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Document Type: Book Chapter

Title of book: Cases in Cost Management A Strategic Emphasis (3rd Edition)

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Chapter Title: Case 1 American Investment Management Services (AIMS)

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Year: 2006

Publisher: South-Western, Cengage Learning

Place of Publishing: United States of America

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American Investment Management Services (AIMS)

Kim Davis, Executive Vice President of AIMS, sat in her 43rd floor corner office overlooking the Manhattan skyline, reflecting on the challenges facing the investment services business in 2000. Profits had come easily during the longest economic expansion of the century. However, signs of weakness in the economy, financial market volatility, intense competition for high net worth customers, and the proliferation of complex technology-dependent products were all making her life much more complicated. AIMS had recently invested in new analytic tools to help think more strategically about its operations and customers. Kim wondered how much the new analytic approach would really impact business decision-making. Was intensive customer segment analysis a real opportunity or just another "shot in the dark?"

AIMS is one of the larger investment services providers in the U.S., approaching \$500 billion in assets in 2000. Of this total, a little more than half was in mutual funds and the balance in brokerage accounts. This case deals with customer profitability assessment for AIMS' 3.9 million households, up from 1.8 million in just four years. Until 1999, AIMS had no system for measuring the profitability of any specific customer.

SEGMENTATION

AIMS spanned two separate and very different product lines (mutual funds and full-line brokerage services), but that was only one element of the complexity it faced. In addition to this product complexity, it also spanned three distinct "distribution channels" (Call Centers, Full Service Branches, and E-business), and a complex array of customers with diverse asset holdings, trading patterns, investment objectives and service requirements. There was no particularly sharp focus on what kind of households to add. The basic idea was high wealth, but that was not pushed exclusively at all. Basically, AIMS wanted to do business with the same 2 million American households (over \$1 million in invested assets) that 21 other major financial services firms were pursuing.

In 1999, AIMS introduced segment analysis, starting with a four-way segmentation that mixed three different dimensions: asset holdings, trading activity and age (as a proxy for investment objectives). The first segment was any household with more than \$500,000 in assets under management at AIMS ("High Net Worth," or "HNW"). Failing this test, the second segment was households trading more than 36 times in 1998 ("Active Traders," or "AT"). Failing this test as well, the third segment was households where the principal customer was already retirement age (60 years old). Finally, customers failing all three of these tests comprised the fourth segment—all other, termed "Core" customers. "Core," with more than 70% of all households, was the largest segment.

The primary role of any segmentation is to facilitate analysis leading to management actions tailored to the specific needs of defined customer subgroups. No particular segmentation is ever beyond dispute. Whatever approach is chosen necessarily emphasizes some distinctions and de-emphasizes others. But, the AIMS segmentation was particularly contentious on two grounds: 1) it segmented current customers rather than a market. It is as if Procter & Gamble were to segment the detergent market based on how many pounds of *Tide* are purchased; 2) the sequence specific classification scheme meant that labels could be misleading: for example, the segment Active Trader applies only to households which are not each HNW. And, "Retiree" applied only to households which were not each HNW or AT.

FINANCIAL RESULTS

As shown in Exhibit 1, AIMS did quite well in 1999. Net margin after tax was about \$156 million on an underlying equity investment of about \$625 million. But, 1999 represented the height of the prolonged bull market. The year 2000 was projected to be much less bullish, and most Wall Street observers envisioned the next few years to be much less rosy than the previous ten.

Even in 1999, performance was not consistent across all the customer segments. Pre-tax margin ranged from a high of 48% for HNW, to only 6% for Retirees and minus 4% for Core.

The revenue breakdown across segments in Exhibit 1 is based on actual identification with individual customers. The expense breakdown starts with an annual "unit cost" study that uses "Activity-Based Costing" (ABC) principles. The study first assigned all operating costs from the General Ledger to specific processes or "activities." Then, the activity costs were divided by throughput measures for each activity, to create "cost per unit of activity" for each sub-stage of each process. This process is illustrated in Exhibit 2 for estimated costs for 2000. Individual unit costs were then multiplied by throughput totals for each segment and aggregated to provide total expenses per segment as shown in Exhibit 1, a report format which was new at AIMS in 1999.

THE CUSTOMER/PRODUCT PROFITABILITY INITIATIVE

As a management report, Exhibit 1 was too aggregated to identify actionable issues. In 2000, AIMS undertook a project to take customer/product profitability reporting down to the individual household level to provide more useable, timely, and integrated information for decision-making. The new system combined unit costs from the annual ABC study with current actual household activity and attributes (e.g., products held, services used, number of trades, number of rep-assisted phone calls) extracted from the Marketing Database to generate profitability by household. The data then were exported into easily queried online analytical processing (OLAP) "cubes." OLAP cubes allow profitability analysis of the intersections among customer attributes, product/service attributes, and channels of distribution.

Exhibit 2, which illustrates the first step in this new system (unit costs across processes), is highly simplified for purposes of the case. As shown, a "driver" was chosen to proxy the activity in each process—telephone calls as the driver of activity in the Call Center, for example. Next, a count was made of the total estimated units of the activity for 2000 for each driver—74.1 million calls for the Call Center, for example. Finally, the total cost for the process was divided by the total activity count to calculate cost per unit of activity for that process.

Some of the assignments of costs to activities and some of the activity measures are "soft," but the activity costs tagged to individual households based on actual household activity are conceptually plausible and at least directionally correct. Similarly, product-specific and service-specific revenues are driven down to a household level. Household profitability calculations are thus based on actual asset holdings, fee-based services consumed and activity usage. The actual system in use allows for 11 categories of customer revenue and 70 categories of process cost.

Conceptually, Exhibit 2 represents "long-run average cost" for each activity. It does not attempt to portray marginal or incremental cost because it is not intended for use in short-run cost-volume-profit (CVP) analyses. Since very little cost at AIMS is variable with short-run volume fluctuations anyway, short-run CVP analysis is really just based on revenue changes.

Almost all costs are "step costs" which go up (or down), in chunks as capacity is added to (or deleted from) the system. In a business as fast-growing as AIMS has been in recent years, capacity is typically being added every year in many places across the process value chain ahead of usage requirements. Thus, there is almost always excess capacity in the system. And, the extent of excess capacity varies across processes, depending on where growth has been fastest and where recent expansions have been made. The analysis in Exhibit 2 divides current cost by current throughput to calculate unit cost. The analysis thus charges any excess capacity to the current users of the process. This is debatable, conceptually, but is not recognized as a practical problem at AIMS.

The expense base grew substantially faster than throughput volume between 1995 and 1999, in anticipation of even greater future growth. In 1995, there was about 10% excess capacity (on average) in the operating expense base. Capacity grew at a compound rate of about 26% from 1995 to 1999, versus households growth at about 21%. As a result, excess capacity in 1999 was a much larger percentage of the expense base, across branches, the call center, on-line activity, transactions processing and account maintenance activity. Kim wondered how much of operating capacity was devoted to unprofitable customers.

THE SEGMENTATION REFINEMENT INITIATIVE

Another new initiative in 2000 to enhance customer profitability analysis involved further refining the segmentation. The goal was to better identify customer clusters that would be responsive to specific managerial actions. Kim Davis was chairing the task force coordinating this effort. The primary four-way segmentation was expanded to 11 categories as shown below.

High Net Worth ($\geq$ \$500,000 of assets under management)

1. (16,000 Households) > \$2,000,000 in assets under management
2. (141,000 Households) - \$500,000 to \$2,000,000

Active Traders ($\geq$ 36 trades per year)

3. (9,000 Households) - more than 200 trades
4. (12,000 Households) - 60 to 200 trades
5. (19,000 Households) - 36 to 60 trades

Retirees

6. (262,000 Households) - \$100,000 to \$500,000 in assets under management
7. (607,000 Households) < \$100,000

Core

8. (426,000 Households) - \$100,000 to \$500,000 in assets under management
9. (1,762,000 Households) - "Boomers" (40 to 59 years of age)
10. (434,000 Households) - "Young Professionals" (under 40 years of age)
11. (192,000 Households) - All Other, including employees

CUSTOMER PROFITABILITY ANALYSIS

As noted earlier, although the company was very profitable in 1999 as the ten-year bull market continued, the senior management group was concerned about the tremendous range of profitability across customer segments and about the potential for substantial profit erosion when overall markets slowed down, as was widely anticipated over the next few years. Kim challenged the management team to analyze customer mix carefully to identify problem areas and potential corrective actions.

One new management report now being produced each quarter showed income statements for each of the eleven segments broken down by deciles, starting with the most profitable 10% of households and ending with the least profitable 10%. Not surprisingly, the tenth decile in all eleven segments was unprofitable, even before considering any allocation of marketing expenses directed at acquisition of new customers. It was generally agreed that profitability analysis of current households should exclude all expenditures directly related to new households—either "prospecting" expenses in marketing or new account set-up expenses in the back office. When the segmentation was ignored, 75% of the bottom decile customers were in the Core segment and 80% had less than \$100,000 in assets under management.

The wide range of profitability across deciles and segments is summarized in Exhibit 3 for 1999. The aggregate loss on all unprofitable households in 1999 was \$248 million. Obviously, unprofitable households are an important concern for AIMS. Kim Davis wanted to identify the roots of the problem as clearly as possible.

At a casual level of analysis, an unprofitable household suggests one of two responses:

- "Fire" them, because AIMS does not want customers on whom it loses money.
- "Do nothing," because there is usually some compensating business reason for keeping them—the "loss leader" concept. It is possible to construct a long list of reasons to choose to keep any one currently unprofitable household.

At a deeper level of analysis, an unprofitable household suggests that AIMS change its behavior (or the household's behavior) to convert the household to profitable status. In general, there are three ways to convert unprofitable households into profitable ones:

- Raise prices.
- Substitute less expensive for more expensive services.
- Reduce the cost of delivering some (or all) services.

Exhibit 4 presents activity profiles of six individual tenth decile households chosen to highlight management problems across different segments. Each household presented in Exhibit 4 proxies for thousands of households with the same general profile. The activity profile of the "average" account is also shown for comparison.

Preliminary discussions about "improving customer profitability" focused on the 2000 forecast for representative "problem households" such as those depicted in Exhibit 4. Management wanted to consider both revenue enhancement proposals and service containment proposals.

Potential Account Profitability Enhancement Programs

- 1) Charge \$15. per rep-assisted call, over 50 calls per year (22,000 10th Decile Households generate more than 50 calls/year)
- 2) Charge \$.02 per quote over 100 per transaction
- 3) Charge a minimum annual fee on brokerage assets or mutual fund assets of \$200 or 20 BP, whichever is greater (a fee for the right to trade, even when trading is very inactive)
- 4) For customers who generate less than \$560. revenue per year (the average), limit access to branches and customer representatives:
 - charge \$100. for branch consultations
 - route all incoming calls to the automated answering service, bypassing account reps
- 5) Charge \$.75 for automated calls over 300 per year.
- 6) Charge \$1.25 for on-line visits over 10 per transaction.
- 7) Set a minimum balance for all new accounts of \$50,000 of assets invested (perhaps exempt persons under 35 years old), and a minimum balance of \$75,000 of assets invested for persons over 45 years old.

(Research indicated that AIMS only had about 40% of the invested assets of its customers, on average. The other 60% was invested elsewhere.)

Each of these proposals was modeled on charges levied by one or another of AIMS' major competitors, including Charles Squibb, Morton Staley Dan Withers, Merry Lurch, or United Express. Other competitors such as Towncorp Bank or County Road Financial Services approached this problem by limiting their offer of investment advisory services to customers with more than \$1 million in invested assets. A good question was why AIMS bothered at all with low net worth customers when so many of them were unprofitable now and likely to remain so.

QUESTIONS

1. To familiarize yourself with the "ABC" methodology, use the information in Exhibit 2 to confirm that the estimated profitability for 2000 for the "average" household (excluding customer acquisition expenses and assuming the household was not "new" in 2000) is about \$205. This average can be verified based on case facts as follows:
 - i. 2000 Forecast

2. Revenue	\$2,173
3. Costs for Current Customers	<u>(1,382*)</u>
4. Profit for Current Customers \$	791
5. Current Customers	3,880,000
6. <u>Average Profit</u>	<u>\$ 205</u>
 7. *Per Exhibit 2, $1,646-48-216=1,382$
8. What managerial insights about profitability per household can you extract from Exhibit 3?
9. Using the information in Exhibits 2 and 4, calculate loss per household for the six customers profiled. Round your calculations to the nearest dollar.
10. Based on your analysis in questions 2 and 3, propose three specific management actions for each of the 6 households in Exhibit 4 that would substantially improve the profitability. Show the quantitative impact of your proposals.
11. Account profitability is also affected by the cost of excess capacity charged to all active households. Kim noted that if AIMS scaled back to 3,000,000 active households and planned on only a 10% excess capacity reserve (for future growth), a large proportion of cost could be eliminated. Estimate how much of total cost for 1999 could be eliminated, based on "case facts."
12. What are your overall recommendations to top management based on the customer profitability information? ■

EXHIBIT 1					
1999 (\$Millions, rounded)					
	<i>HNW</i>	<i>AT</i>	<i>Retiree</i>	<i>Core</i>	<i>Total</i>
<u>Revenues</u>					
Brokerage Fees	219.6	101.6	53.1	201.4	575.7
Mutual Funds Fees	294.7	8.7	216.6	517.6	1,037.6
	514.3	110.3	269.7	719.0	1,613.3*
<u>Expenses</u>					
<u>Customer Service</u>					
Advisors	7.5	.1	1.5	1.9	11.0
Trading	32.8	14.9	19.0	69.1	135.8
Transfer Agent	14.6	2.0	35.2	114.2	166.0
Call Center	76.7	26.2	58.5	166.6	328.0
Branches	4.7	.8	11.6	38.2	55.3
On-Line	11.9	11.8	5.6	34.4	63.7
Communications	5.1	.2	3.9	12.8	22.0
	153.3	56.0	135.5	437.2	781.9
<u>Customer Retention & Development</u>					
Call Center	14.9	4.8	11.1	25.8	56.6
Branches	6.7	.9	15.9	48.1	71.6
On-Line	2.4	2.1	1.3	7.8	13.6
Promo & Mktg.	18.0	1.8	12.1	34.6	66.5
	42.0	9.6	40.4	116.3	208.5
<u>New Customer Acquisition</u>					
Call Center	1.8	.3	3.0	5.5	10.6
Branches	.1	.1	.7	4.9	5.8
On-Line	.1	.1	.9	6.2	7.3
Promo & Mktg.	21.2	6.7	32.3	120.1	180.3
	23.2	7.2	36.9	136.7	204.0
<u>Administrative Overhead</u>	50.	20.	40.	58.	168.0
Total	268.3	92.8	252.9	748.3	1,362.4
Net Margin (before taxes)	246.0	17.6	16.7	(29.3)	250.9

AIMS's revenue breaks down to an average of 35 basis points on \$296 billion in mutual funds and an average of 30 basis points on \$192 billion in brokerage securities.

EXHIBIT 2				
Unit Cost Calculations (2000 estimate)				
Processes	\$000	Driver	Driver Units	Cost/Unit
Interactions				
Branches	\$65,200	Weighted "Interactions"	875,000	\$ 74.51
Telephones (Call Center)				
Rep Assisted	\$ 574,200	Calls	54,200,000	\$ 10.59
Automated	\$ 56,200	Calls	74,100,000	\$.76
On Line				
Visits	\$ 101,600	Visits	78,133,000	\$ 1.29
Quotes only	\$ 14,400	Quotes	718,200,000	\$.02
Back Office				
Set-up New Accounts	\$ 48,000	New Accts.	2,424,000	\$ 19.80
Account Maintenance	\$ 253,200	Accounts	10,300,000	\$ 24.56
Transactions Processing	\$ 200,100	Weighted "Transactions" (Trades, etc.)	18,475,000	\$ 10.83
Marketing				
Development & Retention	\$ 116,400	% of Revenue	\$2.173 billion	5%
Acquisition	\$ 216,300	New Households	600,000	\$361.
Total	\$1,645,600			

EXHIBIT 3

Profitability Across Segments and Deciles — 1999
Margin Before Customer-Acquisition and Account Set-up Cost (\$millions, rounded)

Segment	Top 10% of Households	Bottom 10% of Households	% of Households that are Unprofitable
HNW			
2M+	\$62.2	\$-3.5	12%
.5 to 2M	96.6	-12.8	14%
AT			
> 200 Trades	14.5	-1.2	11%
60-200	9.4	-2.0	23%
36-60	7.4	-3.2	36%
Retirees			
100-500K	45.4	-7.8	9%
<100K	23.0	-16.1	55%
Core			
100-500K	80.5	-11.9	12%
Boomers	72.0	-45.7	59%
Young Professionals	12.0	-14.5	82%
All Other	21.3	-5.7	56%
Total	\$444.3	\$-124.4	

Recap - 1999

Total pretax margin	\$ 250.9 million (Exhibit 1)
Add back account set-up costs	\$ 40.0 million (Estimate for 1999)
Add back new account acquisition	\$ <u>204.0 million (Exhibit 1)</u>
Total profit before customer acquisition and account setup costs	<u>\$ 494.9 million</u>

The “80/20” Rule

<u>Customer</u>	<u>Pre-Tax Margin</u>
Top 10%	\$ 444 million
Next 40%	\$ 299 million
Next 40%	\$ (124 million)
Bottom 10%	\$ (124 million)
100%	\$ 495 million

EXHIBIT 4

Profiles of Selected "Tenth Decile" Households (2000 estimates)

	HNW		AT	Retiree	Core		The "Average"
	2M+	.5M-2M	(60-200)	(100-500)	YP	Boomer	Customer
Branch Visits	4	12	0	2	1	3	.23
Rep-Assisted Calls	120	200	97	38	43	80	14
Automated Calls	180	300	629	79	73	298	19.1
On Line Visits	70	200	221	34	317	115	20.1
On Line Quotes	5,400	37,600	26,000	57	2,732	24,355	185.1
"Transactions"*	196	27	75	4	16	12	4.8
Number of Accounts	6	5	4	3	2	2	2.66
Assets (000)							
Mutual Funds	460	546	27	74	13	32	91
Investment Securities	3,282	378	116	114	35	26	80
Revenue per Household							
Mutual Fund Fees	1,381	1,415	192	335	120	420	320
Brokerage Fees	1,404	1,586	1,452	155	275	269	240
Revenue-Average Basis Points							
Mutual Fund Fees	30	26	71	45	92	131	35
Brokerage Fees	4	42	125	14	79	103	30

*Including trades for which AIMS charged an average of \$30. (through a broker) or \$16. (on-line). It should be clear that many transactions are not trades and thus are not revenue producing (name changes, address changes, dividend payments, or stock splits, for example).