



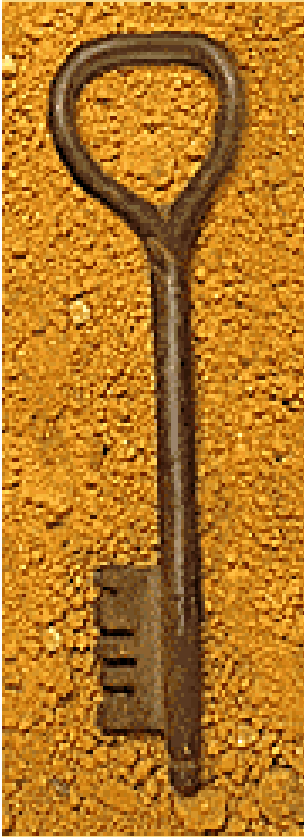
Basic Financial Management For Contractors

Unlocking the Potential



Presented by: **Callahan/Roach & Garofalo**

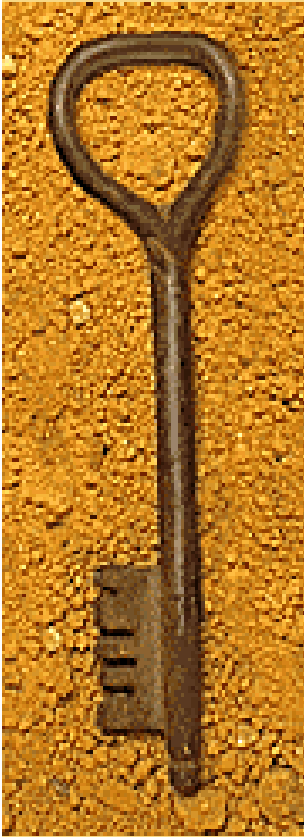
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*“I’ve Never Met
A Contractor
Who Failed
Because of
A lack of
Technical Skills”*

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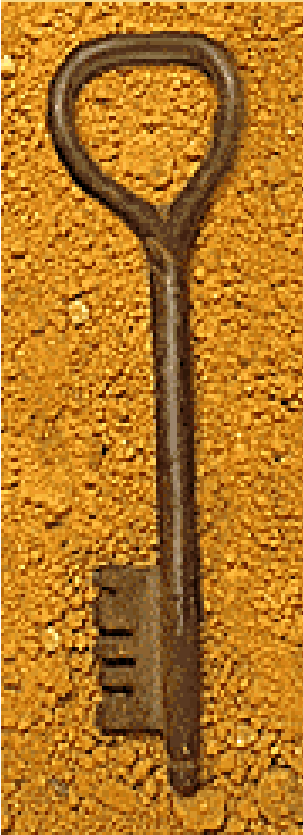
Warm Up Quiz

1. The current assets of the business should always be greater than the current liabilities. **T F**
2. Investing most of your capital in fixed assets (land, buildings, trucks, etc.) is a good business move. **T F**
3. Working capital should be equal to 10% of the company's annual sales. **T F**
4. Current liabilities are debts that must be paid within one year. **T F**
5. Job mark-up is the same as job margin. **T F**

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Guess Your Best



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1. Overhead is calculated as a percentage of:
 - a. Gross margin
 - b. Sales
 - c. Cost of sales
 - d. Budget

2. In order to get 40% Gross Margin on a job you should mark up job cost by:
 - a. 40%
 - b. 66 2/3%
 - c. 80%
 - d. 140%

3. The Balance Sheet does not include:
 - a. Assets
 - b. Liabilities
 - c. Net worth
 - d. Sales

4. The Profit and Loss statement includes:
 - a. Sales
 - b. Cost of sales
 - c. Overhead
 - d. All of the above

5. Bad-debt Expense should never exceed:
 - a. 5% of sales
 - b. 10% of sales
 - c. 1/2% of sales
 - d. 25% of sales



Are you Paying Attention?

- | | |
|--|-----|
| 1. Do you have an annual budget? | Y N |
| 2. Do you know your break-even volume? | Y N |
| 3. Do you have a formal job cost system? | Y N |
| 4. Do you receive monthly financial statements? | Y N |
| 5. Do you use a purchase order system? | Y N |
| 6. Do you have a consistent pricing policy? | Y N |
| 7. Do you know your service department overhead? | Y N |
| 8. Do you project your cash flow needs? | Y N |
| 9. Do you have an adequate line of credit? | Y N |
| 10. Are you satisfied with your company's profitability? | Y N |

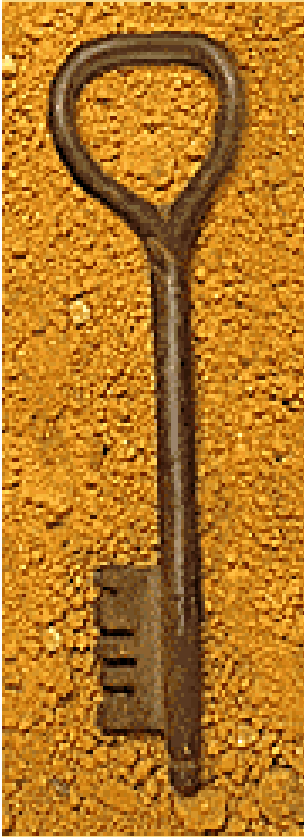
❖ For every \$100,000 of volume, each “no” answer represents \$1,000 of lost net profit.

Example:

$$\begin{array}{r}
 \underline{1,200,000} \text{ (12)} \\
 \text{Volume (units)}
 \end{array}
 \quad
 \begin{array}{c}
 \text{X} \\
 \text{\#of No's}
 \end{array}
 \quad
 \begin{array}{c}
 \underline{5} \\
 \text{\#of No's}
 \end{array}
 \quad
 \begin{array}{c}
 \text{X} \\
 \text{\#of No's}
 \end{array}
 \quad
 \begin{array}{c}
 \underline{\$1000} \\
 \text{\#of No's}
 \end{array}
 \quad
 = \quad
 \begin{array}{c}
 \underline{\$60,000} \\
 \text{Lost Profit}
 \end{array}$$

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Developing Your Financial Statement

What is a Financial Statement?

Balance Sheet:

- ❖ What we own (assets)
- ❖ What we owe (liabilities)
- ❖ What we're worth (net worth)

The Balance Sheet indicates the financial status of a business at a given moment in time.

Income and Expense Statement:

- ❖ What we sold (sales)
- ❖ What we spent (cost of sales+ overhead)
- ❖ What is left (profit or loss)

The Income and Expense Statement indicates that financial transactions of a business over a specific period of time.

What is a Balance Sheet?

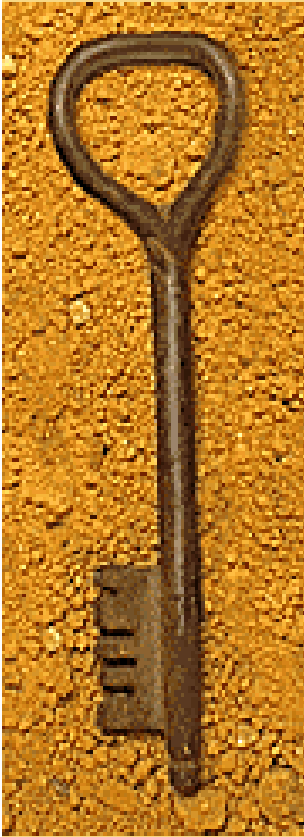
- ◆ **Current Assets** are assets that can be turned into cash within one year. They include Cash, Accounts Receivables, Inventory and Pre-paid Expenses.
- ◆ **Other Assets** are those assets that will not turn into cash within one year. They include Machinery & Equipment, Furniture & Fixtures, Autos & Trucks, Leasehold Improvements and Land & Building (if owned by the Company).
- ◆ **Current Liabilities** are liabilities that the company must pay within one year. They include Accounts Payable, Lines of Credit, Taxes Payable, Service-Agreement Deferred Income and that portion of Notes Payable that are due within the year.
- ◆ **Long-Term Liabilities** are those items that are not payable within one year. They include all payments on Loans, or Mortgage beyond one year.
- ◆ **Reserve for Depreciation** is the amount (allowed by the IRS) to be deducted annually from the purchase price of major items to compensate for wear. Depreciation may be straight-line or accelerated.
- ◆ **Capital Stock** is the amount of money initially invested in the company.
- ◆ **Retained Earnings** are the amount of profits remaining in the company from its beginning.
- ◆ **Net Worth** is the value of the business defined as:
 - Total Assets**
 - Total Liabilities
 - Reserve for Depreciation
 - + Capital Stock
 - + Retained Earnings

What is an Income & Expense Statement

- ◆ **Sales** = The revenue that is generated during a specific period of time (one month or one year or year to date)
- ◆ **Cost of Sales** = the direct costs incurred in completing the work
 - Equipment
 - Materials
 - Direct Labor
 - Commissions
 - Subcontracts
 - Permits
 - Other miscellaneous costs
- ◆ **Gross Margin** = revenues minus Cost of Sales. This is the amount of money remaining to pay for overhead and profit
- ◆ **General & Administrative Expenses (Overhead)** = The costs incurred in running the business. Generally, Overhead is broken into two categories:
 - Fixed Expenses = Those expenses that are the same every period (rent, clerical salaries, etc.)
 - Variable Expenses = Those casts that fluctuate depending on sales revenue (fuel expense, workers compensation, etc.)
- ◆ **Net Operating Profit** = The amount of money that remains (or is lost) after all cost of sales and overhead are calculated.

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Understanding Financial Ratios

Your Banker's View

1. **Banker's don't like Strangers**
2. **Banker's don't like Guesses**
3. **Banker's don't like Surprises**
4. **Banker's like to do business with clients who know their business**
5. **Banker's LOVE to lend money to clients who "don't need it"!!!**

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Liquidity Ratios

GUIDE

Measure your ability to pay bills when due.

1. **Working Capital** = Current Assets – Current Liabilities 10% of Sales

Where Current Assets = Cash, Accounts receivable, Retention, Inventories, Work in Process, and Prepaid Expenses.

Current Liabilities = Those liabilities due this year: Accounts Payable, Notes Payable, Taxes Payable, accrued expenses and billings on uncompleted contracts.

Determines whether the company has adequate liquidity to meet current debts as they come due.

Working capital is used for normal increase in operations and for emergencies. The larger the working capital, the better the company will be able to meet emergencies. Don't expand fixed assets at the expense of the working capital.

2. **Current Ratio** =
$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$
 1.5:1 / 1.8:1

It measures the company's ability to meet current debts when they come due.

3. **Quick Ratio or Acid Test** =
$$\frac{\text{Cash \& Receivables}}{\text{Current Liabilities}}$$
 1:1

More meaningful than current ratio, as inventory plays no role. It shows capacity to meet current debts without selling off inventory or borrowing. Also called "Acid Test Ratio".

4. **Current Assets to Total Assets** =
$$\frac{\text{Current Assets}}{\text{Total Assets}}$$
 .80-.90:1

Important ratio as too many fixed assets in relation to total assets damages liquidity.

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Leverage Ratios

GUIDE

Compare what you have invested in your firm to what Your suppliers and bankers have.

1. **Debt Equity Ratio** =
$$\frac{\text{Total Liabilities}}{\text{Net Worth}}$$
 1:1

General rule is not to have more in Total Liabilities than Net Worth. However, leverage properly utilized allows for better growth.

2. **Current Debt Equity Ratio** =
$$\frac{\text{Current Liabilities}}{\text{Net Worth}}$$
 Small Co. = .66:1
Large Co. = .75:1

If ratio is 1, then the short term creditors have more risk than the stockholders.

3. **Fixed Assets to Net Worth** =
$$\frac{\text{Net Fixed Assets}}{\text{Net Worth}}$$
 Not greater than .33:1

Too much capital should not be tied up in fixed assets.

4. **Total Assets to Net Worth** =
$$\frac{\text{Total Assets}}{\text{Net Worth}}$$
 2:1

A sign of the average total leverage employed by the firm.

Activity Ratios

GUIDE

Measure how well you use the firm's assets.

$$1. \text{ Age of Accounts Receivable } = \frac{\text{Acct's Receivable} \times 365 \text{ days}}{\text{Annual Sales}} \quad \text{30-45 Days}$$

Has effect on total capital requirements. Age depends on strength of credit policy, collection effort and use of discounts, charge cards, and sales financing. Also, builder accounts typically are slow pay. Receivables should be aged 30-60-90 days. Past due amount should not exceed 20% of total receivable.

$$2. \text{ Sales to Receivables } = \frac{\text{Sales}}{\text{Receivables}} \quad \text{8-12 (Times)}$$

$$3. \text{ Average Age of Inventory } = \frac{\text{Average Inventory} \times 365 \text{ days}}{\text{Annual Equip. \& Materials Cost}} \quad \text{45-60 Days}$$

$$4. \text{ Average Age of Accounts Payable } = \frac{\text{Av. Accounts Payable} \times 365 \text{ days}}{\text{Annual E\&M Cost Sales}} \quad \text{30 Days Less than 30, if discounts are available.}$$

Shows to some extent the capitalization of the firm or its credits. A good firm takes discounts, if available.

E&M – Equipment and Materials.

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Activity Ratios (continued)

GUIDE
10
(Times)

$$7. \text{ Working Capital } = \frac{\text{Annual Sales Less Subcontracts}}{\text{Working Capital}}$$

Relates to capitalization of firm and its liquidity. A high turn indicates too little capital. A low turn indicates over-capitalization.

$$8. \text{ Sales to Net Worth } = \frac{\text{Annual Sales}}{\text{Net Worth}} \quad \text{6-10 (Times)}$$

$$9. \text{ Inventory Turnover } = \frac{\text{Average E\&M Cost of Sales}}{\text{Average Inventory at Cost}}$$

or

$$= \frac{365}{\text{Average Age of Inventory}}$$

Measures how well the firm invests in material and equipment. A high turn could mean too many orders. A low turn could indicate wrong buying or over buying.

Guidelines:	Maximum	10	Parts	6
(Turns/Year)	Good	6-8	Floor Plan	5-6
	Minimum	4		

$$10. \text{ Total Asset Turnover } = \frac{\text{Annual Sales}}{\text{Total Assets}} \quad \text{3-7 (depends leverage)}$$

$$11. \text{ Fixed Asset Turnover } = \frac{\text{Annual Sales}}{\text{Net Fixes Assets}} \quad \text{20}$$

$$12. \text{ Accounts Receivable Turnover } = \frac{365}{\text{Age of Receivables}} \quad \text{8-12}$$

Profitability Ratios

GUIDE

1. **Gross Operating Margin** =
$$\frac{\text{Gross Operating Profit}}{\text{Sales}}$$

Determines whether markup procedure covers costs and allows adequate margin to cover expenses and allow for profit.

2. **Operating Income Percent** =
$$\frac{\text{Net Operating Profit Before Taxes}}{\text{Sales}}$$

**5%
Minimum**

3. **Return of Investment** =
$$\frac{\text{Net Profit Before Taxes}}{\text{Net Worth}}$$

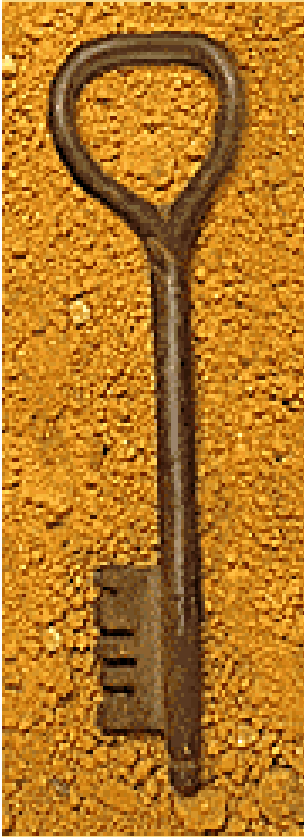
Also called Return of Equity. Ultimate indication of all facts concerning your operation.

4. **Return on Total Assets** =
$$\frac{\text{Net Operating Profit Before Taxes}}{\text{Total Assets}}$$

That ratio is a valid measure of profit and management effectiveness.

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Using Your Financial Statement for Pricing

Determining the Right Price



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FINANCIAL FACTS

Revenue	\$2,130,997
EMSO* Costs (.484)	\$1,039,667
Labor Cost (.106)	\$ 231,000
OH. Costs(.343)	\$ 719,773
Desired Profit (.067)	\$ 140,557

*** Equipment, Material, Subcontract, Other**

Pricing Methods

1. Single Divisor Method
2. Calculated Single Division Method
3. Labor Factor Method
4. Dual Ratio Method

Example Job:

Equipment	\$3080.00
Material	\$1120.00
Labor	\$1027.00
Subcontractor	\$280.00
Other	\$93.00
	<hr/>
Total Cost	\$5600.00

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Single Divisor Method

$$\frac{\text{TOTAL DIRECT COST}}{\text{Some Arbitrary Number}} = \text{Selling Price}$$

Advantages

- *Provides some consistency in pricing method, assuming you are always lucky enough to come up with the “right” arbitrary number.

Disadvantages

- *No recognition of difference between overhead and profit.
- *No recognition of overhead as related to equipment and material vs. direct labor.

Example

$$\frac{\$5600 \text{ (TDC)}}{.7} = \$8000.00 \text{ S.P.}$$

Calculated Single Divisor Method

TOTAL DIRECT COST

$$1.00 - (\text{contracting overhead } \% + \text{desired profit } \%)$$

Advantages

- * Recognizes that overhead must be achieved.
- * Recognizes some desired profit goal.

Disadvantages

- * No recognition of overhead as related to EMSO vs. direct labor.

Example

\$5600 (T.D.C.)

$$1.00 - (.343 \text{ contracting overhead} + .067 \text{ desired profit})$$

\$5600

1.00 - .41

\$5600

.59

= \$9491.53 Selling Price

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Labor Factor Method

$$\frac{\text{Contracting Overhead}}{\text{Contracting Labor}} = \text{overhead factor applied to labor}$$

$$\frac{\text{Other Direct Costs} + \text{DL} + (\text{Direct labor} \times \text{labor factor})}{1.00 - \text{desired profit \%}} = \text{Selling Price}$$

Advantages

- * Recognizes that labor creates MOST overhead

Disadvantages

- * Does not recognize the EMSO creates some overhead.

Example

$$\frac{719,773 \text{ contracting overhead}}{231,000 \text{ contracting labor}} = 3.12 \text{ labor factor}$$

DIRECT LABOR	\$1027.00
X Labor Factor (3.12)	\$3204.24
EMSO Costs	\$4573.00
Total Breakeven	<u>\$8804.24</u>
Desired Net Profit (.933)	\$9436.48

Dual Ratio Method

$$\frac{\text{Labor Cost}}{\text{Total Cost}} \times \frac{\text{Overhead Cost}}{\text{EMSO Cost}} = \text{EMSO Factor}$$

$$\frac{\text{EMSO Cost}}{\text{Total Cost}} \times \frac{\text{Overhead Cost}}{\text{Labor Cost}} = \text{Labor Factor}$$

Advantages

* Accurately recognizes that overhead varies greatly according to the material vs. labor relationship on each job.

Disadvantages

Example

$$\begin{array}{r} 231,000 \\ \hline 1,270,667 \end{array} \times \begin{array}{r} 719,773 \\ \hline 1,039,667 \end{array} = .1258 \text{ EMSO Factor}$$

$$\begin{array}{r} 1,039,667 \\ \hline 1,270,667 \end{array} \times \begin{array}{r} 719,773 \\ \hline 231,000 \end{array} = 2.5494 \text{ Labor Factor}$$

1. Total EMSO Cost	\$4573.00
2. X EMSO Factor (.1258)	\$575.28
3. Direct Labor Cost	\$1027.00
4. X Labor Factor (2.5494)	\$2618.23
5. Total Break Even	\$8793.51
6. ÷ Desired Profit (1.00-.067) =.933	\$ 9424.98

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Why Bother?

The last three methods that we examined yielded selling prices very close to each other.

Calculated Single Divisor	=	\$9491.00
Labor Factor Method	=	\$9436.00
Dual Ratio Method	=	\$9425.00

Why did this occur?

Are all jobs the same?

What happens when the ratios change?

New Job Example

Equipment	\$1667.00
Material	\$1333.00
Labor	\$2333.00
Subcontract	\$200.00
Other	\$67.00
	<hr/>
TOTAL COST	\$5600.00

Pricing Problems

1. Using the New Job Example, calculate the selling price using the Calculated Single Divisor Method. Use the contracting overhead and a desired 6.7% net profit.
2. Using the New Job Example, calculate the selling price using the Labor Factor Method. Use the contracting statement and a desired 6.7% profit.
3. Using the New Job Example, calculate the selling price using the Dual Ratio Method. Use the contracting statement and a desired 6.7% profit.

Labor Factor Method

High Labor Job

Contracting Overhead

= overhead factor

Contracting Labor

applied to labor

Other Direct Costs + DL + (Direct labor x labor factor)

= Selling
Price

1.00 – desired profit %

Advantages

- * Recognizes that labor creates MOST overhead

Disadvantages

- * Does not recognize the EMSO creates some overhead.

Example

719,773 contracting overhead

----- = 3.12 labor factor

231,000 contracting labor

DIRECT LABOR \$2333.00

X Labor Factor (3.12) \$7278.96

EMSO Costs \$3267.00

Total Breakeven \$12,878.96

Desired Net Profit (.933) \$13,803.82

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Dual Ratio Method

$$\frac{\text{Labor Cost}}{\text{Total Cost}} \times \frac{\text{Overhead Cost}}{\text{EMSO Cost}} = \text{EMSO Factor}$$

$$\frac{\text{EMSO Cost}}{\text{Total Cost}} \times \frac{\text{Overhead Cost}}{\text{Labor Cost}} = \text{Labor Factor}$$

Advantages

* Accurately recognizes that overhead varies greatly according to the material vs. labor relationship on each job.

Disadvantages

Example

$$\begin{array}{r} 231,000 \\ \hline 1,270,667 \end{array} \times \begin{array}{r} 719,773 \\ \hline 1,039,667 \end{array} = .1258 \text{ EMSO Factor}$$

$$\begin{array}{r} 1,039,667 \\ \hline 1,270,667 \end{array} \times \begin{array}{r} 719,773 \\ \hline 231,000 \end{array} = 2.5494 \text{ Labor Factor}$$

1. Total EMSO Cost	\$3267.00
2. X EMSO Factor (.1258)	\$410.99
3. Direct Labor Cost	\$2333.00
4. X Labor Factor (2.5494)	\$5947.75
5. Total Break Even	\$11,958.74
6. ÷ Desired Profit (1.00-.067) =.933	\$12,817.51

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One More Time

Last Job Example

Equipment	\$5167.00
Material	\$86.00
Labor	\$280.00
Subcontract	\$0.00
Other	\$67.00
TOTAL COST	<u>\$5600.00</u>

1. Using the above example, calculate the selling price using the Calculated Single Divisor Method. Use the contracting overhead and a desired 6.7% net profit.
2. Using the above example, calculate the selling price using the Labor Factor Method. Use the contracting statement and a desired 6.7% profit.
3. Using the above example, calculate the selling price using the Dual Ratio Method. Use the contracting statement and a desired 6.7% profit.

Labor Factor Method

Low Labor Job

Contracting Overhead

= overhead factor

Contracting Labor

applied to labor

Other Direct Costs + DL + (Direct labor x labor factor)

= Selling
Price

1.00 – desired profit %

Advantages

- * Recognizes that labor creates MOST overhead

Disadvantages

- * Does not recognize the EMSO creates some overhead.

Example

719,773 contracting overhead

----- = 3.12 labor factor

231,000 contracting labor

DIRECT LABOR	\$280.00
X Labor Factor (3.12)	\$873.60
EMSO Costs	\$5320.00
Total Breakeven	<hr/> \$6473.60
Desired Net Profit (.933)	\$6938.48

Dual Ratio Method

$$\frac{\text{Labor Cost}}{\text{Total Cost}} \times \frac{\text{Overhead Cost}}{\text{EMSO Cost}} = \text{EMSO Factor}$$

$$\frac{\text{EMSO Cost}}{\text{Total Cost}} \times \frac{\text{Overhead Cost}}{\text{Labor Cost}} = \text{Labor Factor}$$

Advantages

* Accurately recognizes that overhead varies greatly according to the material vs. labor relationship on each job.

Disadvantages

Example

$$\begin{array}{r} 231,000 \\ \hline 1,270,667 \end{array} \times \begin{array}{r} 719,773 \\ \hline 1,039,667 \end{array} = .1258 \text{ EMSO Factor}$$

$$\begin{array}{r} 1,039,667 \\ \hline 1,270,667 \end{array} \times \begin{array}{r} 719,773 \\ \hline 231,000 \end{array} = 2.5494 \text{ Labor Factor}$$

1. Total EMSO Cost	\$5320.00
2. X EMSO Factor (.1258)	\$670.62
3. Direct Labor Cost	\$280.00
4. X Labor Factor (2.5494)	\$713.83
5. Total Break Even	\$6984.45
6. ÷ Desired Profit (1.00-.067) =.933	\$7486.01

Why Bother?

The last three methods that we examined yielded selling prices very close to each other.

Calculated Single Divisor	=	\$9491.00
Labor Factor Method	=	\$9436.00
Dual Ratio Method	=	\$9425.00

High Labor Job

Calculated Single Divisor	=	\$9491.00
Labor Factor Method	=	\$13803.82
Dual Ratio Method	=	\$12817.51

Low Labor Job

Calculated Single Divisor	=	\$9491.00
Labor Factor Method	=	\$6938.48
Dual Ratio Method	=	\$7486.01

THAT'S WHY BOTHER!

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1% Advances

1. Increase Sales 1%
2. Increase Prices 1%
3. Reduce Cost of Sales 1%
4. Reduce Overhead 1%

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Advance #1

Increase Sales 1%

Sales	\$3,000,000	
	\$30,000	plus 1% increase
New Sales	<u>\$3,030,000</u>	
Cost of Sales	\$1,654,000	
	\$16,560	add 55.2% of additional sales
New Cost of Sales	<u>\$1,670,560</u>	
New Gross Margin	\$1,359,440	
Overhead	\$1,219,333	(no significant increase)
New Net Profit	\$140,107	4.62%
Old New Profit	\$126,667	4.20%
Increase	<u>\$13,440</u>	

OR

10.61%

INCREASE IN PROFIT

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Advance #2

Increase Price 1%

New Sales	\$3,030,000	
	<u>\$30,300</u>	increase prices 1%

New New Sales	\$3,060,300	
---------------	-------------	--

New Cost of Sales	\$1,670,560	54.59%
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New Gross Margin	\$1,389,740	45.41%
------------------	-------------	--------

Overhead	\$1,219,333	39.84%
----------	-------------	--------

New Net Profit	\$170,407	5.57%
----------------	-----------	-------

Old Net Profit	\$126,667	4.20%
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Increase	<u>\$43,740</u>	
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OR

34.53%

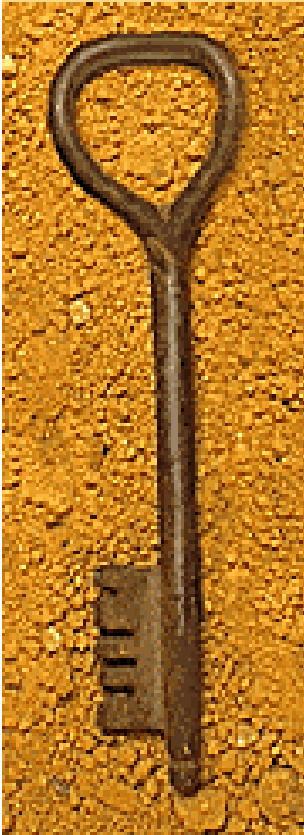
INCREASE IN PROFIT

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Advance #3

Reduce C.O.S. 1%



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New Sales	\$3,060,300	
Cost of Sales	\$1,670,560	54.59%
Less 1%	(16,705)	
New Cost of Sales	<u>\$1,653,855</u>	54.04%
New Gross Margin	\$1,406,445	45.95%
Overhead	\$1,219,333	39.84%
New Net Profit	\$187,112	6.11%
Old Net Profit	\$126,667	4.20%
Increase	<u>\$60,445</u>	

OR

47.72%

INCREASE IN PROFIT

Advance #4

Reduce Overhead 1%

New New Sales	\$3,060,300	100%
New New Cost of Sales	\$1,653.855	54.04%
New New Gross Margin	\$1,406,445	45.95%
Overhead	\$1,219,333	39.84%
Less 1%	(12,193)	
New Overhead	\$1,207,140	39.44%
New New Net Profit	\$199,305	6.51%
Old Net Profit	\$126,667	4.20%
Increase	\$72,638	

OR

57.34%

INCREASE IN PROFIT

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