

# Cluster III in 2007

## Customer Management in a Multi-Channel Environment

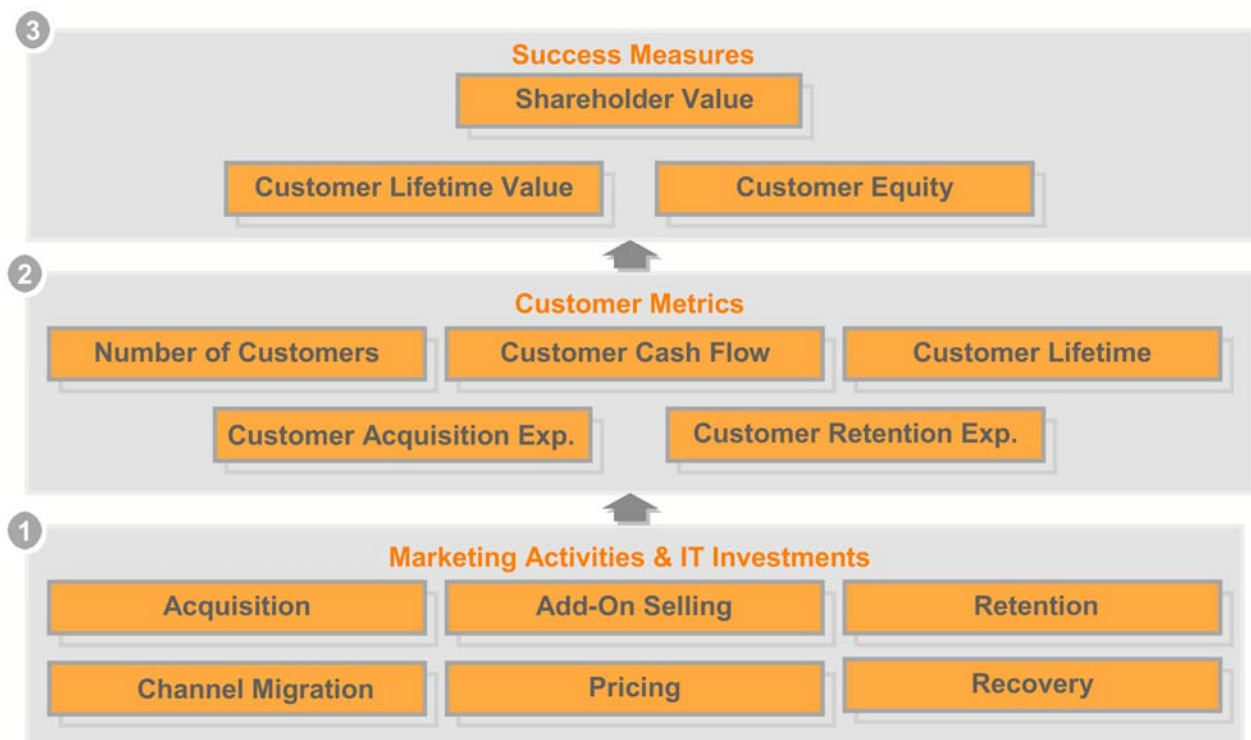
### 1 Motivation

The orientation of financial institutions has changed from a focus on products and transactions towards a focus on the profitability of a long lasting customer relationship. Therefore optimizing customer management activities regarding customer acquisition, customer retention and add-on-selling with the aim to increase the customer lifetime value and customer equity, an aggregate measure of the life time value of current and potential customers, plays an important role now.

As sales channels represent the link to the customer, their management is one crucial factor of the customer management approach. But many financial institutions are currently faced with a confusing array of choices and operational challenges in managing their multiple sales channels. Hence, the mission of Cluster III is to optimize Customer Equity by standardizing and automating customer management in a multi-channel environment.

Figure 1 represents the vision of our cluster “Customer Management in a Multi-Channel Environment”.

Figure 1: Vision of Cluster III “Customer Management in a Multi-Channel Environment”



Our cluster is structured in three modules which all aim to optimize the Customer Equity of a financial institution. The modules are as follows:

**(1) Marketing Activities & IT Investments:** This module studies the impact of marketing activities and IT investments on the 5 key customer metrics. For example, we will analyze the impact of customer channel migration activities on customer cash flow and on customer value and the ROI of IT investments. Furthermore, interdependencies between product categories will be investigated to evaluate the advantageousness of add-on selling activities with respect to customer profitability.

**(2) Customer Metrics:** This module pursues two objectives. Firstly, it analyzes the interdependencies between the different customer metrics. The second objective of this module is to evaluate the impact of the different customer metrics on the success measures.

**(3) Success Measures:** This module also has two objectives. Firstly, this module meets the challenge of how to calculate the success measures. Second, the relationship between the different success measures and their development over time will be investigated and implications for managers will be derived.

The insights from the three modules will be used to develop decision tools that guide the customer management strategy in a multi-channel environment for financial institutions. Based on these results, financial institutions should be able to increase their value of the customer base and to predict the impact of different strategies on enterprise value.

## **2 Customer Management Projects**

In 2007 the Cluster III will focus on the following work packages.

### **2.1 Market Analysis: German Retailbanking Market**

"Typologie der Wünsche Intermedia" (TdWI) is published by Burda Advertising Center and under license by 19 partners in the advertising media. This survey provides data on a regular basis on German consumer behavior and covers the financial service industry. It is based on the German-speaking population from the age of 14 belonging to private households in Germany. The participants are sampled by their addresses selected at random. The sampling scope is about 20.000 households. The survey is based on personal interviews and a written questionnaire. Interviews are carried out using a structured questionnaire; the written part of the survey is based on instructions provided by the interviewer. The survey is conducted once a year and we have got the data for a time period of 3 years.

Based on these data it is possible to conduct several analyses. For example, market shares for different product categories can be determined as well as the cross-selling rates of different financial institutions can be evaluated and compared. It is the aim of this project to provide several analyses of the German Retailbanking market to provide the partners of the E-Finance Lab with additional information.

This project has already started in 2004. A yearly analysis will be done to provide the partners of the E-Finance Lab with new trends and developments in the financial services industry.

### **2.2 Customer Management Benchmark**

The 5 key metrics for customer management in the financial services industry will be analyzed. The key players in the market will be surveyed. Therefore, a survey among the German Top 500 financial services institutions will supply the data needed. This will allow to derive implications for managers and to benchmark several institutions.

### **2.3 ROI of Customer Management Investments**

This work package will identify a structured process to improve customer management processes in a banking environment.

2.3.1 This work package's first objective is to visualize the procedure for the measurement of a certain bank's status quo concerning their customer management activities, for the evaluation of possible improvements, and for the implementation.

2.3.2 The second objective would be the application of the results with a banking partner.

Partner: Microsoft, BearingPoint

## **2.4 Estimating Customer Lifetime Value**

The focus of this project is to evaluate alternative methods to estimate customer value for retail bank customers.

2.4.1 We first assess the conditions under which the usually recommended Markov chain approach to compute customer lifetime value is appropriate.

2.4.2 In a second step, our objective is to develop an alternative probabilistic approach for the estimation of future customer profits. This alternative individual-level model should yield more accurate predictions of customer profit development, thereby allowing retail banks to better identify their high potentials customers and therefore to better allocate their marketing resources amongst their customers.

Partner: Deutsche Bank, Prof. Corinne Faure Ph.D.

## **2.5 Metrics for Customer Management (CE Dashboard)**

This work package will develop a so called "Customer Equity Dashboard" to monitor the financial impact of marketing spending suitable for senior management needs. So far, no translation of marketing outcomes to financial measures has been done and this kind of important information is not handed over to senior management to assist managing the firm based on its values. A connecting link between the concepts has to be drawn because it is imperative to set appropriate measurement metrics to track and monitor the effectiveness of marketing (e.g., customer management) activities.

2.5.1 The first objective of this work package is to use the customer equity and customer lifetime value concept to propose the "Customer Equity Dashboard" that should inform senior managers about the current value of their customer base as well as monitor changes over time. Software will be developed to implement the CE dashboard.

2.5.2 The second objective of this work package is to illustrate the usefulness of this approach by applying the concept in a real-world situation.

Partner: Prof. Julian Villanueva Ph.D. (IESE, Spain)

## **2.6 Development of Customer Metrics over Time**

Among the most important metrics in marketing, customer profitability is traditionally regarded as a measure with broad applications in the operative management of the customer base in financial services. Therefore a sound understanding of the development is required to ensure decision quality, especially if there is need for a decision on deepening or ending a customer relationship.

This work package will analyze the development of profitability of a certain retail banking customer over time.

2.6.1 The first objective is to determine whether there are major shifts in the calculated profitability from one year to another. Objects of the analysis will be profitability measures as used for the calculation of the customer lifetime value. The data set should reflect the retail customer base of a financial service provider in Germany and allow the comparison of at least two years forecasting.

2.6.2 The second objective of this work package is the analysis of the customer retention development with respect to the previous year's measurement results.

2.6.3 The third objective is the analysis of the Customer Lifetime Value development as a result from underlying customer metrics like profitability and retention.

Partner: Postbank

## **2.7 Risk Adjustment in Customer Lifetime Valuation**

This work package will analyze how and when to incorporate risk into the customer lifetime valuation formula. Currently, a risk adjustment in customer lifetime valuation is done rather hands on. Future customer cash flows streams are discounted at the same discount rate, assuming that all customers are equally risky.

2.7.1 The first objective of this work package is to identify possible applications for risk-adjusted customer lifetime valuation. In other words, this work package tries to review marketing applications in terms of the usefulness of risk-adjusted customer lifetime valuation and identify associated customer risk factors.

2.7.2 The second objective of this work package is to develop a way of how to incorporate the customer risk factors into the current customer lifetime value models and apply it to a dataset of a German bank. Stated differently, this work package aims to determine the discount factor in customer lifetime value models. The developed approach will be applied to a real world setting.

Partner: to be determined

## **2.8 Impact of Multi-Channel Usage on Customer Profitability**

This work package will determine profitability differences between multi-channel customers and single-channel customers of a bank. As a consequence, it will be possible to determine the effects of using multiple sales channels as opposed to using only one sales channel of a bank on the profitability of banking customers.

The objective of this work package is to compare the profitability of multi-channel and single-channel customers. In order to receive unbiased estimates, it will be necessary to account for so called self-selection effects. This can be achieved by decomposing the profitability differences between multi-channel and single-channel customers in customer specific and channel specific effects. One method to statistically decompose the profitability impact of using multiple sales channels is called matching. The matching approach compares actual behavior of an individual with the assessment about how this individual would have behaved, had she or he not used multiple sales channels. This comparison will allow to define the impact of using multiple sales channels on the profitability of the individual customer. If the profitability difference is not completely explained by the channel effect, the remaining difference can then be attributed to the self-selection effect.

Partner: Postbank

## **2.9 Balancing Acquisition, Retention and Add-on-Selling Expenditures to Maximize Customer Equity**

To measure, manage, and maximize customer profitability requires considering resource allocation decisions, the benefits and the costs of marketing, sales, and customer interactions. Therefore the questions how much should be spend on customer acquisition, customer retention and add-on-selling and how those expenditures should be allocated so that the customer equity is maximized play an important role in customer management. Prior research has only focused on part of these issues. We developed an advanced model which overcomes the disadvantages of those prior models.

The objective of this project is the the practical application of the advanced model to optimize managers' decisions regarding the budget allocation process.

Partner: DAB bank

## **2.10 Predicting Customer Purchase Behavior**

Predicting customers' purchase behavior is required for the estimation of the customer lifetime value and for segmenting those customers into active and inactive customers. This information is useful for determining the value of the customer base and for developing recovery strategy for lost customers. We will apply and compare models that were introduced in the E-Finance Lab "Customer Base Analysis" seminar in spring 2006.

Partner: to be determined

### **2.11 Predicting Customer's Share-of-Wallet**

Many companies collect substantial information regarding their interactions with their customers. Yet information regarding their customers' transactions with competing firms is often sparse or non-existent. As a result, firms are often compelled to manage customer relationships based on an inward view of their customers. It is the objective of this project to develop a survey-based approach to augment firms' internal records with insights regarding their customers' relationships with competing firms, including the size of each customer's wallet and the firm's share of it.

Partner: Postbank, DAB bank

### **2.12 Second Workshop on "Customer Base Analysis"**

The aim of this international workshop is to present and discuss in more detail methods for analyzing the value of a customer base. The workshop will be hosted in collaboration with Peter Fader (Wharton, USA) and Bruce Hardie (LBS, UK).

### **2.13 Acquiring Customers via Search Engine Marketing**

The aim of this project is to develop a model for optimal search engine marketing, e.g., via search engines such as the one from Google ([www.google.de](http://www.google.de)). New entrants like ING-Diba showed that online marketing allows to successfully build up a large customer base. Among online advertising, search engine marketing is expected to gain a market share of approximately 40%. That form of online advertising requires to determine optimal prices for online advertising, i.e., optimal bids that are submitted to the auction system of the search engine providers.