
Implementing Customer, Product, and Channel Profitability Analytics

- ▶ *The Importance of an Activity-Based Costing Strategy in Your Organization*

Author: Richard Barrett

Contributors: Jennifer Meegan, Nic Smith

Contents

Executive Summary	1
Bringing Together Customer Insight and Customer Value	2
Increasing Accuracy in Profitability Measurement	3
ABC: The Keystone to Cost and Profitability Analytics	5
Using the Most Appropriate Assignment Methodology	5
Time Splits	6
Time Capture	6
Time-Driven	6
Profitability at the Transactional Level	7
The Case for Multi-Dimensional Analysis	7
Other Issues in Cost and Profitability Analytics	8
Accurately Costing Customers, Products, and Channels	10
Conclusion	11

Executive Summary

It is estimated that companies spend over U.S. \$500 million per year on software and services for profitability analysis. Now that many have data warehouses providing a single view of the customer and their transactions, and the focus is shifting to using this customer data, we can only expect this level of spending to increase.

In order to be more reliable, this must be underpinned by cost and profitability analysis with an activity-driven view of how your organization's products, customers, and channels consume resources and incur costs. Without this foundation, the resulting analysis will be critically flawed and will result in inappropriate decisions.

This paper describes how activity-based costing (ABC) contributes to more reliable customer, product, and channel profitability analysis, concluding with two brief case studies where financial services providers have successfully deployed ABC.

Regardless of where or how they first opened their account or took out their policy, today both private and corporate clients of financial services providers (FSPs) expect to transact their business through a variety of delivery channels. Often they will choose whichever is the most convenient for their immediate requirements. Many FSPs have yet to grasp the full impact this has on their organizations and continue with inappropriate processes, such as conducting customer surveys about the branch where their account is based, despite the fact that over the years, many customers will have moved frequently and have not been in their branches for a decade or more.

In retail banking and insurance, the growth in new service channels, such as the telephone and the internet, and fierce competition from new entrants has led many FSPs to focus purely on customer acquisition. The philosophy was simple and appealing. Gain more customers, surround them with a wide array of products to up-sell and cross-sell, offer a variety of service channels, and profits will surely follow.

To make this happen, FSPs acquired expensive customer relationship management (CRM) applications and vast data warehouses to store every piece of available customer data including extensive transaction histories. ABC is the only methodology to provide accurate customer, channel, and product profitability data, allowing organizations to leverage the value of the underlying data.

Bringing Together Customer Insight and Customer Value

Although acquiring and retaining profitable customers directly improves bottom line financial performance, in many organizations there is no clear owner of customers and customer data. The marketing department is typically responsible for what is increasingly being labelled “customer insight”; that is, developing a detailed understanding of customers, and their current and possible future behavior. But when it comes to calculating customer profitability (AKA customer value), the numbers are often found in the finance department.

For many years, CEOs have demanded a single customer view to provide companies with customer-centric growth strategies. Most companies have either achieved or made significant progress towards this in recent years. Now the challenge is to reconcile this hard-won single view of the customer, their purchases, and transactions with cost and profitability reporting, where source data resides in other systems maintained by other departments.

For effective cost and profitability analysis, marketing and finance departments must work closely together. This means using shared definitions while ensuring analysis performed in one application can be seamlessly linked to other applications to strengthen the underlying data assumptions.

As organizations work towards bringing customer insight and customer value together, often by introducing historic customer profitability reporting into the core data warehouse, they are facing two key issues:

- ▶ They must decide what level of analysis to go to. CRM systems and data warehouses hold millions of pieces of disaggregated data overlaid with powerful tools enabling users to analyze, mine, and report on any dimension or attribute directly from individual account to high-level market segment. To be compatible with this schema, cost and profitability data must be reported in the same way (i.e. at the transactional level).
- ▶ Organizations need to develop teams of people with diverse skills and abilities to deliver “customer insight” and “customer value” to business managers and help them use it to make better decisions. This team is likely to consist of marketers, market researchers, and management accountants supported by others with technical expertise in business intelligence (BI) and database management. Organizations will need to decide exactly whether this team is located in the organization, or whether it can function effectively as a virtual team.

An organization that truly understands profitability at the customer level can become much more customer orientated with a structure based on both product and customer. Those responsible for customer management can be held equally accountable for bottom line performance as their colleagues responsible for products.

Increasing Accuracy in Profitability Measurement

Not all customer relationships are equally profitable. For instance, customers who rigorously manage personal finances to maintain a low balance in their current account, or write a large number of low value checks, limit the ability for a bank to earn revenue and are costly to service. Similarly a customer who has accepted every product cross sold to them, but rarely uses those products, is likely to generate more cost than revenue. Therefore, growing the number of accounts or the headline revenue alone is no guarantee of automatic profit. FSPs quickly recognized this and customer profitability measurement tools became part of the offerings of many of the CRM vendors, promising to help FSPs assess which customers to target with marketing, sales, and service initiatives in order to maximize profitability.

Prior to the adoption of ABC, a common approach to calculating customer profitability was the “top-down approach.” This simply involved apportioning general ledger line items to products or customers using specific metrics such as the total number of accounts or some other operational driver such as the number of transactions. Table 1 below shows a simple example of how this would work when calculating the profitability of three customer segments where expenses from the general ledger are only available at an aggregate level.

Customer Segments				
Product 1	Total	Segment 1	Segment 2	Segment 3
Income	\$12,000,000	\$6,500,000	\$1,200,000	\$4,300,000
Cost	\$9,800,000			
Net Income	\$2,200,000			
# Accounts	300,000	160,000	60,000	110,000

Table 1

Table 2 shows the results of apportioning expenses to each customer segment based on the number of accounts in each segment.

Customer Segments				
Product 1	Total	Segment 1	Segment 2	Segment 3
Income	\$12,000,000	\$6,500,000	\$1,200,000	\$4,300,000
Cost	\$9,800,000	(\$9.8m * 53%) \$5,194,000	(\$9.8m * 20%) \$1,960,000	(\$9.8m * 27%) \$2,646,000
Net Income	\$2,200,000	\$1,306,000	-\$760,000	\$1,654,000
# Accounts	300,000	160,000	60,000	80,000
% Accounts	100%	(160,000 / 300,000) 53%	(60,000 / 300,000) 20%	(80,000 / 300,000) 27%

Table 2

This method of apportioning costs is not necessarily wrong. For instance, if customer behavior and the cost-to-serve are identical in each segment, the allocation is satisfactory. However this is highly unlikely. In practice, customers in each segment are likely to exhibit different behaviours that consume resources and cost in different ways. Customers in segment 1 may have twice the number of transactions as other customers and should incur a greater proportion of the total cost.

But apportioning costs on any driver is unlikely to produce reliable results. A better approach is to allocate costs based on the consumption of resources. This can only be done by first understanding how customers (and products and distribution channels) consume activities, and then understanding how these, in turn, consume resources. The limitations of apportionment become particularly apparent when one considers shared services functions. A high percentage of the total cost base of an FSP is in technology, infrastructure, and back-office functions. Apportioning such large amounts of expense using simplistic drivers such as the number of accounts or transactions is likely to result in gross errors. This will, in turn, easily result in erroneous and potentially expensive decisions being taken. The only remedy is a more sophisticated approach to analyzing costs and this is where ABC comes in.

ABC: The Keystone to Cost and Profitability Analytics

As companies struggle to gain a more complete understanding of customer, product, and channel profitability, they realize the importance of using ABC to correctly calculate costs. Activities can be defined at the macro level (such as direct debit payment) or at a more detailed level (such as counter payment at a rural branch, recognizing costs will vary by product and by delivery channel as well as geographically).

One of the key challenges for large organizations like FSPs is to understand how infrastructure resources are consumed. This can only be reliably understood by using an ABC methodology to calculate how products, customers, and channels consume activities and how activities consume resources and cost. Figure 1 shows the basic flow of cost in an ABC model; the reality is more complex with various reassignments and reallocations.

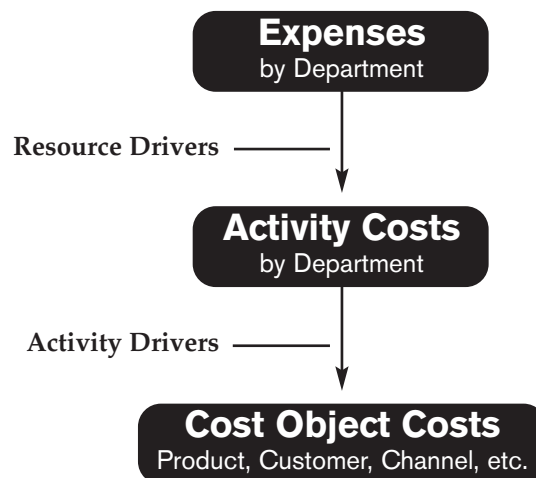


Figure 1: The basics of activity-based costing.

Using the Most Appropriate Assignment Methodology

Although it should always be possible to reconcile the total expenses assigned with the sum of the object costs calculated, sometimes organizations have to resort to estimates and approximations and any ABC model is likely to contain a number of different assignment methodologies. The main methodologies are described below. Keep in mind, the best practice is to use whichever methodology is most appropriate to the particular activity and department, and to make use of any reliable data already being collected.

Time Splits

- ▶ When assigning departmental expenses to activities, time splits are frequently used as a resource driver. Managers are simply surveyed to ascertain what proportion of time is spent on different activities. This split is then used to allocate expenses to activities. Capturing non-system driver data such as time splits used to be onerous and time consuming but the advent of web-based ABC has removed many of these problems. Time splits remain the main assignment methodology in departments that do not carry out highly repetitive activities such as marketing and support functions.

Time Capture

- ▶ Where time capture systems are already in place, time capture should be reviewed as the possible basis for ABC costing before any other methodology is considered. This is particularly so where capture of time data is already automated and data can be readily imported into the ABC model.

Time-Driven

- ▶ The key difference in this methodology is that cost driver rates are based on the practical capacity of the resources supplied. The time taken to perform an activity is either measured or estimated. It is this consumption of resource that is used as the basis on which to assign costs to activities. The time-driven methodology is particularly useful in departments that carry out highly repetitious activities or where individual cost objects are far from homogenous and consume an activity for differing lengths of time.

The key issue here is to choose a methodology appropriate to the cost being assigned, and to make the best use of existing data.

Profitability at the Transactional Level

Although calculating the costs of many millions of records used to be beyond the ability of ABC applications, that's no longer the case. Therefore it's important to establish which level of granularity to work to before selecting a vendor. Where customer profitability is one of the key deliverables of ABC initiatives, there are a number of reasons why you should consider transactional ABC (i.e. costing each sales order line or transaction):

- ▶ As mentioned above, many data warehouses already contain detailed transaction histories—frequently enriched with syndicated customer data—at the customer level. Costing this transactional data is an obvious next step and allows for complete flexibility of analysis and reporting at any higher level. For instance, if all the individual transactions of an individual account are costed, you can consolidate reporting to the individual customer, household, customer segment, marketing campaign, or to any other selection criteria available in the data warehouse.
- ▶ Reporting customer profitability at a higher level, by customer segment, for example, frequently masks the fact that unprofitable customers exist in even the most profitable segments. Given that many organizations already have the ability to identify individual customers for specific activity, it makes little sense not to work at the lower level of analysis.

However, in business where transactions are homogeneous and customers place similar demands on resources, there may be little to gain from working at the transactional level. Consider insurance. Typically most customers buy a standard policy and have little, if any, further transactions with the insurer during the policy year unless they make a claim. In such cases, doing ABC at the transactional level is unlikely to provide greater insight. But where transactions are heterogeneous and customers place varying levels of demand on resources, retail banking for instance, it may be appropriate to calculate the profitability of individual customers.

The Case for Multi-Dimensional Analysis

It is important that profitability analysis doesn't stop at the customer level. Ranking clusters of customers by profitability does not show why some are more profitable than others, or explain how to make them more profitable. To provide a more rounded picture, organizations need to incorporate views of:

- ▶ Which products customers are buying and how profitable are they. In fact if a bottom-up ABC methodology is used for costing, the costs and profitability of the products a customer uses needs to be calculated before the overall profitability of that customer can be derived. Having done the hard work, calculating profitability by product is no more than aggregation.

-
- ▶ Which delivery channels customers elect to use and the costs of transactions delivered by these channels. To be useful for decision making, such analysis may need to go to a finer level of granularity; perhaps down to individual branches and affinity partners.

An exclusive focus on product or channel profitability would be questionable and could lead to the elimination of products and channels used by highly profitable customers. It is therefore important that profitability is measured and analyzed across all three dimensions (product, customer, and channel) before any actions are taken to rationalize the product portfolio or branch network.

Other Issues in Cost and Profitability Analytics

A key component of ABC modeling is to show how activities and their associated costs and revenues relate to customers, channels, and products. Once activity costs are calculated, they can be computed with driver volumes to calculate the costs and profitability of the various customers, products, and channels.

But in many organizations, there is typically little channel-specific management information to use as driver volumes and inevitably there are always several questions to be resolved.

- ▶ **What constitutes a channel?**

Do such things as ATMs and the internet constitute distribution channels or should they simply be treated as service delivery mechanisms?

- ▶ **What constitutes revenue?**

Dealing with fee- and commission-based products is easy, but FSPs need to integrate information about the transfer price of funds and the cost of risk (e.g. loan loss provisions and reserves, and risk-adjusted cost of equity) when attributing revenue to products, customers, and channels.

► **How do you allocate revenue to channels?**

When customers are increasingly choosing to service their account via a mix of channels, what is the most appropriate methodology to allocate revenue between channels? For instance, many account holders never visit the branch where they initially opened their account and it may be inappropriate to automatically allocate revenue to the channel where the customer relationship was established. Now that multi-channel service delivery is the norm, it may be more appropriate to completely separate customers and the branch or channel where the relationship began and implement a transfer pricing mechanism. This way, branch, channel, and customer profitability can still be measured and provide reliable data for decision making.

► **What timescales should we be looking at?**

Looking at current year revenues and current year costs generates a number of potentially unfathomable issues about how to treat acquisition and retention costs. It also fails to recognize a customer's potential for profit varies with their life stage. It may therefore be more appropriate to include revenue as the net present value of the customer's estimated lifetime value.

► **Just historic or forward looking too?**

In the past, the majority of activity-based costing models were focused on the analysis of historical costs. While this has brought great insight into profitability, organizations are beginning to recognize the additional value to be found by applying ABC principles to future periods. This aids strategic decision making and enables organizations to easily carry out "what-if?" analysis.

There are no correct answers to these questions. Appropriate solutions depend on the types of questions the organization sets out to answer when pursuing a profitability project and appropriate timescales.

Accurately Costing Customers, Products, and Channels

In a multi-product and multi-channel environment, costs must be allocated to the combination of cost objects realistically representing how cost is incurred. For instance, customers taking cash from an ATM in a major metropolitan area ought to incur a different cost from the same customers making an over-the-counter deposit in a remote region. In financial services, much of the data is inherently multi-dimensional. Costs need to be allocated to precise intersections of customer, product, and channel. It is only sensible to use an ABC application capable of doing this allocation in a single pass of the data.

ABC applications that do not allow single step, multi-dimensional allocations have to use a cascaded approach of allocating costs sequentially to customer, product, and channel. This will generate unreliable results that can lead to inappropriate decisions.

Conclusion

In a recent survey carried out by the UK Institute of Financial Services², 77% of respondents reported believing there are significant gaps in the ability to measure customer value. A quarter of respondents said they had no access to customer profitability analysis. These figures would not be quite so alarming were it not for the fact that the financial services sector is at the vanguard of cost and profitability analytics!

However as FSPs and companies from other sectors move towards developing robust solutions able to inform decision making across the organization, there is a consensus of how to proceed:

- ▶ To be reliable, profitability measurement must be based on the activity-based costing methodology.
- ▶ Analysis of only one dimension of profitability, such as customer profitability, will not provide adequate insight for decision making.
- ▶ Companies need to ensure their ABC initiative fits seamlessly into existing data schema. Frequently this means costing individual transactions and individual customers.
- ▶ Always use a costing methodology appropriate to the specific activity in the specific department.
- ▶ Companies should ensure the methodology in their chosen ABC application uses a single step multi-dimensional allocation of activity costs to cost objects.
- ▶ Although ABC projects raise a number of issues, not least in allocating revenues to channels, if the project team focuses on the deliverables and business decisions the project is seeking to support, such matters will be more easily resolved.

² Institute of Financial Services (2006), "Customer Value—Is there an information deficit?"

► www.businessobjects.com

For a complete listing of our sales offices, please visit our web site.

Business Objects owns the following U.S. patents, which may cover products that are offered and licensed by Business Objects: 5,555,403; 6,247,008 B1; 6,578,027 B2; 6,490,593; and 6,289,352. Business Objects and the Business Objects logo, BusinessObjects, Crystal Reports, Crystal Enterprise, Crystal Analysis, WebIntelligence, RapidMarts, and BusinessQuery are trademarks or registered trademarks of Business Objects SA or its affiliated companies in the United States and other countries. All other names mentioned herein may be trademarks of their respective owners. Copyright © 2006 Business Objects. All rights reserved.

