to more customer-centric processes. People at every level are beginning to see that wiser marketing is more profitable.

However, Wachovia is not currently completely customer-centric. DeAngelis says that Wachovia still at times "puts a customer wrapper around product strategies as opposed to truly beginning with the customer." The company selects appropriate marketing pieces that should go out to a customer based on company products, and, although the marketing plan is reviewed frequently to optimize the economics, it still begins with the product, not with the customer.

II. Customer Segmentation

Defining Customer Relationships

Part of the company's journey since 1995 has been to build a common definition of customer relationships so that it can look across the entire corporation and speak a common language. Everyone needs to understand what our market position, trends, and opportunities are.
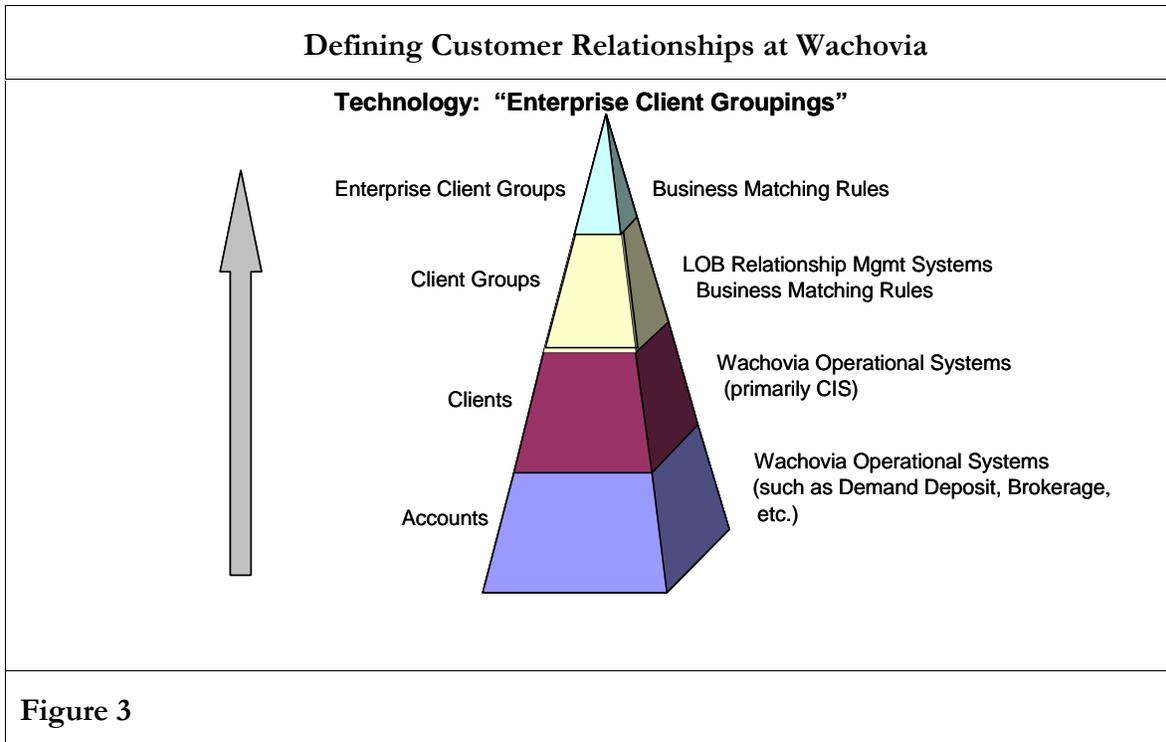
—Director of CART

In the past, Wachovia has not been consistent in defining customer relationships; each business unit had its own definition. This has changed over time. Figure 3, page 8, demonstrates how customer relationships are defined at Wachovia. From the bottom of the pyramid to the top, there are three steps: (1) Accounts are owned by clients, (2) clients roll up to a client group, and (3) client groups roll up to an enterprise client group (ECG). For example, a nuclear family may have a husband, wife, and child. Each of the family members might be a client and hold an account. A client group is the husband and wife of the family. They reside at the same address and Wachovia thinks of them as a single relationship that needs to be managed. For the sake of the example, the husband and wife are highly affluent, managed by a wealth banker, and own a company.

The child is different. She is in school and will soon set up her own domicile. However, in one instance, she holds an account with her parents and is considered part of an

enterprise group—parents, their company, and their child. Depending on the situation, employees of the company owned by the parents could be part of the group.

Defining Customer Relationships at Wachovia

Technology: "Enterprise Client Groupings"

Enterprise Client Groups — Business Matching Rules

Client Groups — LOB Relationship Mgmt Systems / Business Matching Rules

Clients — Wachovia Operational Systems (primarily CIS)

Accounts — Wachovia Operational Systems (such as Demand Deposit, Brokerage, etc.)

Figure 3

The ECG is the common denominator at Wachovia; it consists of the clients and their accounts. It is a discrete buying unit and marketing group, and finance develops profitability figures regarding it.

Because commercial businesses share the definition of the customer, Wachovia does not call the grouping process "householding." DeAngelis says, "If you want to be irrelevant to the commercial group, give a presentation in which you speak of 'householding.'"

IT at the operational level manages the identification of client groups, and although errors in data entry may keep the groups from being identified properly, virtually all of the clients are properly linked to their accounts and their groups. Unlike many of its competitors, Wachovia takes its pyramid (or ladder) of clients and their accounts seriously. It emphasizes accuracy in names and identification numbers so that "John Smith" is properly understood in the context of his relationships.

The pyramid is dynamic in nature to reflect the reality of relationships, enabling more effective marketing and customer management. The enterprise client group is the basis for CART's analysis of customer behavior in support of strategy development and marketing programs.

Some transactions are tightly integrated with CIS (customer information system), and some continue to be batched. The company is linking more and more transactions with CIS, including all of the core banking systems (the account-opening process, the logic systems, etc.). Even the newer investment banking products are becoming more integrated.

The client and the account levels of the model are managed operationally, but a decision support role manages the top two layers. The third-highest layer, client groups, tends to be specific to a line of business. The third layer uses customer relationship management tools to provide reminders and ticklers to bankers to help them prioritize their time. A component of the customer relationship management system is his "book" (his relationships), which is linked to and updated with CIS. With the help of CART, the banker can build a view of his portfolio. For example, he can say, "These four clients (CIS identification numbers) make up my 'MNOP' relationship." The knowledge is so sophisticated that no "rule" (name, address, tax number) can equal it. Bankers know that XYZ Corporation is the parent of ABC subsidiary and that Joe Jones is the majority owner, for example.

There is a customer relationship management system for commercial and one for wealth. The CIS environment has the capability to allow a banker in any business unit to link two clients together. One link CART encourages its small business bankers to use is that a certain individual owns a certain business—a hard relationship to make in a classic matching process.

In summary, CIS has three main line-of-business relationship rules: (1) client to client, (2) wealth banker building his portfolio, and (3) commercial banker building her portfolio.

The data warehouse is able to provide information using typical classic matching rules, for example, same name, same address, and same tax identification number. When women keep their maiden names, the system creates matches based on the address.

The commercial business uses the same rules. It can determine that, for example, eight clients belong together in a relationship. The first four have the same last name and address, the fourth and fifth are in a line-of-business view, the fifth and sixth share a tax identification number and live at the same address, and so on. The eight clients create a daisy-chain of relationships. Every client is in only one enterprise client group, and there is always an account owned by one or more of the clients.

The organization puts a primary client flag on each of the accounts so that it does not double count them. Two people who co-chair a little league fundraising committee may have a joint account, but that does not mean the two are in the same household.

The first developmental CIS milestone occurred in 1998 when First Union moved to its first generation data warehouse (SIGMA). It brought in the matching logic for what was at the time "householding." The CIS system of today was assembled after the

Wachovia/First Union merger. The corporation selected the best of both legacy systems and brought in the sophistication of the client-group capability.

Because relationships between the wealth business and the commercial business are complicated, no off-the-shelf solution is appropriate.

If a customer calls the bank, the cost can either be captured and charged back or not. If a customer calls to ask about the location of the nearest branch, the call would be answered in a general pool and the cost would be considered "maintenance cost" and not allocated. If the customer needed more extensive help, he or she would give an account number, and the cost would be calculated from the account, rather than the client, level. However, the cost would be rolled up and aggregated at the client level.

Currently, many Wachovia customers fall into all categories: an account, a client, a client group, and an enterprise client group. They have only one touch point with the organization.

Campaigns are typically based on either the client group level or the client level. Cross-selling campaigns work best at the client group level. If the bank launched a campaign to increase the number of IRAs, it might look on the client level—joint accounts in which one person had an IRA and the other did not. If the bank wanted to encourage carriers of debit cards to use them to buy more items, it would target the account level.

Tradeoffs were made in client grouping. The CIS team reviewed 30 to 40 potential rule sets that would allow for the linking of two clients together. The team implemented the six or seven that were the best. For example, the bank does not have a rule that matches telephone numbers—it found too many false positives (people together who do not belong together). With 14 million client groups, the team is constantly balancing precision with overmatching.

When the team first developed the rules, it had enterprise-wide meetings to receive feedback from the stakeholders. It asked questions such as "What rules do you use now?" and "What types of infrastructure do you use to support the rules?" Now that the rules are developed, the team "keeps its ear to the ground" to ensure the rules continue to be effective.

Employees are able to group clients and accounts manually through several IS and customer relationship management mechanisms.

The rules are currently stable. The company has tension around accuracy versus consistency. Less than 5 percent of the relationships are not correctly identified, but the company does not want to tweak the rules to accommodate the relatively small number of those affected because to do so by changing the rules would affect a wider range of relationships and the ability to track trends.

Customer Segmentation at Wachovia

In Wachovia's physical network of 3,000 financial centers, there are two primary, mutually exclusive segments.

- **Wealth** is a relationship with (1) $2 million or more in investable assets (defined as a combination of deposits and investments) and (2) the ability to bring $1 million or more to Wachovia. An important part of the relationship is its potential.
- **Retail** has sub-segments: affluent, mass affluent, and mass.

Nationally, the consumer area has external brokerage, which focuses on investments. It concentrates on customers with $250,000 or more in investable assets and is an investment advisory business rather than a relationship business. In some cases, the financial centers and the brokerage houses share a market and have relationships that are not mutually exclusive.

Collocating financial services and brokerage is a strategy to attract the customers who prefer more of the relationship advisory business than the investment business. Collocating also attracts the customers who like to disaggregate their financial needs and spread them across a number of advisors. Most of the financial advisors in the brokerage houses are Wachovia employees.

Figure 4, page 12, shows a diagram of the segmentation of the consumer market that the company shifted to in 2003. The graphic is part of a project that Wachovia conducted to find the key drivers of market segmentation.

Customer Segmentation – Market		

Figure 4
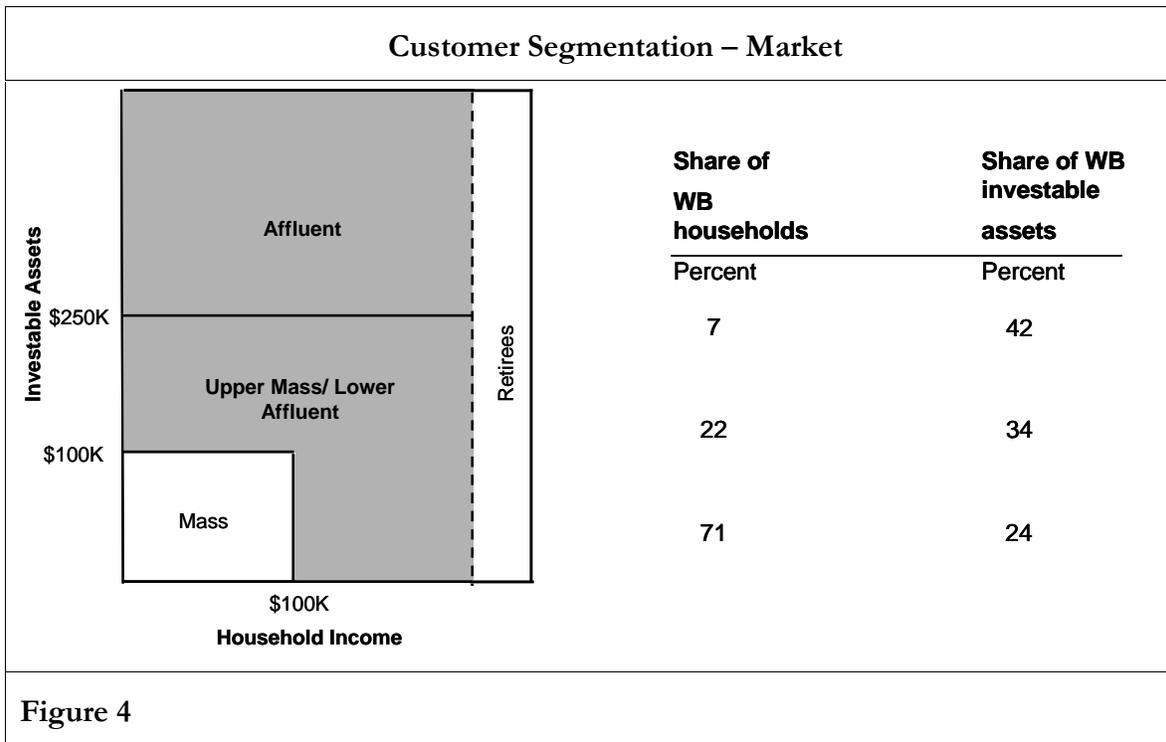
The team defined mass, upper mass/lower affluent, and affluent. Retirees are a special group that cuts across all three areas.

The mass market has less than $100,000 in investable assets. The mass market also has an income component. If customers are making less than $100,000 per year and have less than $100,000 in assets, they fall into the mass market. However, if they make more than $100,000 but have less than $100,000 of investable income, they are placed in "upper mass." Wachovia believes that "upper mass" is an extremely interesting segment that may represent an emerging affluent customer. The affluent segment accounts for only 7 percent of households but 42 percent of the bank's investable assets.

Wachovia's consumer segmentation scheme accounts for potential. It not only looks at the customers who have the potential to be affluent, it also looks at the customers who have more money in their wallets to invest with Wachovia.

The bank uses two third-party vendors for information regarding the potential of the customers. Their information, which covers all 10 million households and concerns deposits and investments, is brought into the data warehouse environment. The bank pulls all of this information in to understand its share of wallet. Additionally, Wachovia takes the protection of sensitive information very seriously. As such, Wachovia has comprehensive policies, procedures, and systems in place to protect customer information.

The bank employs the same segmentation when it looks at its prospecting database and targets prospective customers.

Wachovia determines its market share in three ways.
(1) Through FDIC reports, which are often quoted. FDIC provides deposits-by-county information. Banks can divide their total number of deposits by the total deposits in the county and determine their share of deposits. The FDIC is somewhat limited because it is accounting-based.
(2) Third-party vendors provide syndicated research-based studies and surveys. Wachovia provides data to these organizations at the "zip-plus-five" level and receives granular information.
(3) Internal modeling.

Figure 5 below lists the various types of segmentation programs at Wachovia and their key foci. P$ycle is not proprietary, and it is from a third party vendor. It uses an algorithm that measures the customer's ability to consume financial products. It is updated every five to 10 years with inputs from various sources; the bank uses it to understand different levels of affluence. It breaks down to 42 sub-cycle segments, which then roll up into nine cycles.

Customer Segmentation∅Consumer Marketing Segments		
Segmentation Program	**Types of Segmentation**	**Key Focus**
P$ycle	• Psychographic	• Market Comparison
Behavioral	• Behavioral	• Cross-Sell/ Up-Sell
Book of Business	• Behavioral (Channel) • Profitability (Value)	• Cross-Sell/ Up-Sell • Retention
Good to Great	• Demographic • Prospective Value	• Market Comparison • Market Positioning
Attitudinal	• Attitudinal	• Value Proposition Design/ Development

Figure 5

The second line of Figure 5 indicates that Wachovia uses its internal behavioral information to segment its customers. Because the organization captures activity at a

transactional level, it can study the behavior of its customers. The statistical method, which is done in-house, is a multi-variant technique built on clustered analysis.

Using the book of business technique, management assigns a book of selected customer portfolios to a team of front-line and call center employees. The idea is to allow the employees to increase the deposits and the retention of those in the book because they are clients that the company would like to keep and grow. The content of the book is segment driven.

While analysis is behind the decision of which customers to include in the book and what targets are appropriate, the front line sees only simple, easy-to-understand information and is trained to understand the actions to take with the customers. The results of employee performance regarding the book are reported monthly, and the employees receive an annual incentive based on their performance.

Wachovia has been doing groundbreaking work in matching customer attitudes to behaviors. It is currently engaging in an attitudinal study involving primary research using its mass, upper mass, and affluent segments. The study team is looking not only at what various segments want in service delivery but also at what all of the customers want as a group. DeAngelis likens the effort to a study that an airline might do on how airline customers feel about riding in the cabin of an aircraft. Some customers, he says, are more valuable than others, so you set them apart, but eventually "the entire plane has to land, so you have to provide some services that are consistent for everyone because today's coach customer is tomorrow's first class customer." The study covers both product type and channel experience. The results of the study are for the back office behind the scenes, but the study team will develop a way to leverage the information all the way to the front line.

A key learning with the affluent segment is that members of this group are less likely to consolidate their wallet in one provider. The bank is faced with the problem of trying to deepen its relationship with the very people who are less likely to consolidate. It is now locating the affluent people who are willing to consolidate and finding out what they care about. It will then define value propositions across the customer experience that will attract not only the customers but their entire share of wallet.

Wholesale Segments
Like the consumer business, the company's wholesale business (Figure 6, page 15) has large segments. Within the branch banking network, the following are served: small business, business banking, commercial, commercial real estate, and community banking. At the national level, the following are served: corporate banking and investment banking. Corporate and investment banking are served based on their industry, for example, the health care industry or the insurance industry.

Customer Segmentation∅Wholesale Segments	
Wachovia Customers	**Prospects – Customer Acquisition**

Wachovia Customers	Community Banking (Managed by Community Bankers • Booked in Community RCs)	Prospects – Customer Acquisition	Community Banking (Market based)
Large Corporate/ CIB • Managed by CIB • Booked to CIB RCs		**Large Corporate/ CIB** • Companies over $250 million in sales • Certain targeted industries	
Commercial • Sales between $15 mm and $250 mm • Government, Not-for-Profit Healthcare • Booked to Commercial RCs • Managed by Commercial RMs		**Commercial** • Sales between $15 mm and $250 mm • Government, Not-for-Profit Healthcare	
Business Banking • Sales between $3 mm and $15 mm OR • Profit over $6,000 OR • Deposits over $300,000 OR Loans over $1mm • Booked to Business Banking RCs • Managed by Business Bankers		**Business Banking** • Sales between $3 mm and $15 mm	
Small Business Banking • Sales between $1 mm and $3 mm OR • Profit over $2,500 OR • Deposits over $100,000 OR Loans > $250m • Booked to Small Business RCs		**Small Business Banking** • Sales between $1 mm and $3 mm	
Retail/ Small Business • Sales less than $1 million • Residual		**Retail/ Small Business** • Sales less than $1 million	

* Additional segments include Dealer Financial Services, Real Estate Financial Services, and Wealth (managing certain professional firms.
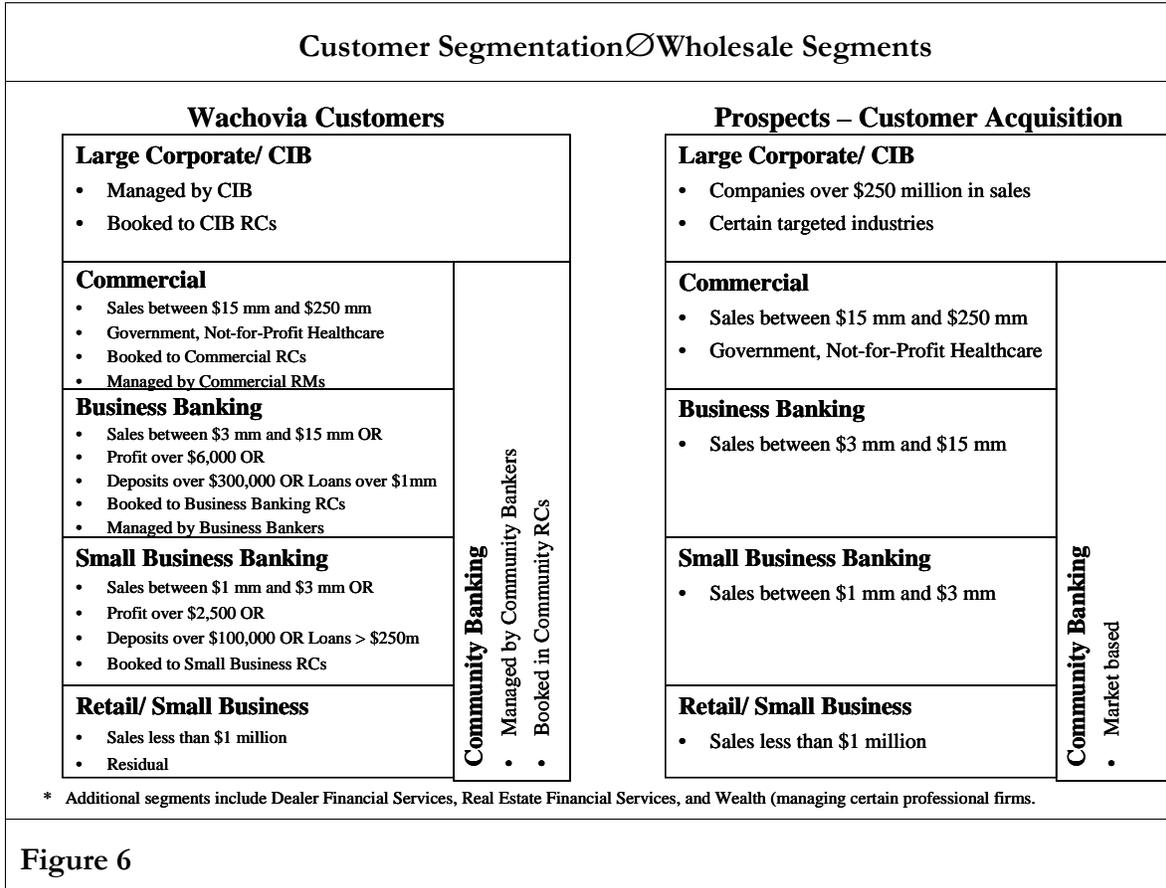
Figure 6

Figure 6 shows the segmentation of the wholesale group. The left side of the figure demonstrates how the bank serves current customers, and the right side is how the bank prospects for new customers. Prospecting is driven by sales size (or profit deposits) or industry type.
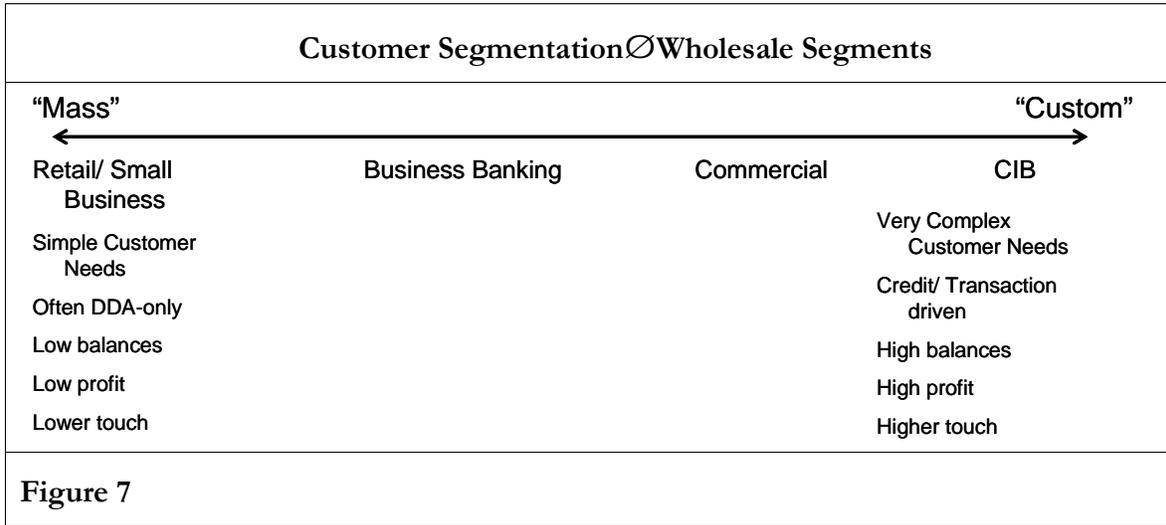
Companies present unique challenges when segmenting. Finding relevant sales size information from third-party vendors and matching it to companies is difficult. Wachovia's coverage rate for small businesses may be as low as 40 percent; it relies more on the deposits and balances for segmentation and misses some of the opportunities for prospecting that it could have if segmentation were better.

Wachovia assigns companies to a primary segment based on five factors: (1) bankers' skill and cost; (2) customer needs, preferences, and complexity; (3) time spent per customer; (4) current and lifetime value; and (5) potential and opportunity.

A relationship manager plays a much more important role in the wholesale business than he or she does in the consumer business. The relationship manager is responsible for the client group view.

Figure 7 below shows the continuum of services from retail and small businesses to the preferred corporate investment bank (CIB). The bank has 850,000 wholesale customers ranging from Fortune 500 companies to home-based sole proprietorships. Approximately 8 million businesses are located in its footprint. Because businesses have different needs and expectations from their financial institution, Wachovia's lines-of-business offer different value propositions.

Customer Segmentation∅Wholesale Segments			
"Mass"			**"Custom"**
←——————————————————————————→			
Retail/ Small Business	Business Banking	Commercial	CIB
			Very Complex Customer Needs
Simple Customer Needs			Credit/ Transaction driven
Often DDA-only			
Low balances			High balances
Low profit			High profit
Lower touch			Higher touch

Figure 7

Wholesale segmentation is based on the same principles as consumer segmentation; the "atoms" are at the account level, and they can be formed into various types of molecules that can be used for making service or marketing decisions.

Wachovia has various challenges in reporting the cost to serve customers, including the following.

- Building agreement across organizational units as to consistent definitions of client relationship and profitability is difficult.
- The application development capacity to build inputs to the COMPAS system is limited. For example, the company has had some estimates of the profit of the brokerage area, which is becoming more important to the company, but it did not have the degree of input that the other businesses have. Input regarding the brokerage area is complex and requires a high level of information technology. According to DeAngelis, "Wachovia is now operating in the wrong side of the 80/20 rule. Work has been completed in calculating the costs and account profitability of the majority of its business units. The remaining areas of the company are more complex, such as brokerage, and will need a relatively great number of resources to build input capability."
- Mergers draw resources away from activities that lead to calculating, reporting, and using customer profitability. In mergers, accounts are integrated, and cost structures are different. At times the data from the acquired company does not line up with the Wachovia data.

- Tracking and attributing costs to contacts and calls coming into the call centers is difficult. Currently, the cost of general contact is covered by a cost pool. Attributing them will take time and resources. A corollary problem is determining appropriate levels of disaggregation of cost and revenue information. If every call coming into the call center could be attributed, it may not be wise to do so. Accounting for every interaction would require the COMPAS platform to be three times what it is now. DeAngelis asks, "Do you want to add that much detail if you don't even know the problem you are trying to solve?"

Segmentation and Business Strategy

CART handles campaign management. CART determines how intrusive a contact is based on frequency and method (e-mail, direct mail, phone call) of delivery. It builds a solution around customer contact optimization—what provides the highest net present value. In addition, CART is studying how campaigns affect the specific branch according to its location and the demand or appetite for the types of leads. The group is trying to optimize campaigns across the enterprise by acting appropriately at the branch level.

CART examines any activity that involves calling a customer, including calls from the branches. Through the SOLD system, CART sends leads to the branch where the customer conducts most of his or her business. The branch is the "face of Wachovia" to the local customer. For example, the bank does not initiate a call to a customer who is already opting in for calls within a 60-day period. The bank does not send a piece of direct mail to a customer who already received one within a 30-day timeframe. Underneath all of these decisions are the analytics that help CART determine the most probable economic return to the company.

Historically, CART has always had the capability to model response and expected return within a campaign, but the group is now attempting to optimize response across the entire portfolio of campaigns. In 2005, CART will conduct approximately 250 campaigns. Each campaign could have mail, Internet, and branch lead components. It is determining not only how to prioritize within the "verticals" (the product lines) but also horizontally across all of the product lines.

III. Understanding the Cost to Serve Customers

Customer Profitability Process

Monthly, the data management group (CDMG) is responsible for feeding individual customer financial information to CART; each customer transaction is part of the data feed. CART uses the data to calculate individual profitability, which it feeds back out into the CART databases.

Figure 8 below shows the technical environment and data flow of COMPAS (cost measurement profitability analysis). The three boxes in the upper left column—financial information, fees, and statistics—are the equity attributions that feed into COMPAS. Financial information includes all of the components of profitability, the kind of information that would be listed on an income statement.

COMPAS∅The Technical Environment

Figure 8
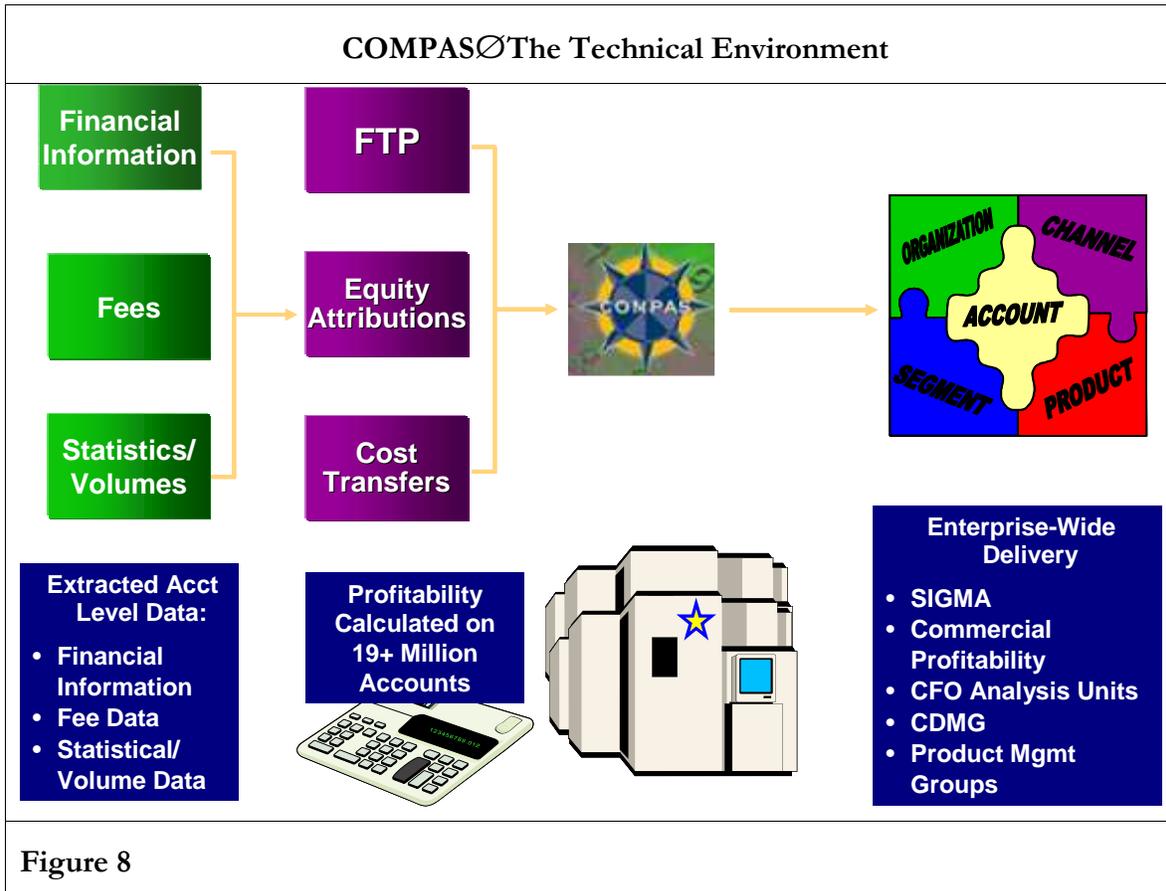
An important integration point involves the profitability versus the risk (credit risk, operational risk, market risk, etc.). During the past six years, the organization has studied not only how profitable the customer is but also how profitable he or she is on a risk-adjusted basis.

Cost transfers are an important part of the input into profitability because the costs that the banks incur while supporting certain activities is great. Although Figure 8 shows that profitability is calculated on more than 19 million accounts, the figure has recently risen to more than 26 million accounts. Each account represents multiple transactions.

The output of COMPAS is used to support the calculation of business segment profitability; customer profitability is integrated with product and organizational profitability. By beginning at the customer account level, Wachovia ensures a common definition of profitability.

The far right side of the chart indicates data delivery. Data is delivered to SIGMA, the commercial profitability groups, the CFO analysis units, CDMG, and the various product management groups. The finance department works with the commercial profitability groups, which are located in each of the businesses, to help them understand their results.

Customer Profitability Metrics

Wachovia realizes that customer lifetime value is an important measure, and it aspires to know and optimize it. However, it does not use it as an individual measure; front-line agents do not serve the customer with customer lifetime value in mind. Instead, the company focuses on optimizing the value and increasing the loyalty of the entire customer base. It is currently studying how changes in loyalty affect customer lifetime value.

The company is studying marketing return on investment using the most detailed inputs that it can to optimize its marketing spend. It is developing a mix of marketing (advertising, direct mail, sponsorships, public relations, investment in the sales team, etc.) that will drive customer loyalty and lifetime customer value.

Cost of Sales

Figure 9 (page 20) points out the approach to expense attribution in the profit model. Expense attribution is necessary in an organization that has a common profitability platform. A cost development group is responsible for understanding different processes and platforms throughout the organization to determine, for example, whether it actually takes a penny or a nickel to process a check. The work of the cost development group is leveraged to support the understanding of profitability in various fees, whether it is customer account level or at the business or product level.

For policy reasons, a certain group of expenses are not included in this type of study. The cost figure used is not the full cost of doing business. The rationale for the cut-off point in including expenses in the calculation of cost is a determination of how the business intends to use the data.

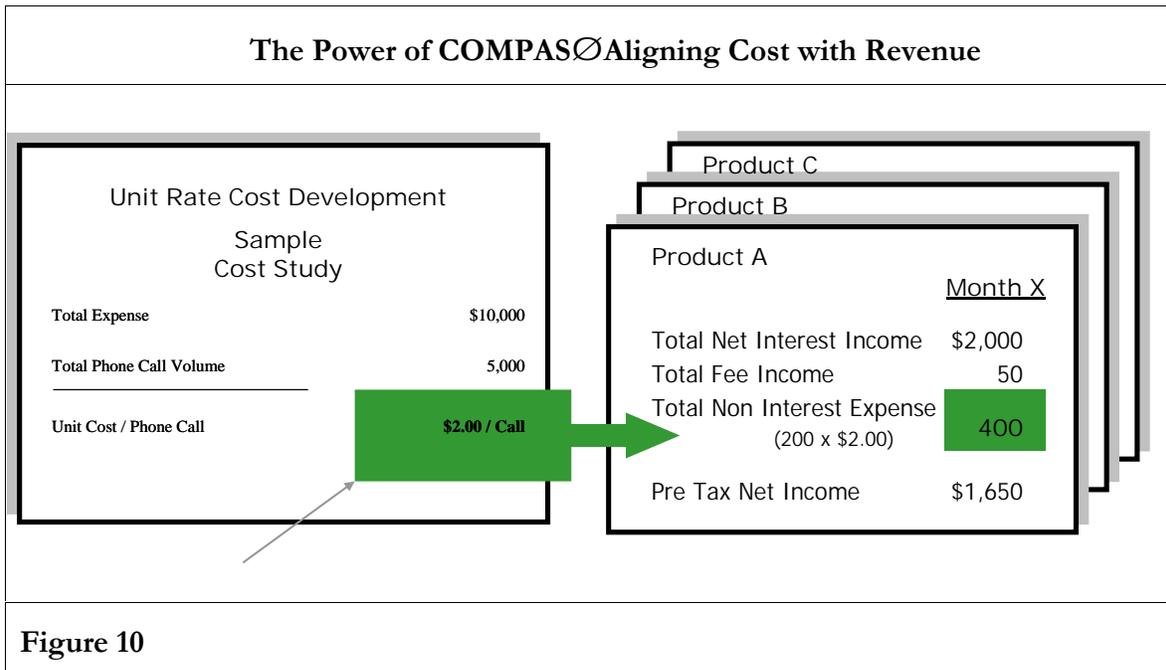**COMPAS Cost Development and Cost Transfers**
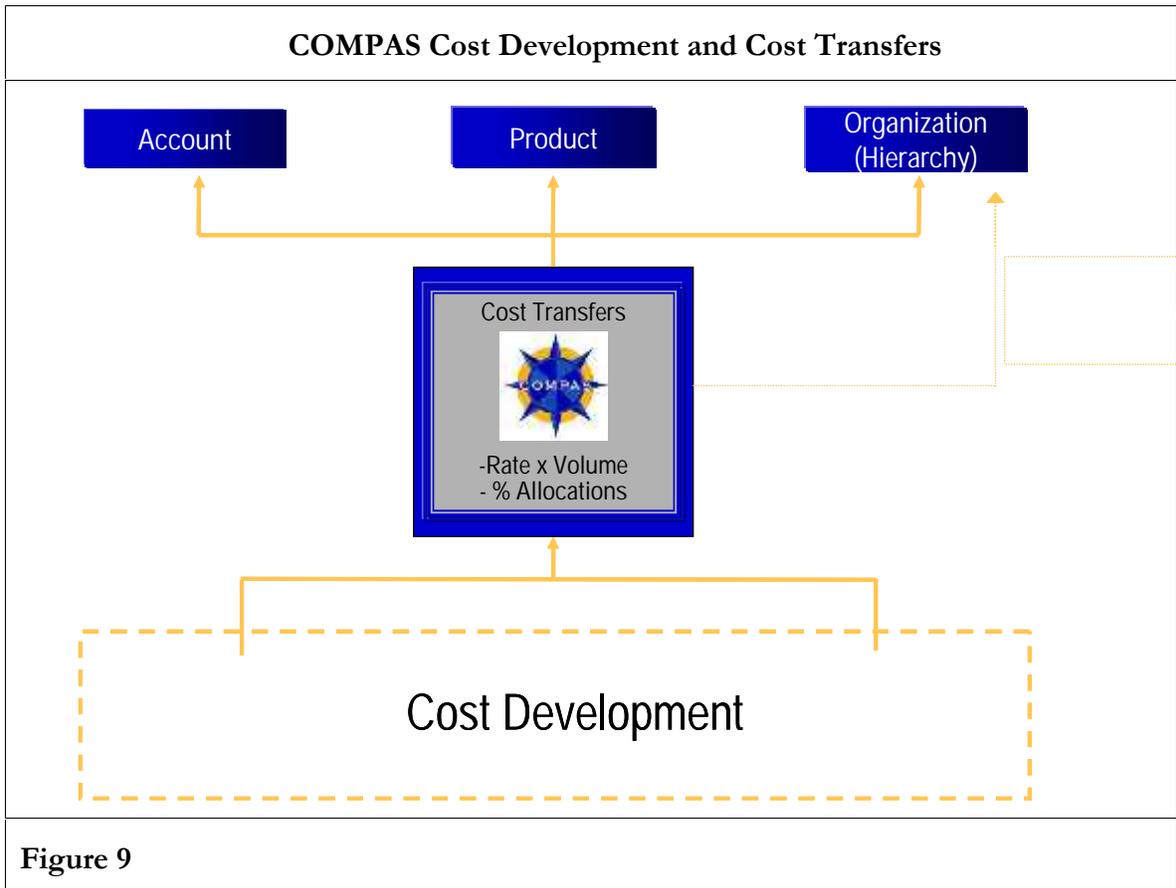
Figure 9

By comparing transactional volumes at the customer account and product levels, the associated expenses can be aligned to the appropriate levels within the COMPAS environment. Figure 10 (page 21) is a simple example of the results of a unit rate development process. The left-hand side of the figure shows the unit rate development. If the total expense is $10,000 and the total phone call volume is 5,000 calls, the cost per call is $2.00. To take the $2.00 into the different views of profitability, a P&L is created. Products B and C could have different "Total non-interest expenses."

There are many discrete unit costs loaded in COMPAS, which is both an advantage and a disadvantage. The unit rate development process has been "user-driven," and some departments have looked deeply at the data and requested more granular unit rates.

Wachovia is currently studying the exact costs that go into maintaining an account at the branch banks. Customers are charged a monthly fee, and the project team needs to know how high the fee should be to cover the costs. The team is drawing a line at some point and saying that although certain expenses are validly included in the cost of maintaining accounts, others are not.

The Power of COMPAS∅Aligning Cost with Revenue

Unit Rate Cost Development

Sample
Cost Study

Total Expense	$10,000
Total Phone Call Volume	5,000
Unit Cost / Phone Call	**$2.00 / Call**

Product C

Product B

Product A

Month X

Total Net Interest Income	$2,000
Total Fee Income	50
Total Non Interest Expense (200 x $2.00)	400
Pre Tax Net Income	$1,650

Figure 10

Sample Net Income After Taxes Calculation

FUBA_NBR	54951049	16777309	16777309
Type of Account	**Term Loan**	**DDA**	**Brokerage**
Average Balance (avg_bal_amt)	$11,522.06	$2,688.36	$20,798.68
Interest Income (int_icm_amt)	$77.62	$13.24	$0.00
Interest Expense (int_exp_amt)	$56.94	$2.78	$0.00
Other FTP (other_ftp_amt)	$0.96	$8.05	$0.00
Loan Loss Provision (expd_loss_amt)	$1.86	$0.00	$0.00
Net Interest Margin	$19.78	$18.51	$0.00
(int_icm_amt - int_exp_amt +other_ftp_amt - expd_loss_amt)			
Total Fee Income (tot_fee_amt)	$0.00	$0.00	$37.85
Total Revenue	$19.78	$18.51	$37.85
(int_icm_amt - int_exp_amt +other_ftp_amt - expd_loss_amt + tot_fee_amt)			
Transaction Cost Amount (tx_cost_amt)	$0.00	$0.00	$0.00
Sales Cost Amount (sals_cost_amt)	$0.00	$0.00	$0.00
Service Cost Amount (svc_cost_amt)	$3.57	$3.25	$21.91
Total Cost Amount (tot_cost_amt)	$3.57	$3.25	$21.91
Net Income Before Taxes (prft_amt)	**$16.21**	**$15.26**	**$15.94**
Tax (taxes)	$6.16	$5.19	$6.13
Net Income After Taxes (prfit_after_tax)	**$10.05**	**$10.07**	**$9.81**

Figure 11

Figure 11, page 21, shows a P&L with the net income after taxes from an example term loan and an example demand deposit account. The elements are different for each. The loan not only has interest income booked but also has the cost of funds incurred through the funds transfer processing mechanism. The interest expense line is the cost of funds for that particular asset.

One other element of the P&L is an increased emergence of risk-adjusted profitability. An expected loss is incorporated on the P&L as loan loss provision. Finance adjusts this line item throughout any risk cycle, depending on the economic environment. The expected loss by customer account is incorporated into the profitability. A real estate loan secured with property to a customer with a 760 FICA (credit) score has a low risk number associated with it. For commercial loans, finance extracts risk information from the commercial loan department because it has better information on the amount of exposure.

The P&L on individual accounts gives Wachovia the ability to aggregate to the personal level. It looks across customers and segments evaluating relative profitability. Profitability is actionable at the account, segment, and sub-segment levels. Profitability can drive a targeted mail campaign or help Wachovia understand the profitability of segments. Account-level profitability is not reported to the relationship level through the finance department, it is reported through CART.

> *"(Account-level profitability calculations) are our atoms. We can create many different molecules using our atoms. If we are doing a campaign at the individual level, we do it. If we want to market to a segment or a sub-segment, we use it for that. The essence is that you have the same underpinning atomic structure."*
> —Wachovia site visit representative

Challenges of Customer Profitability

According to DeAngelis, the entire company has never truly "plumbed" the underlying infrastructure around the customer experience—its information, the way it makes decisions, where power resides. DeAngelis says that Wachovia has redefined success. Culturally, businesses think that more is always better. So if a business sells one number of units successfully, it tries to sell five of them to become more successful. Along with changing its infrastructure, Wachovia is changing what it values.

When a company recognizes a good customer, the temptation is to pile on. The deposit groups, money market savings, brokers, and lending bankers all would like to market to him. The lending banker says, "Well, he has a home with a lot of equity in it. He is a prime candidate for a loan, " for example. But, because of the amount of the investment involved, should not the broker always go first? CART tries to be the facilitator/optimizer/traffic cop to ensure that the customer is not overwhelmed and does not receive mixed messages.

Wachovia continues to evolve as it relates to how opportunities are prioritized. Because each line of business and department has its own P&L, there is limited incentive for an

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individual unit to not want to market to a client relationship. CART tries to deliver leads based on highest expected value. Statistical modeling groups are examining the likely result of a suite of offers received by the customer. The probability group looks at the expected value of a customer response. For example, it might predict a 0.05 percent chance that the customer would respond to an equity line offer and a $2,000 lifetime value if he or she did respond. The group would balance the offer with one that has a higher chance of response but a lower lifetime value.

Working with Stakeholders

The finance department had to negotiate seriously with the various businesses so that it could integrate profitability data. The businesses had to agree to the process. The key was to show users of the data that the profitability data truly reflects reality. The businesses were interested in how unit rates were developed, and they wanted to be in the discussion about what to include in them.

Doug Williams, finance leader, says that it is important that not just the CFOs and the financial experts in the company believe in the single definition of profitability. From the business units, people came forth to champion the unified calculation of profitability. The current CEO and his predecessor also stood behind the effort.

Until the finance department integrated and reported profitability, many different entities were reporting it on their own. They all managed to make themselves look profitable by calculating revenue in a number of different ways.

Until the organization was able to bring a relationship management view of the client to the business bankers, the bankers pushed back: "We know our customers, we do not need for corporate to tell us who our customers are." Corporate not only needs to preserve its relationship management capability but also help identify patterns that are applicable throughout the enterprise.

Seventy percent of communication of profitability is done through standardized reporting, and 30 percent is done through ad hoc requests. Finance is supporting each of the business units and their finance groups; each group has a different data distribution. Finance encourages "non-reactiveness," that is, business units exploring the data to try to find something important (for example a sub-optimally performing product) and then asking for support from finance to verify the finding.

COMPAS is a calculating, not a reporting, environment; it could be described as an "engine" with a number of well-defined data distribution paths out of it.

Currently, Wachovia is in a multi-phased process of full customer contact optimization. It currently uses SAS to drive its customer analysis activities. However, it is beginning to use a third-party tool, Unica Affinium, with the work flow in campaign management and optimization.

The driver for implementing Affinium is not capability; it is efficiency. CART currently has the capability of full customer contact optimization, but it needs to work using as few resources as possible.

CART optimizes its contacts and manages its campaigns, not from a customer segment level, but from a household level. DeAngelis says "If you start putting artificial barriers on what you can send the customer base depending on internal decisions, we could have sub-optimization. It is an internal constraint."

Maximizing Customer Profitability Through the "Sweet Spot"

A key to success is how to make segmentation actionable for the employees in the financial and the call centers. Every customer is identified as a "T" (transactor), "S" (saver/investor), or a "B" (borrower). Where the sets intersect, there is a "sweet spot." A single customer in the sweet spot is a transactor, saver/investor, and a borrower. Any financial service representative knows when interacting with a customer whether she is a "T," "S," or "B" and knows the plan to move her to the next level. Everyone in the company speaks the language of this segmentation; upper management often refers to the "sweet spot."

The following table shows the percentages of customers in the segments.

Table A: Segment	Percent
Transactor	25.4
Saver/Investor	12
Borrower	4
Transactor/ Saver/Investor	28.5
Borrower/Transactor	6.1
Saver/Investor/ Borrower	2.2
Sweet spot	20.6

The following table shows how the percentage of customers in the sweet spot grows the longer that the customers are retained.

Table B: Tenure Band	Percent in Sweet Spot
Less than 1 year	2
1 year to less than 3 years	3.8
3 years to less than 5 years	3.9
5 years to less than 10 years	12.6
10 years and up	77.7

Figure 12 (page 26) demonstrates the output of a sophisticated behavioral segmentation of the retail customer. Although the analysis behind it is complex, the company rolls it out in a simple way.

Both Table A and Figure 12 demonstrate that when customers are moved into the sweet spot, they are profitable and do not leave the bank. The average portfolio balance of a customer in the sweet spot is $73,200, which is much higher than the balance ($1,073) of the transactors only.
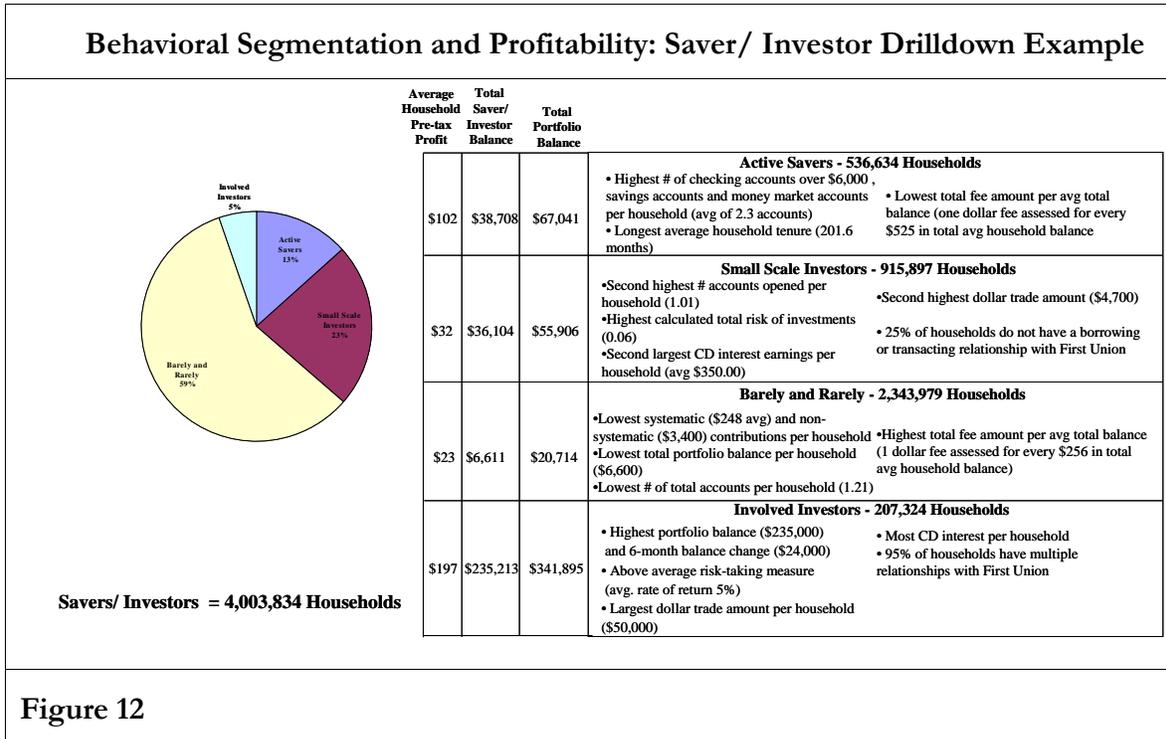

Behavioral Segmentation and Profitability: Saver/ Investor Drilldown Example

Savers/ Investors = 4,003,834 Households

Average Household Pre-tax Profit	Total Saver/ Investor Balance	Total Portfolio Balance		
			Active Savers - 536,634 Households	
$102	$38,708	$67,041	• Highest # of checking accounts over $6,000 , savings accounts and money market accounts per household (avg of 2.3 accounts) • Longest average household tenure (201.6 months)	• Lowest total fee amount per avg total balance (one dollar fee assessed for every $525 in total avg household balance
			Small Scale Investors - 915,897 Households	
$32	$36,104	$55,906	•Second highest # accounts opened per household (1.01) •Highest calculated total risk of investments (0.06) •Second largest CD interest earnings per household (avg $350.00)	•Second highest dollar trade amount ($4,700) • 25% of households do not have a borrowing or transacting relationship with First Union
			Barely and Rarely - 2,343,979 Households	
$23	$6,611	$20,714	•Lowest systematic ($248 avg) and non-systematic ($3,400) contributions per household •Lowest total portfolio balance per household ($6,600) •Lowest # of total accounts per household (1.21)	•Highest total fee amount per avg total balance (1 dollar fee assessed for every $256 in total avg household balance)
			Involved Investors - 207,324 Households	
$197	$235,213	$341,895	• Highest portfolio balance ($235,000) and 6-month balance change ($24,000) • Above average risk-taking measure (avg. rate of return 5%) • Largest dollar trade amount per household ($50,000)	• Most CD interest per household • 95% of households have multiple relationships with First Union

Figure 12

Figure 12 represents the sub-segmentation of the savers/investors group. A simple comparison of the total portfolio balance of two groups, "Barely and Rarely," and "Involved Investor," shows a difference of approximately $320,000. This analysis is used for targeted marketing and building strategy.

Enabling Technologies

Wachovia has a comprehensive analytical platform. Central to its integrated customer information are Wachovia's corporate data warehouse, SIGMA, ChoicePoint, and COMPAS.

The corporate data warehouse is a comprehensive corporate-wide information system that includes data from 25 legacy systems. It is used for storage rather than access; it encompasses consumer, small business, and commercial customers and contains more than 1,800 specific data elements. It holds 24 months of account history and 14 months of transaction history. Value-added data enhancements include household/relationship groupings (formerly "householding"), household level profitability, and demographics.

SIGMA is a data mart fed by the data warehouse that provides access for all levels of management. It includes tracking, reporting, and analysis of profitability, and customer

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trends. It holds summary-level data for more than 13 million customer groupings and 15 months of account history. CART uses SAS to analyze the data from SIGMA.

ChoicePoint is a third-party prospecting data warehouse that includes credit information from two bureaus and demographic information about consumers. It currently concentrates on equity-based lending, but CART is beginning to use it in other lines of business. It includes information on more than 600 data attributes of more than 120 million individual homeowners across the United States. It contains three terabytes of data. The database is housed at a state-of-the-art data center in Alpharetta, Ga.

COMPAS is an enterprise-wide profitability system that uses standardized methodologies and captures data at the account level. Profitability data is reconciled between the various profitability dimensions including account, product, customer, segment, organizational, and general ledger. The finance department owns COMPAS, and it is a home-grown system with an Oracle application at its core. The seeds of COMPAS came into First Union with its merger with Signet. Signet was the company that determined to calculate profitability granularly and roll it up. It was adopted into the new organization formed by the union of Wachovia and First Union.

Transaction history differs from account history in that account history is a summary of all of the transactions conducted in a month. A transaction history would list checks, dates, and amounts. An account history would say that the customer wrote six checks during a specific month.

There are places in which CART analysts operate alone. When they first develop a thought, a thread, or a segmentation strategy, the CART analysts maintain it in their user environment. CART uses the platform to analyze information that may be helpful to managers in the field, but it does not roll out the tables and charts immediately. It lets them "stabilize" first and ensures that the definitions are clear. After CART is sure that the analysis is meaningful and helpful, it gives the businesses access to it.

Wachovia calculates an efficiency ratio that equals "cost to serve" divided by revenue. It has found, for example, that affluent and retired customers have the most favorable network efficiency ratio under the current service model, and a potential increase in the share of these segments is likely to improve overall network efficiency, assuming the cost to serve is held constant. It has also found a striking, but not unexpected, differential between the cost-to-serve in the branch and a cost-to-serve through an ATM machine.

IV. Reporting Customer Profitability Information/Use of the Information

Reporting Cycles

Wachovia does not generate reams of "canned" customer segment reports. Quarterly, CART produces corporate metrics for the highest levels of management to provide some consistent views of each client segment: retail, small business, business banking, commercial, and wealth. These reports focus on customer life cycle.

For the next level of management, CART produces quarterly segment metric reports. Finally, and most importantly, CART produces profitability analysis reports for strategic decision support.

The Report

While other, more analytical groups may rank departmental profitability, financing—the group that produces the profitability reports—concentrates only on the numbers. Before it determined how the monthly profitability reports should look, it analyzed how it would be used.

Because it has an integrated platform in which the customer top-level data builds into product profitability and the same data supports business segment profitability, the reports that the business units see begin with business segment profitability—beginning in areas and regions, then rolling up.

Reports are distributed approximately two weeks after each month ends. The profitability numbers appear in a complete balance sheet and P&L. Analysts within the business units can start to work to discover the drivers of the numbers.

In general, customer profitability rolls up well. Answers on the cost side are a little less consistent because of the various policy decisions that come into play when units decide what level of cost is appropriate to push all the way down to the customer. Units vary on the amount of high level corporate overhead that appears in their cost calculation. It depends on what types of decisions that the units are making using the cost calculation.

Wachovia does not have customer account level data for every area of the organization. CART is currently working with the capital management group in the brokerage and asset management businesses to collect more customer information.

Wachovia does not generate reams of reports on segment profitability. The information is in a repository; some people want to look at the consistent views on a quarterly summary level. Most access is controlled by decision support need—the information that teams need to make decisions. DeAngelis says that profitability information is "intelligence" rather than "reporting."

Employee Buy-in

Both the CART and the finance groups are consultative when they plan projects involving cost studies and analytics. DeAngelis says "We are doing it with the business partner, not to him. We win skeptical business partners over when we print out a list of specific accounts. Their focus turns from fear of the 'black box' of data to interest in the actionable information." The teams also gain buy-in by seeing upper management support and concentrating on specific markets when they test concepts. Finally, finance and CART gain credibility by consistently delivering. For example, if businesses are willing to "stick their necks out" to give incentive pay to their employees, they must receive the data on which the pay is based in a timely way.
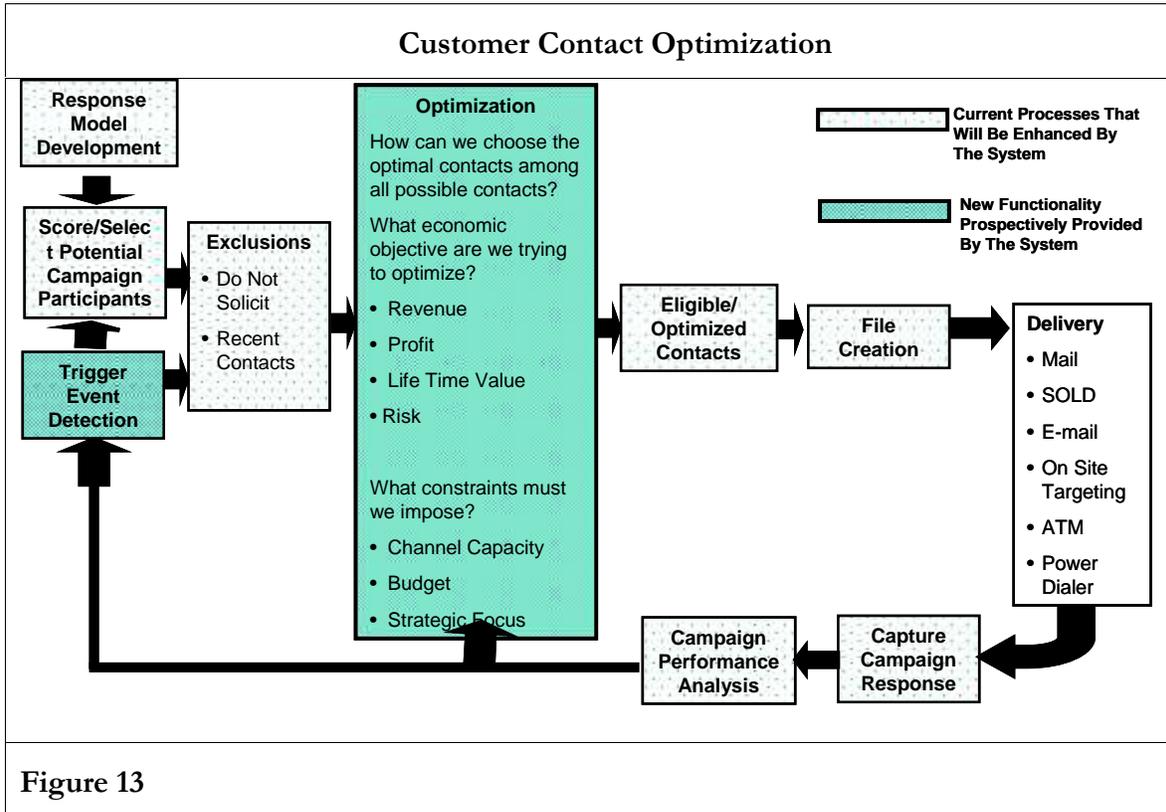
Using Customer Profitability Information in Decision Making

Figure 13, page 30, shows how customer contact is optimized. Wachovia understands response and expected profit by campaign. Until recently, it did not understand the optimal mix of campaigns across the entire customer base.

The model description begins at the large middle box labeled "Optimization." To locate the best contacts to receive an offer, the company first determines what it is trying to optimize—revenue, profit, lifetime value, inherent risk, etc. Campaign constraints—channel capacity (for example, some branches have fewer sales people than other branches have), budget constraints, and strategic focus (segment strategy)—are part of the picture.

Decisions that are made within the box result in a list of eligible contacts. The company uses the activities in the box in conjunction with tools it has historically used to manage campaigns such as response model development, scoring the customer base, and "do not solicit" exclusions.

Customer Contact Optimization

Response Model Development → **Score/Select Potential Campaign Participants** → **Trigger Event Detection**	

Exclusions
- Do Not Solicit
- Recent Contacts

Optimization

How can we choose the optimal contacts among all possible contacts?

What economic objective are we trying to optimize?
- Revenue
- Profit
- Life Time Value
- Risk

What constraints must we impose?
- Channel Capacity
- Budget
- Strategic Focus

Eligible/ Optimized Contacts

File Creation

Delivery
- Mail
- SOLD
- E-mail
- On Site Targeting
- ATM
- Power Dialer

Campaign Performance Analysis

Capture Campaign Response

Current Processes That Will Be Enhanced By The System

New Functionality Prospectively Provided By The System

Figure 13

Quantifying the Value

Calculating and acting on profitability and customer segmentation has greatly decreased customer attrition.

V. Lessons Learned and Critical Success Factors

Wachovia's critical success factors for calculating and reporting customer profitability include:
1. a single view of the relationship across the organization,
2. granular data enabling aggregation into relationship views that align with organizational and product views, and
3. senior-level champions of a customer-centric approach and information-based decision making.

Lessons learned include the following.
1. The breadth of relationships is important in driving profitability.
2. Concepts should be simplified when they are presented to the front line.
3. Companies need continual learning and cultural change to gain full leverage of capabilities.