CRM

CUSTOMER RELATIONSHIP MANAGEMENT

The Analytical Dimension

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1. Introduction

CRM - Customer Relationship Management.

This is currently a hot topic and referred to frequently in a wide range of articles. The evolution of CRM has seen several guises including, continuous relationship marketing, and customer relationship marketing, before settling down to customer relationship management. The definitions offered vary considerably, so I have distilled this down to one that I personally am comfortable with;

"The collective processes (including business rules), methodologies and tools (including software) that help an enterprise manage customer relationships in an organised way."

A lot of CRM literature and software focuses on a Business to Business ("B2B") relationship. The systems and process created for "account management" are often designed to deal with a large number of relationships and lots of data on a comparatively small number of clients. The typical financial services organisation will have lots of clients with, generally speaking, simpler relationships and less data on each. The amount of data on each customer can balloon if, for example, individual transactions are included.

In theory the principle is the same, however in practice the implementation and tools used will be quite different. As the definition that we have adopted includes the tools and processes then it is important to make this distinction.

The remainder of this paper will focus on the application of CRM to Business to Consumer ("B2C") relationships in the financial services sector, and in particular the supporting analyses.

2. Some CRM Concepts

In broad terms CRM attempts to recreate the sort of "one-to-one relationship" and knowledge of customer needs that used to exist in the "corner store". In the corner store example the number of customers was sufficiently small and the interactions personal enough so that all the necessary data could simply be stored in the shopkeeper's head or order book.

Obviously this ceases to be possible as the customer base grows to, for example, one million customers. The problem is compounded by the number of staff required to service the customers, the fact that a customer may not be always dealing with the same person, and the inevitable turn-over of staff. At this scale the investment in technology needed to try to recreate the one-to-one relationship becomes very significant.

CRM practitioners refer to any interaction with a customer as a "touch point". Customer touch points include;

- Customer service

- Broker or agent sales

- Telesales

- Direct sales

- E-commerce

- Web marketing

- Claims processing

- Complaint resolution

Examples of existing CRM systems in a typical financial services company include call centre systems, client or product administration systems, procedure manuals, correspondence systems, direct mail lists, Email systems, brokers contact databases and purpose built databases (or datamarts) used for say database marketing. Whether or not they were designed that way, all of these systems and processes are involved in customer "touch points", and therefore contribute to the total relationship that the customer has with the organisation.

3. The Internet

The latest thinking is that Business to Business ("B2B") is expected to make-up 95% of the total eBusiness pie, with consumer purchases ("B2C") representing just 5%. [1]

Most of the high profile dot coms have focused on the "B2C" market, which is presumably behind the collapse of the sector.

If the assertion above is correct then the Internet becomes as much of a tool within an organisation for managing a customer as a means of making contact with the customer. An obvious example is the Internet as a "B2B" connection between the broker or financial planner and the company.

(1) Forrester Research and *The Economist*, November 1999

4. The Marketing Challenge

The marketing challenge of CRM is to better match the product offering to the needs of the customer. The changing marketplace also has to be factored into the process.

- Customers are becoming better informed and less loyal, new entrants to the market make the transfer cost to the customer less by removing or rebating entry fees to attract the "right" customers.

- Customers may prefer to deal with a new channel rather than their existing channel.

- Increasing "commoditisation" of products.

- Need to better target product offerings to the customer life cycle to properly service the customer.

- Movement to permission marketing where the client accepts additional information on product offerings in return for providing additional information on themselves.

- Need for additional information on customers such as "share of wallet". This becomes more important as the division between product offerings blurs (e.g. between insurance and banking).

"I know that half of my advertising is wasted, but I don't know which half"

John Wanamaker, US department store magnate.

5. The Technology Challenge

The technology challenge is about;

- Creation of appropriate systems to manage the different relationships with the customer

- Management of the ever expanding data and information in a consistent and useful manner

From the analysis point of view the data is key, some of the issues that need to be considered are;

- Managing large databases

- Analysis of large volumes of data generated by transactions and "touch point" data from the customer systems (such as website tracking data)

- Accuracy of data entered

- Consistency between different ways of accessing and reporting on data

- The ability to obtain additional information that is current

- The ability to match data from external or multiple internal sources

- The cost of the hardware continues to reduce for both processing power and storage

6. The Analysis Challenge

The critical component of a CRM system (or systems) is the analysis that supports the system. The analysis is focused on answering the key questions about customers like;

- Who are your most valuable customers?

- Which customers are likely to leave or stay?

- Which customers are most likely to respond to an offer?

- What is the best product to offer each customer?

- What is the most relevant message for each customer?

Actuaries have traditionally done some of this analysis. The key difference is the customer focus and communicating the findings and the process to other parts of the organisation.

Analysis that is presented in a relevant format then becomes valuable to the marketing and customer service departments.

Ideally a large number of elements of the analysis are automated so that it is continuously updated. In this way trends can be observed and the results of any initiatives assessed.

At present a great deal of effort is expended in getting the right data from multiple sources. The challenges involved in this are a subject and industry in their own right – data warehousing.

The customer analysis can also be used to produce better forecasts and projections.

7. Analysis Methodology

The key to all analysis is that to maximise value to the organisation it must be set up in a structured way so that the analysis is repeatable with minimum effort. Trends can then be established and the effect of changes evaluated. It is important that a Control Cycle approach is used. The analysis then becomes a process or a tool in the CRM sense.

7.1 Generic Analysis in CRM terminology

An integrated Analytical CRM solution addresses all of the following:

- Customer Profiling (segmentation, risk, propensity)

- Campaign Management (analysis of campaign effectiveness)

- Customer Care (analysis of customer contacts and service)

- Customer Loyalty (persistency, retention, churn)

- Sales Analysis and Prospecting (sales by product, category, store, channel, customer care, cross-sell, up-sell)

Source: - Sybase Whitepaper

7.2 Specific Analyses for a Financial Services Organisation

- Experience analyses
- Expense analyses
- Call centre analysis
- Claim analysis
- Sales analysis
- Customer satisfaction
- Focus groups
- Activity analysis
- Direct Marketing response analysis

7.3 Analysis Level

- Company
- Portfolio
- Product
- Regional
- Distribution channel
- Segment
- Broker
- Demographic characteristics
- Individual customer

> **High**
> ↓
> **Low**
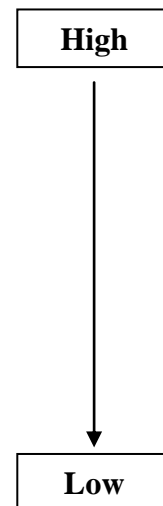
The level that the analysis is done to is a fairly fundamental difference between the traditional techniques and the CRM techniques. Modern CRM requires analysis at a much lower level and requires customer-centric analysis.

To a large extent the level of analysis determines the appropriate tools needed, and the appropriate technology.

The challenge, as the level of technology increases, is to keep the business focus.

7.4 Analysis Tools

- Customised queries from the policy admin system (eg Access, SAS etc)

- Customised queries from a purpose built database

- Point and click query tools on a data warehouse (Business Intelligence tools eg Business Objects, Impromptu etc.)

- Data mining

- Neural Networks

- GLMs

7.5 Analysis Output

As the complexity of the analyses increases, the importance of summarising the information in a meaningful form increases.

Depending on the organisation this could be done in a number of ways such as;

- Contribution to embedded value (or current customer value)

- Contribution to appraisal value (or future customer value)

- Lifetime customer value

- Contribution to reported profit (eg. MoS profit, bearing in mind that the profit margin percentage is likely to vary by customer)

- Contribution to profit and overheads

- Direct expenses

- Customer "risk" – propensity to leave, or claim

- Customer "potential" – cross selling opportunities

7.6 Industry Characteristics - Financial Services

- Longer term relationship

- High acquisition costs

- Provision of a service rather than sale of a "widget"

- Services supplied to a customer base

- Customer movement is gradual

- Not all customer interactions are "buying opportunities"

The characteristics above could equally well apply to banking and telecommunications as well as financial services. Considerable development in CRM methodology has occurred in both the banking and telecommunications industries.

Because of the customer characteristics the assessment of profit and value is not straightforward, the analysis is consequently more demanding.

8. Segmentation

Segmentation is categorising the customers into groups with similar characteristics. This enables appropriate strategies to be developed for each segment.

The segmentation can be as fine as desired, or as fine as the systems permit. In theory each customer can be in their own segment, however any analysis of patterns or customer statistics can cease to have meaning.

The ultimate aim of one-to-one marketing is to segment the market to the lowest level possible, to have a product tailored specifically for each customer.

8.1 Additional data

The data collected by financial institutions will often be either incomplete or out of date. For example income and occupation details are not generally known for a large number of customers. In this case the analysis can benefit from augmentation from other sources of data.

- Requirement for hard wealth and income data about customer segments
- Customer surveys
- Additional statistics, eg Te Tari Tatua (Statistics New Zealand), household income by postal code

9. Customer Value

The actuarial profession has highly developed tools to analyse policies.

An actuary's starting point for the value of a customer will generally be the sum of the embedded values for all the customer's products.

Actuaries have traditionally profiled customers by risk characteristics rather than profit or value drivers.

The challenge is to use these same tools to analyse customers.

Customer lifetime value can be broken down into two components – current customer value and the future business potential of that customer.

9.1 Comparing Current Customer Value to Embedded Value

If you wish to match the total customer value to the embedded value you have missed the point. It is doubtful that the two will be the same, and it doesn't matter. The two numbers are calculated for different purposes. It is still however important to be aware of which elements should remain consistent. To be of any real value the customer value indicator has to move away from portfolio averages. Because of the non-linear nature of profit projections (for example lapse and surrender rates), the bottom up calculation will be different to the top-down calculation.

Simple example of portfolio average vs. lower level average

Profit pa. (EOY)	Discount Rate	Lapse Rate	PV Future Profit	Difference
100	10%	10%	390	
100	10%	10%	390	
200			**780**	
100	10%	5%	487	+97
100	10%	15%	314	-76
200			**801**	**+21**

In this case the customer with the better persistency has added more value than the poor persistency customer has subtracted. This effect would be even more marked if the high persistency customer also generates more profit per annum.

This very simple example illustrates the shortcomings of using simple portfolio averages, particularly if these are done in an inappropriate way, for example a simple per policy analysis may be inappropriate. I am not in any way trying to discredit embedded values, but merely to illustrate the way that information is lost in the use of averages.

The point is that, to get the maximum information from a customer value system, we need to move beyond thinking that the customer value is simply the sum of all the product values.

It is commonly quoted that a simple segmentation of customer value might look like;

Segment	Proportion of customers	Proportion of value
"high value"	20%	140%
"medium value"	60%	20%
"low value"	20%	-60%
	100%	100%

However this type of analysis could be very misleading if it is based purely on embedded value assumptions which rely on portfolio averages. In particular the expense assumptions need to reflect the actual cost of servicing each customer segment.

More detailed expense analyses rely on having more data on the processes required to service each customer. In this way the difference between "low maintenance" and "high-maintenance" customers can be quantified.

The aims of an embedded value expense analysis (where the split between acquisition and renewal is most important) and a customer value analysis are quite different. The allocation of overheads and fixed costs will often serve to obscure some of the findings from a customer value model. An alternative customer value based on profit plus contribution to fixed costs and overheads may help to cut through some of this uncertainty.

The range of customer values can be large, conventional embedded value calculations can easily produce a range of -$200 to over $10,000 for single policies. A customer value model will give an even wider range of values.

9.2 Customer Lifetime Value vs Appraisal Value

The customer lifetime value attempts to include the value of future business that the customer may do with the organisation. The new business component of an appraisal value doesn't distinguish between current and future customers. The appraisal value is more focused on the value of current distribution channels, rather than customers. The appraisal value is generally limited to the current range of products. Potentially customer lifetime value can allow for products that have not yet been developed. For example the characteristics of current pre-retirement customers may be quite different from current retired customers. A completely different product offering may be needed in the future when this segment retires.

9.3 Value to Customer

The flip side of customer value and another use of the term is; - What is the value to the customer? - The customer will only purchase a product or service that has value to them, this value is determined by an unknown method unique to each customer.

Obviously to be successful the suite of products must be of value to the customer as well as adding to customer value from the company's perspective.

10. Evaluating Projects

The CRM analysis will also provide a framework for assessing the benefits of any proposed initiative in terms of customer value. This will enable a more complete and quantifiable business case to be put together.

The information on customer relationships will help to put a value on previously intangible items.

11. Risk Management

The life insurance industry used to be about accepting and making a profit out of risk.

The industry has progressively managed the risk component out of many of its products. Investment risk is now largely borne by the customer, with only the "second order" effect of customer dissatisfaction left to manage.

The risk to the company has been transformed largely to "profit" and "value" risk. The risk management process therefore has to focus on understanding and managing the drivers of risk and value. This effort is rewarded most on the customers that are most sensitive in dollar terms to changing value drivers, whether by size or nature.

The danger in the risk analysis lies in using aggregate or summarised information to calculate the risk factors. A group of products are not all subject to the average of the portfolio risk factors. This would seem to be common sense when applied to the claim analysis of a motor portfolio, but what about the risk factors of investment product customers?

The practical management of the value risk requires the right information to target the customers that are most at risk.

12. Direct Marketing

Direct marketing has been one of the prime catalysts for the development of modern CRM techniques.

Information about customers enables the "one-to-one relationship marketing" to work. Successful CRM campaigns are more than just database marketing, which is about trying to determine a customers needs from either historical data, or by inferences from the purchasing patterns of "similar" customers (similar customers may be identified by a number of techniques including data mining or clustering). The challenge lies in the prediction of what a customer is likely to buy. One way of achieving this is by a continuous process of monitoring the success of previous offerings. The algorithm used to generate the personalised offering is then updated to reflect the additional information.

This is essentially the control cycle.

13. Control Cycle

The control cycle is the process used to set the parameters for any type of forecasting.

- Collect Information
- Analyse
- Project Outcomes
- Assess actual outcomes
- Revise assumptions
- Do it again!!
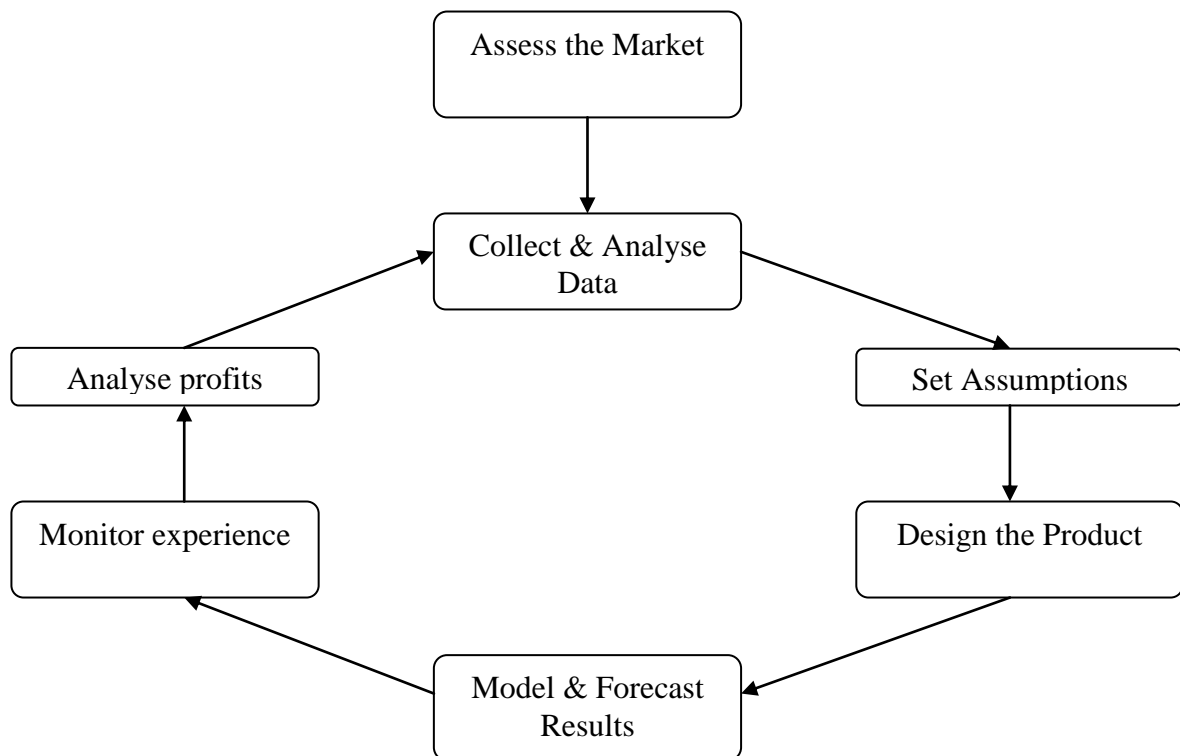
14. CRM Case Studies

Company	Key Strategy
Amazon.com	Use database to recommend either similar books or books based on buying patterns of people that have also brought the book you have.
Websites in general	Recording "click tracks" or "click streams" to analyse the effectiveness of the website structure and content.
Hallmark Cards	Customers Family Birthday database.
Woolworths Supermarkets	Internet site keeps a customer's previous shopping lists.
Loyalty Programs – FlyBuys	Collect demographics when you join, then buying pattern data to analyse later, personally I have yet to see this used to individualise marketing.
Qantas Frequent Flyer	Seating or dietary preferences. Collect members profile, including interests then does permission marketing from this.

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