PINPOINTING PROFITABILITY THROUGH AN ACCOUNTING INFORMATION SYSTEM

by Steven M. Flory and Robert Welker

Owner-managers of the smaller retail establishments operating in a competitive product market historically have tended to be sales-oriented, and have not paid close attention to costs. This focus is not surprising because in most cases these owner-managers have had most of their experience in sales, rather than production or finance. Moreover, until recent years costs have been relatively predictable, so that the sales effort has been the factor having the greatest influence on profits. Rising overhead costs and decreasing profit margins created by the recent high inflation have brought about an erosion of profits in stores of this type. The result has been a slow but steady rise in the proprietors' interest in controlling costs.

One sales-promotion method used by many retail establishments is to carry certain products as traffic builders for their primary products. Often, these secondary products have even been carried at a loss to the store. Traffic builders, however, have been one of the product areas hardest hit by the inflationary cost spiral. Once inexpensive extra services offered to customers, they have become, in many cases, dispensible luxuries.

To meet the cost rise, store owners should begin a program aimed at effectively controlling auxilliary product lines on a more coordinated basis, but without cutting back appreciably on the number of lines offered to customers. In other words, the full-service concept is still important, but it is now becoming more essential for all revenue-generating products and services to carry a greater share of their operating costs. More effective control involves an expansion of the amount and variety of information that a store must accumulate on its product lines. One approach for organizing this information is to categorize asset, revenue, and expense accounts by product line, using a concept called profit-center accounting. The use of a profit-center approach to record-keeping allows the owner-manager to shift away from the operating concept, in which certain segments of the business are expected to lose money in order to support the other sales areas.

Establishing Profit Centers

A profit center is a division or segment of the business that is treated, basically as an independent unit for purposes of measuring the revenue and expenses generated by that unit. The idea of the profit-center approach originated with the larger corporations and has been widely used within that sector. However, the most important prerequisite for establishing a profit-center accounting system is the intent of management or owners to do so, and not the size of the business. The benefits of profit-center accounting are certainly available to any size business that elects to implement this approach. By updating revenue and expenses in each profit segment of the business, an owner-manager has an opportunity to not only pinpoint those segments that are not performing up to expectations but also to do so on a more timely basis.

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The example of a medium-size, full-line music store may be used to illustrate the kind of information system that is required to implement profit-center accounting. The focal point of the sales effort in these stores is in the piano and organ lines, because of the relatively large sales-dollar inflow and markup on these items. Other sales lines, such as records, sheet music, and music instruction, are generally maintained as traffic builders. The music stores are unique in the sense that the need to control product lines has been compounded by both an expansion in variety of items sold and a shortened obsolescence period of sheet music and record inventories.

The profit centers of a music store might be defined by the following product departments: pianos, organs, guitars and band instruments, sheet music, and records. For discussion purposes in this article, the first three departments are treated as primary products and the last two are traffic builders. A department must be viewed as a profit center even if it is a traffic builder that is not expected to make a profit. The profit-center approach will assist in minimizing the loss, and possibly help to transform the problem product into a profitable one. Moreover, the knowledge of how much a product is costing as a traffic builder should be of value in appraising the merits of carrying it solely as a sales promotion item for the primary products.

Structuring the Information System

The current chart of accounts of the music store must be regrouped according to profit centers so that the contribution of each to profit can be determined. This process involves analyzing all costs to determine those which directly relate to each product line.

A suggested chart of accounts is listed in Exhibit I for an average size, full-service music store. The balance sheet and income statement classifications follow a commonly utilized numbering plan:

100-199	Assets
200-299	Equities (Liabilities and Owner's Capital)
300-399	Revenue
400-499	Expenses

The store's product lines and common costs are keyed by a letter that preceeds the account numbers. For example, A404 represents sales commissions expense that is incurred directly for the benefit of the piano department.

Two kinds of common costs (costs that are necessary for all the products) are identified. The F group represents the costs to be allocated to each product line in order to evaluate the effectiveness of that particular profit center. Certain costs that should not be allocated are included along with the general asset and equity accounts in the G group. The test for inclusion of cost in these groups is as follows:

(1) Is the cost necessary to produce all products rather than one particular product? If the answer to this question is yes, then the cost should be classified as either F4xx or G4xx. If it is no, then the cost should be directly traced to the identified product to which it pertains.

(2) If a product line is eliminated, can the cost of productive services be reduced or these services be used more effectively for other products? If so, the cost is one which should be allocated to the product lines and should be classified as F4xx. If not, the cost should not be allocated and should be classified as G4xx.

EXHIBIT I

Chart of Accounts

A. Pianos
- 100 Inventory—new
- 101 Inventory—used
- 102 Inventory—accessories
- 103 Inventory—parts
- 300 Sales—new
- 301 Sales—used
- 302 Sales—accessories
- 303 Sales—repairs
- 304 Sales returns and allowances
- 305 Sales discounts
- 400 Cost of goods sold—new
- 401 Cost of goods sold—used
- 402 Cost of goods sold—accessories
- 403 Cost of repair contracts
- 404 Sales commissions
- 405 Supplies used
- 406 Advertising
- 407 Demonstrator expense
- 408 Delivery expense
- 409 Freight-in

B. Organs
- 100 Inventory—new
- 101 Inventory—used
- 102 Inventory—accessories
- 103 Inventory—parts
- 300 Sales—new
- 301 Sales—used
- 302 Sales—accessories
- 303 Sales—repairs
- 304 Sales returns and allowances
- 305 Sales discounts
- 400 Cost of goods sold—new
- 401 Cost of goods sold—used
- 402 Cost of goods sold—accessories
- 403 Cost of repair contracts
- 404 Sales commissions
- 405 Supplies used
- 406 Advertising
- 407 Demonstrator expense
- 408 Delivery expense
- 409 Freight-in

C. Guitars and Band Instruments
- 100 Inventory—new
- 101 Inventory—used
- 102 Inventory—parts
- 103 Inventory—accessories
- 104 Display fixtures
- 105 Display fixtures—accumulated depreciation
- 300 Sales—new
- 301 Sales—used
- 302 Sales—accessories
- 303 Sales—repairs
- 304 Sales returns and allowances
- 305 Sales discounts
- 400 Cost of goods sold—new
- 401 Cost of goods sold—used
- 402 Cost of goods sold—accessories
- 403 Cost of repair contracts
- 404 Sales commissions
- 405 Supplies used
- 406 Advertising
- 407 Demonstrator expense
- 408 Delivery expense
- 409 Freight-in
- 410 Depreciation of display fixtures

D. Sheet Music
- 100 Inventory
- 101 Display fixtures
- 102 Display fixtures—accumulated depreciation
- 300 Sales
- 301 Sales returns and allowances
- 302 Sales discounts
- 400 Cost of goods sold
- 401 Sales commissions
- 402 Obsolescence and damage
- 403 Freight-in
- 404 Depreciation of display fixtures

E. Records
- 100 Inventory
- 101 Display fixtures
- 102 Display fixtures—accumulated depreciation
- 300 Sales
- 301 Sales returns and allowances
- 302 Sales discounts
- 400 Cost of goods sold
- 401 Sales commissions
- 402 Obsolence and damage
- 403 Freight-in
- 404 Depreciation of display fixtures
- 405 Advertising

F. Common Costs
- 400 Sales salaries
- 401 Payroll taxes-sales
- 402 Repairs and maintenance—autos and trucks
- 403 Property taxes—inventory
- 404 Insurance—inventory

G. General Accounts
- 100 Cash
- 101 Petty Cash
- 102 Accounts receivable—trade
- 103 Accounts receivable—other
- 104 Notes receivable—trade
- 105 Notes receivable—other
- 106 Supplies inventory
- 107 Repair equipment
- 108 Land
- 109 Building
- 110 Building—accumulated depreciation
- 111 Furniture
- 112 Furniture—accumulated depreciation
- 113 Autos and trucks
- 114 Autos and trucks—accumulated depreciation
- 115 Leasehold improvements
- 116 Leasehold improvements—accumulated depreciation
- 200 Accounts payable—trade
- 201 Accounts payable—other
- 202 Notes payable—trade
- 203 Notes payable—bank
- 204 Notes payable—mortgage
- 205 Deferred service contract
- 206 Advances from customers
- 207 Accrued payables—miscellaneous
- 208 Sales taxes collected
- 225 Owners' capital
- 400 Salaries and wages—nonsales
- 401 Payroll taxes—nonsales
- 402 Repairs and maintenance—building and fixtures
- 403 Property taxes—land and building
- 404 Insurance—building, fixtures, and vehicles
- 405 Depreciation—general asset items
- 406 Advertising—general business
- 407 Utilities
- 408 Telephone
- 409 Postage
- 410 Travel and entertainment
- 411 Legal and accounting
- 412 Supplies used—office
- 413 Dues and subscriptions
- 414 Donations
- 415 Uncollectible accounts
- 416 Interest
- 417 Miscellaneous
- 418 Income Taxes

As an example of this classification procedure, consider the salaries of the sales personnel (account F400). Such employees work in all product-line departments, and thus their salaries should be considered a common cost, rather than being charged entirely to one department. However, the salaries can be allocated to each product line according to the relative sales effort expended. The latter can be estimated on the basis of the average time that it takes to sell each item and the total sales salaries can then be distributed among product lines in proportion to the total number of sales minutes charged to each. An allocation process of this type is shown in Exhibit II.

As another example of the classification procedure, take advertising expense. Certain components of advertising relate directly to each product line and are classified as A406, B406, C406 or E405, according to the product being advertised. General advertising (e.g., an institutional advertisement) which relates to the entire business operation is a nonallocated common cost and is included in the account G406.

Since the focus is now on profit centers, the traditional income statement should be restructured to highlight each center's profit performance. One approach for accomplishing this segmental profit measurement is shown in Exhibit III.

The dollar values supplied for each account in this example are entirely hypothetical. The focus of this statement is on a product's contribution to income. The contribution figure is computed by subtracting both direct costs (given in the 400 accounts for groups A through E) and a product's share of common costs from the F group of accounts.

The contribution to total profit is shown in both dollar amounts and the percentage contribution to total profit. One of the uses that the owner-manager can make of this information is in judging which profit centers, such as (possibly) the record department in this example, are requiring too much sales effort for the amount of revenue provided and may actually be making a negative contribution to the store's income. A decision must then

Exhibit II

ALLOCATION OF SALES SALARIES

Product Line	Units Sold	Estimated Minutes/ Sale	Total Minutes	Allocation Percentage	Total Sales Salaries	Allocation to Product
Pianos	112	50	5,600	10.7%	$50,000	$ 5,350
Organs	42	50	2,100	4.0%	50,000	2,000
Guitar/Band Instruments ..	521	20	10,420	20.0%	50,000	10,000
Sheet Music	4119	3	12,357	23.7%	50,000	11,850
Records	7251	3	21,753	41.6%	50,000	20,800
			52,230	100.0%		$50,000

Exhibit III

PRODUCT LINE INCOME STATEMENT

Piano				
Net Sales (A300-305)			$83,450	
Less: Direct expenses (A400-409)		$33,820		
Allocated Common Costs (F400-404):				
Sales Salaries	$ 5,000			
Other	1,265	7,615	41,435	
Contribution to profit			$42,015	(49.5%)
Organ				
Net Sales (A300-305)			$64,270	
Less: Direct expenses (B400-409)		$30,150		
Allocated Common Costs (F400-404):				
Sales Salaries	$ 2,000			
Other	835	2,835	32,985	
Contribution to profit			$31,285	(36.9%)
Guitar and Band Instruments				
Net Sales (C300-305)			$55,860	
Less: Direct expenses (C400-410)		$27,640		
Allocated Common Costs (F400-404):				
Sales Salaries	$10,000			
Other	1,775	1,775	39,415	
Contribution to profit			$16,445	(19.4%)
Sheet Music				
Net Sales (D300-302)			$32,642	
Less: Direct expenses (D400-404)		$ 6,750		
Allocated Common Costs (F400-404):				
Sales Salaries	$11,850			
Other	2,240	14,090	20,840	
Contribution to profit			$ 2,802	(3.3%)
Records				
Net Sales (E300-302)			$26,250	
Less: Direct expenses (E400-405)		$11,525		
Allocated Common Costs (F400-404):				
Sales Salaries	$20,800			
Other	1,650	22,450	33,975	
Contribution to profit			$ (7,725)	(-9.1%)
Total Contribution to Profit			$84,822	(100%)

Exhibit III (Continued)

Less: General Expenses (G400-418):		
Salaries and wages—nonsale	$ 6,500	
Payroll taxes—nonsale	732	
Repairs and maintenance building and fixtures	850	
Property taxes—land and building	2,200	
Insurance—building, fixtures and vehicles	1,255	
Depreciation—general asset items	5,840	
Advertising—general bus.	4,500	
Utilities	6,725	
Telephone	850	
Postage	437	
Travel and entertainment	620	
Legal and accounting	1,575	
Supplies used—office	560	
Dues and subscriptions	140	
Donations	500	
Uncollectible accounts	2,250	
Interest	925	
Miscellaneous	275	
Income taxes	21,750	
Total general expense		$58,484
Net Income		$26,338

be made as to the relative value of such a product line in attracting additional customers for other departments vis à vis its negative profit contribution. Additional analysis can be made by computing the contribution of each profit center per dollar of assets that is directly allocated to that profit center (the principal examples being the inventory and display fixtures). The asset totals are computed from the 100 level accounts in each profit center. The resulting contribution to asset ratio can be set up as a trend analysis (as shown in Exhibit IV) in order to compare the relative inventory changes and profit center contribution. Such a trend, for example, might indicate possible inventory buildups which are not offset by an increase in profit contribution.

Conclusion

A profit-center reporting system in a retail business highlights the financial status of each individual product line. Such a system provides the retail manager with an opportunity to analyze carefully all of the financial performance characteristics (both sales and costs) of a particular operation before the information is merged into an overall operating statistic that might obscure many potentially important decision factors. By using a "management-by-exception" approach, a low contribution-to-profit figure or a decreasing contribution-per-asset-dollar would signal the need to review the operations of that particular product line. In this way, small business owner-managers can optimize one of the most crucial restraints on operational effectiveness—their time.

Exhibit IV
PRODUCT LINE CONTRIBUTION ON DIRECT INVESTMENT

	19X7	19X6	19X5	19X4
1. Pianos				
Contribution	$42,015	$40,500	$36,250	$38,560
Investment	87,000	88,400	85,300	90,000
Contribution/ Investment	48.3%	45.8%	42.5%	42.8%
2. Organs				
Contribution	$31,285	$38,500	$32,000	$30,500
Investment	80,200	95,000	90,700	85,750
Contribution/ Investment	39 %	40.5%	35.3%	35.6%
3. Guitar and Band Instruments				
Contribution	$16,445	$14,700	$20,650	$18,600
Investment	46,800	45,000	52,750	50,250
Contribution/ Investment	35.1%	32.7%	39.1%	37.0%
4. Sheet Music				
Contribution	$ 2,802	$ 3,507	$ 2,265	$ 2,804
Investment	10,572	13,400	9,350	9,870
Contribution/ Investment	26.5%	26.2%	24.2%	28.4%
5. Records				
Contributions	$ (7,725)	$ (1,350)	$ 765	$ 1,304
Investment	15,800	12,450	13,800	11,475
Contribution/ Investment	-48.9%	-10.8%	5.5%	11.4%