MEASURING CUSTOMER & PRODUCT PROFITABILITY WITHIN FINANCIAL INSTITUTIONS

Michigan Association of CPAs

Financial Institutions Conference

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Brad is a Consulting Manager in the Financial Services Industry (FSI) group. He is responsible for managing financial institution engagements within the FSI group that pertain to regulatory compliance, enterprise risk management and internal audit.

Professional Experience:

- Provides financial and business consulting services to financial institutions including:
  - Banks
  - Credit Unions
  - Credit Union Service Organizations
  - Mortgage Companies
- Extensive experience in providing regulatory compliance, corporate governance, and enterprise risk management consulting services that support financial institutions in assessing and addressing risks.
- Advises financial institutions on risk management strategies within the risk areas of commercial and consumer credit, operational, market sensitivity, liquidity, legal and reputational and internal control improvements.
- Extensive experience working with institutions under regulatory corrective action in issue remediation.
- Extensive experience with complex institutions in the areas of economic capital modeling, treasury, hedging, securitization, lending and commercial credit.
- Prior to joining the firm, Brad worked for nearly a decade at the Federal Reserve Bank of Chicago where he was responsible for the examination of banking organizations ranging from community banks to large complex international banks.

Background:

- Bachelor of Science in Business Administration with a Finance concentration from Olivet Nazarene University
- Federal Reserve Board of Governors Commissioned Bank Examiner

Active and Prior Professional Memberships Include:

- *Member* - Global Association of Risk Professionals (GARP)
- *Member* - Professional Risk Managers' International Association (PRMIA)
- *Member* - Michigan Bankers Association (MBA)
- *Member* - Michigan Association of Community Bankers

Douglas T. Hicks, CPA, CMC
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Douglas T. Hicks, CPA, CMC is President of D.T. Hicks & Co., a consulting firm concentrating on the decision costing needs of small and mid-sized organizations. Since 1985, Doug has worked with nearly two hundred businesses to develop cost-effective methods for developing the accurate and relevant cost information they need to lead them into more profitable future. D.T. Hicks & Co. has partnered with UHY Advisor's Financial Services Industry group to provide decision costing solutions to banks, credit unions, mortgage and finance companies.

Professional Experience:

- "Activity-Based" client organizations range from $2 million to over $3 billion in annual sales and have included firms in health care, packaging, distribution, printing, and marketing services as well as banking, automotive, aerospace, food, furniture, heavy duty equipment, and other industries.

- Authored articles for a wide variety of professional and trade periodicals including *Journal of Accountancy, Cost Management, ActionLine, Plastic Technology, Modern Casting, Precision, Printing Manager, Manufacturing Engineering, Leadership Excellence*, and *Management Accounting*.

- Author of *Activity-Based Costing for Small and Mid-Sized Businesses: An Implementation Guide* (1992) and *Activity-Based Costing: Making it Work for Small and Mid-Sized Companies* (1998) which have had combined worldwide sales of 15,000 units for publisher John Wiley & Sons.

- Before establishing his firm, he accumulated over fifteen years of financial and management accounting experience, twelve of those years in industry.

Background:

- President of D. T. Hicks & Co. established in 1985.
- Financial Executive at Kelsey-Hayes Company and Hayes-Albion Corporation
- Bachelor of Science in Accounting from University of Michigan – Dearborn
- In 1998, he was selected the IMA's *Instructor of the Year*, an award based on the results of course evaluations turned in by conference and seminar participants.
- In 1997, he received the University of Michigan – Dearborn Alumni Association's *Professional Growth and Scholarship Award* for his work in advancing modern costing concepts.

Active and Prior Professional Memberships Include:

- *Member* – Michigan Association of CPAs
- *Member* – Institute of Management Accountants
- *Member* – Institution of Management Consultants

BUSINESS PORTFOLIO MANAGEMENT

Investment Vehicle Identification	Amount	Estimated Return %	Estimated Return $
Investment A	$250,000		
Investment B	$250,000		
Investment C	$250,000		
Investment D	$250,000		
Investment E	$250,000		
Investment F	$250,000		
Investment G	$250,000		
Investment H	$250,000		
Investment I	$250,000		
Investment J	$250,000		
Total	$2,500,000	15.0%	$375,000

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BUSINESS PORTFOLIO MANAGEMENT

Investment Vehicle Identification	Amount	Estimated Return %	Estimated Return $
Investment A	$250,000	4.2%	$10,500
Investment B	$0		$0
Investment C	$250,000	12.3%	$30,750
Investment D	$0		$0
Investment E	$250,000	3.9%	$9,750
Investment F	$0		$0
Investment G	$0		$0
Investment H	$0		$0
Investment I	$250,000	3.6%	$9,000
Investment J	$0		$0
Total	$1,000,000	6.0%	$60,000

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BUSINESS PORTFOLIO MANAGEMENT

Investment Vehicle Identification	Amount	Estimated Return %	Estimated Return $
Investment A	$250,000	4.2%	$10,500
Investment B	$250,000	29.7%	$74,250
Investment C	$250,000	12.3%	$30,750
Investment D	$250,000	22.9%	$57,250
Investment E	$250,000	3.9%	$9,750
Investment F	$250,000	20.4%	$51,000
Investment G	$250,000	15.7%	$39,250
Investment H	$250,000	23.4%	$58,500
Investment I	$250,000	3.6%	$9,000
Investment J	$250,000	13.9%	$34,750
Total	$2,500,000	15.0%	$375,000

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BUSINESS PORTFOLIO MANAGEMENT

Investment Vehicle Identification	Amount	Estimated Return %	Estimated Return $
Investment A	$0		$0
Investment B	$250,000	29.7%	$74,250
Investment C	$0		$0
Investment D	$250,000	22.9%	$57,250
Investment E	$0		$0
Investment F	$250,000	20.4%	$51,000
Investment G	$0		$0
Investment H	$250,000	23.4%	$58,500
Investment I	$0		$0
Investment J	$0		$0
Total	$1,000,000	24.1%	$241,000

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PREMISE

- Financial institutions' operating costs <u>are not</u> a simple function of loan balance, interest cost or revenue.

- Financial institutions' operating costs <u>are</u> a function of the activities required to raise funds and deploy those funds profitably.

IMPACT OF OPERATING COST ON PROFIT

ROA CALCULATOR

MACPA National Bank

Example Loan Amount		$1,000,000	
Net Interest Margin		4.50%	$45,000
Loan Loss Provision		0.50%	$5,000
Operating Cost		2.00%	$20,000
Net Income Percentage		2.00%	$20,000
Taxes @	34.0%	0.68%	$6,800
Return on Asset (ROA)		1.32%	$13,200
After-Tax Net Income		$13,200	

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IMPACT OF OPERATING COST ON PROFIT

ROA CALCULATOR

MACPA National Bank

Example Loan Amount		$1,000,000	
Net Interest Margin		4.50%	$45,000
Loan Loss Provision		0.50%	$5,000
Operating Cost		2.50%	$25,000
Net Income Percentage		1.50%	$15,000
Taxes @	34.0%	0.51%	$5,100
Return on Asset (ROA)		0.99%	$9,900
After-Tax Net Income		$9,900	
Change in ROA (Basis Points)		(0.33)	
Change in After-Tax Net Income		($3,300)	

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IMPACT OF OPERATING COST ON PROFIT

ROA CALCULATOR

MACPA National Bank

Example Loan Amount	$1,000,000	
Net Interest Margin	4.50%	$45,000
Loan Loss Provision	0.50%	$5,000
Operating Cost	1.50%	$15,000
Net Income Percentage	2.50%	$25,000
Taxes @ 34.0%	0.85%	$8,500
Return on Asset (ROA)	1.65%	$16,500
After-Tax Net Income	$16,500	
Change in ROA (Basis Points)	0.33	
Change in After-Tax Net Income	$3,300	

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IMPACT OF OPERATING COST ON PROFIT

ROA CALCULATOR

MACPA National Bank

Example Loan Amount		$1,000,000		$10,000,000	
Net Interest Margin		4.50%	$45,000	4.50%	$450,000
Loan Loss Provision		0.50%	$5,000	0.50%	$50,000
Operating Cost		2.00%	$20,000	2.00%	$200,000
Net Income Percentage		2.00%	$20,000	2.00%	$200,000
Taxes @	34.0%	0.68%	$6,800	0.68%	$68,000
Return on Asset (ROA)		1.32%	$13,200	1.32%	$132,000
After-Tax Net Income		$13,200		$132,000	

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IMPACT OF OPERATING COST ON PROFIT

ROA CALCULATOR

MACPA National Bank

Example Loan Amount		$1,000,000		$10,000,000	
Net Interest Margin		4.50%	$45,000	4.50%	$450,000
Loan Loss Provision		0.50%	$5,000	0.50%	$50,000
Operating Cost		5.00%	$50,000	0.50%	$50,000
Net Income Percentage		-1.00%	($10,000)	3.50%	$350,000
Taxes @	34.0%	-0.34%	($3,400)	1.19%	$119,000
Return on Asset (ROA)		-0.66%	($6,600)	2.31%	$231,000
After-Tax Net Income		($6,600)		$231,000	

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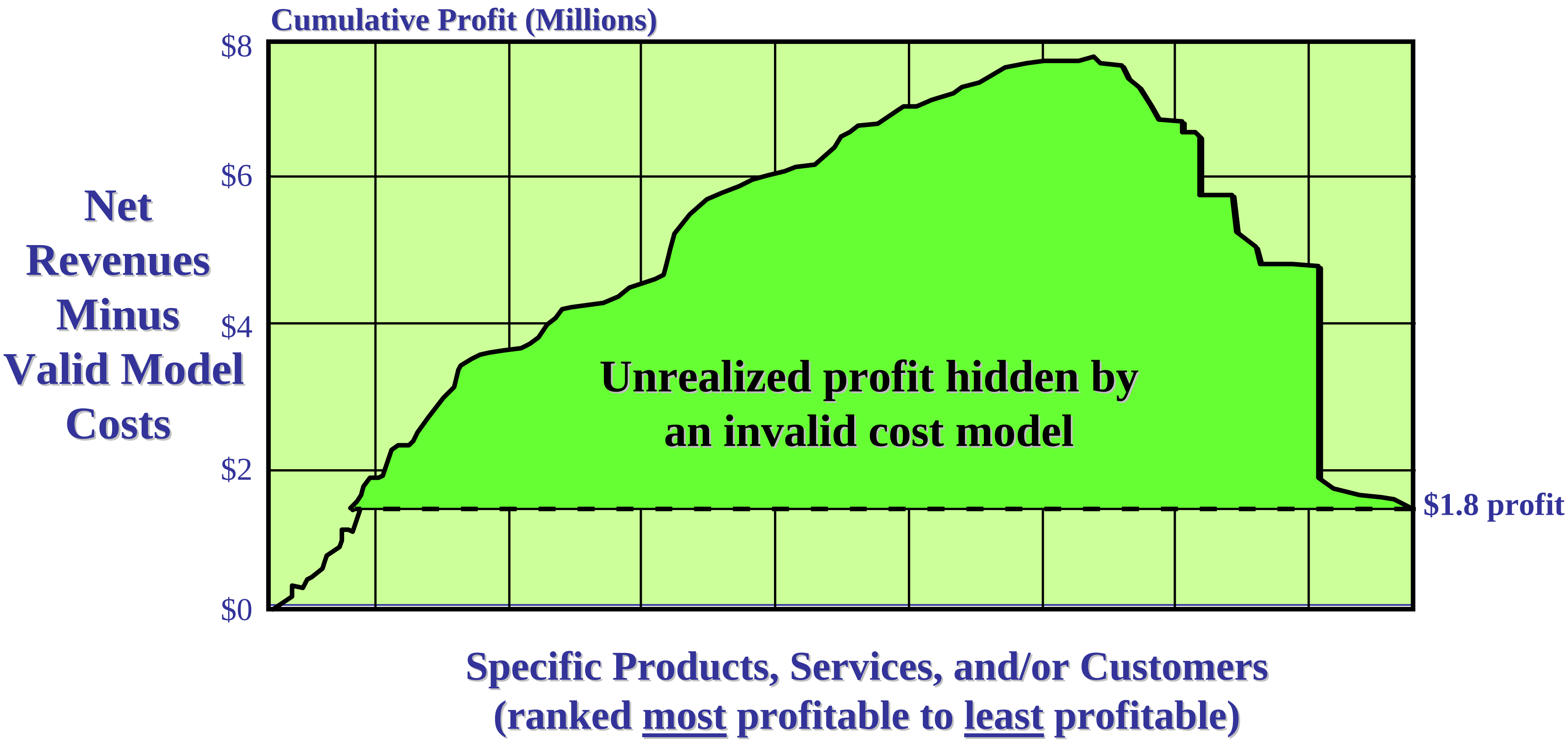
PRODUCT PROFITABILITY



THE SOLUTION

Use the “lens” of activity-based costing to create a valid economic cost model of the financial institution’s operations

Such a model will enable the institution to accurately apply the cost of its business operations to its products and customers

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THE SOLUTION

The objective is not computational virtuosity, it is *insight*…non-obvious knowledge that will lead to better performance

The goal of this cost model is *accuracy* and *relevance* – not precision

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ACTIVITY-BASED COSTING

Activity-Based Costing (ABC) is a "lens" for taking the complex operations of a business enterprise and developing a ***cost model*** that accurately reflects the ***relationships between the company's costs, activities, and products*****.**

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ACTIVITY-BASED COSTING

The purpose of Activity-Based Costing is ***insight***, not calculations.

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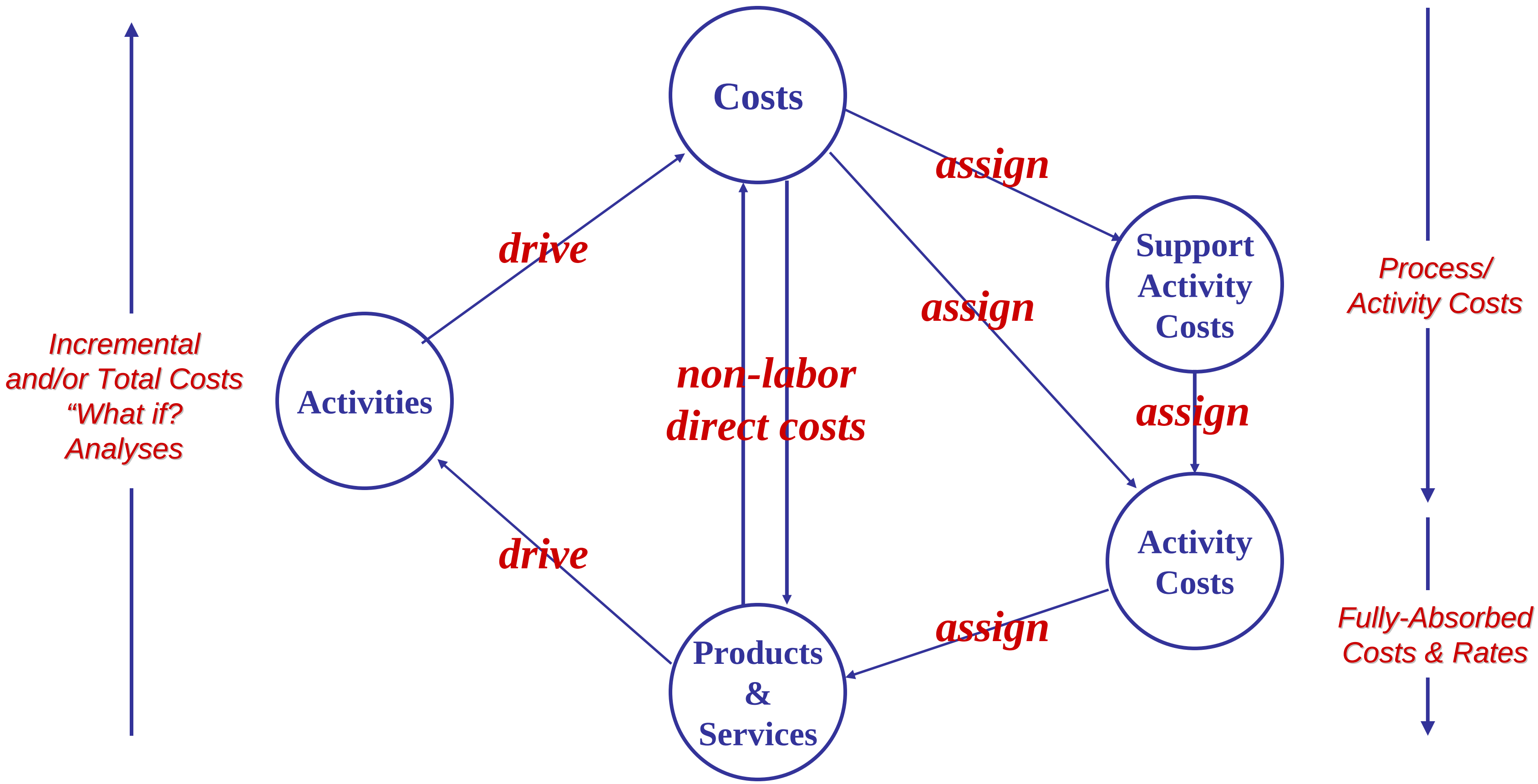
ACTIVITY-BASED COSTING

- Products and services cause activities and those activities cause costs
- Associate costs with the activities that make them necessary and accumulated activity costs with the products or services that make them necessary

BASIC "ACTIVITY-BASED" COST MODEL



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IMPORTANT UNDERLYING PRINCIPLE

The effectiveness of an activity-based costing model or system is more dependent on its **design** than on its **method of implementation** or the **data** used to populate the model or system.

"It is better to estimate the right things than to precisely measure the wrong things."

"It is better to be approximately correct than to be precisely wrong."

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ACTIVITY-BASED COST FLOW

Bank Costs

Bank Cost Objectives

CATEGORIES OF COSTS/ACTIVITIES

- Departmental Activities
- General Fund Raising Activities
- Transaction Fund Raising Activities
- Contractor Direct Costs
- Contractor Direct Cost Support Activities
- Transaction Fund Using Activities
- Market or Customer Support Activities
- Product or Product Line Support Activities
- General and Administrative Activities

CATEGORIES OF COSTS/ACTIVITIES

- Departmental Activities
  - Facilities
  - Human Resources
  - Information Technology
  - Accounting / Finance
  - Legal
  - Branch Operations
  - Marketing
  - Etc.

CATEGORIES OF COSTS/ACTIVITIES

- General Fund Raising Activities
  - Branch Operation and Maintenance
  - ATM “Fleet” Operation and Maintenance
  - FDIC Insurance
  - Brokered Fees

CATEGORIES OF COSTS/ACTIVITIES

- Transactions Fund Raising Activities
  - Paper Deposits/Withdrawals
  - ATM Deposits/Withdrawals
  - Debit Card Transactions
  - Statements
  - ACH Transactions
  - Special Events *

* *Stop payments, overdraft/returns, overdraft/honors, money orders, garnishments, levies*

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CATEGORIES OF COSTS/ACTIVITIES

- Contractor Direct Costs
  - Appraisals
  - Title Searches
  - Coupon Books
  - UCC Filings

CATEGORIES OF COSTS/ACTIVITIES

- Contractor Direct Cost Support Activities
  - Appraisals
  - Title Searches
  - Coupon Books
  - UCC Filings

CATEGORIES OF COSTS/ACTIVITIES

- Transaction Fund Using Activities
  - Closing
  - Credit Analysis / Grading
  - Approval
  - Servicing
  - Collections
  - Retirement

CATEGORIES OF COSTS/ACTIVITIES

- Market or Customer Support Activities
  - Mid-Market Marketing
  - Large Corporate Account Marketing
  - Retail Client Marketing
  - Call Center

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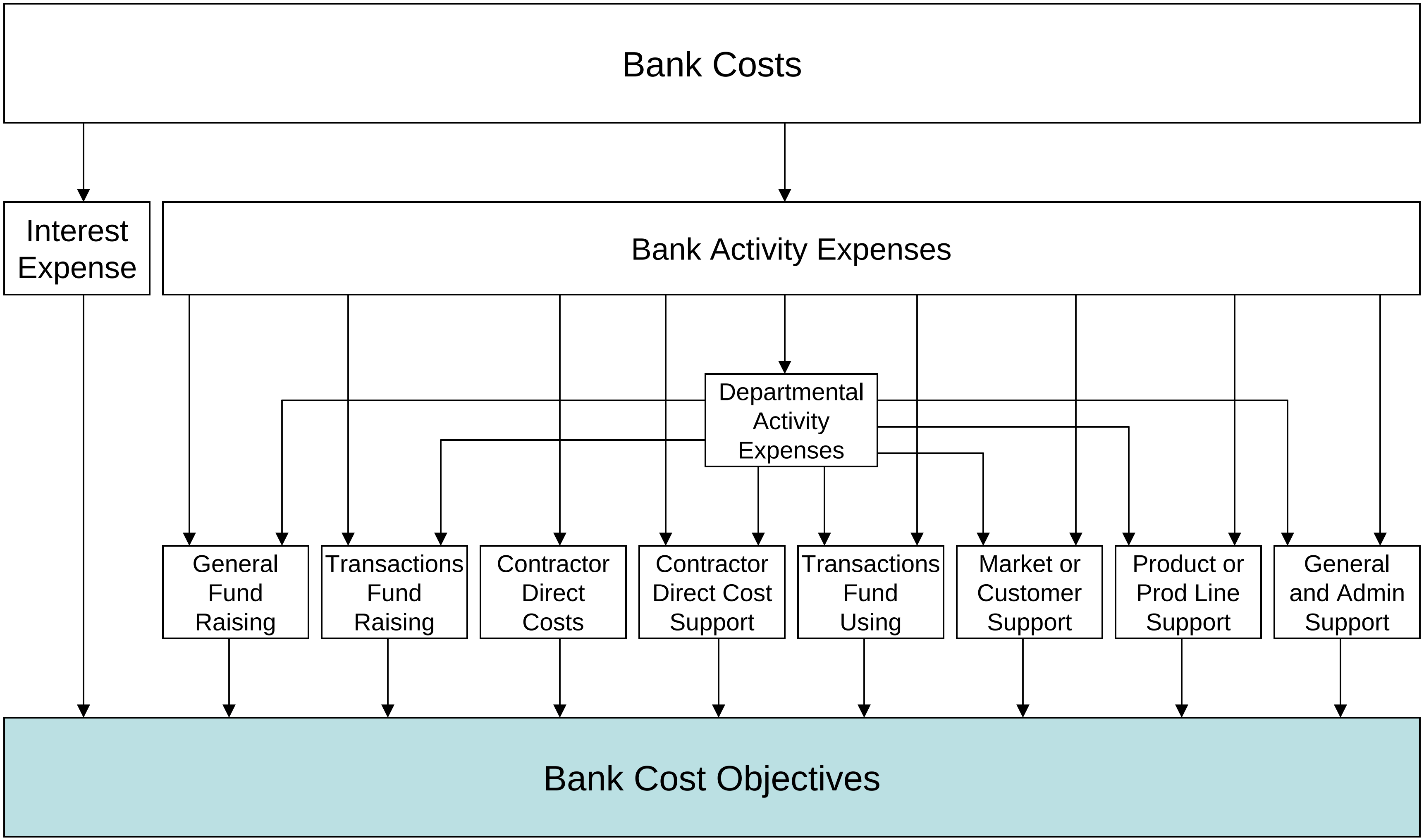
CATEGORIES OF COSTS/ACTIVITIES

- Product or Product Line Support Activities
  - Commercial Real Estate Loans
  - Retail Auto Loans
  - Working Capital Loans
  - Commercial Equipment Loans

ACTIVITY-BASED COST FLOW



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IMPACT OF OPERATING COST ON PROFIT

ROA CALCULATOR

MACPA National Bank

Example Loan Amount		$1,000,000		$10,000,000	
Net Interest Margin		4.50%	$45,000	4.50%	$450,000
Loan Loss Provision		0.50%	$5,000	0.50%	$50,000
Operating Cost					
Depositor Fund Raising/Pct		1.00%	$10,000	1.00%	$100,000
Origniation Amortization/Yr		$5,000	$5,000	$5,000	$5,000
Credit Management/Yr		$3,500	$3,500	$3,500	$3,500
Loan Management/Yr		$2,500	$2,500	$2,500	$2,500
Loan Transaction Support/Yı		$1,000	$1,000	$1,000	$1,000
Net Income Percentage		1.80%	$18,000	2.88%	$288,000
Taxes @	34.0%	0.61%	$6,120	0.98%	$97,920
Return on Asset (ROA)		1.19%	$11,880	1.90%	$190,080
After-Tax Net Income		$11,880		$190,080	

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MEASURING CUSTOMER & PRODUCT PROFITABILITY WITHIN FINANCIAL INSTITUTIONS

- Financial institutions’ operating costs <u>are not</u> a simple function of loan balance, interest cost or revenue.

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MEASURING CUSTOMER & PRODUCT PROFITABILITY WITHIN FINANCIAL INSTITUTIONS

- By applying the “lens” of activity-based concepts, a financial institution can better link the cost of its activities to its products and customers and better understand and manage the profitability of its customer relationships.

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