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PERSONAL PLANNING

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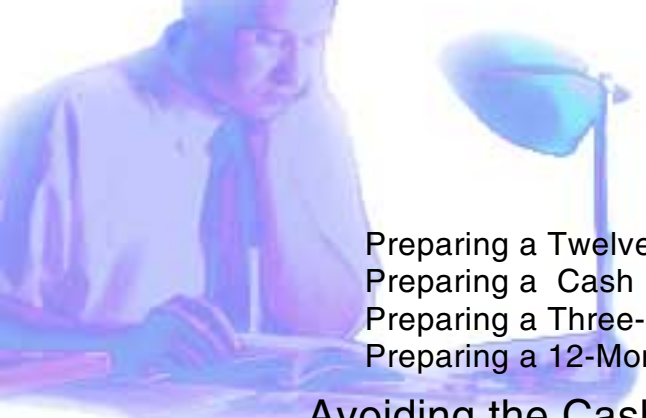
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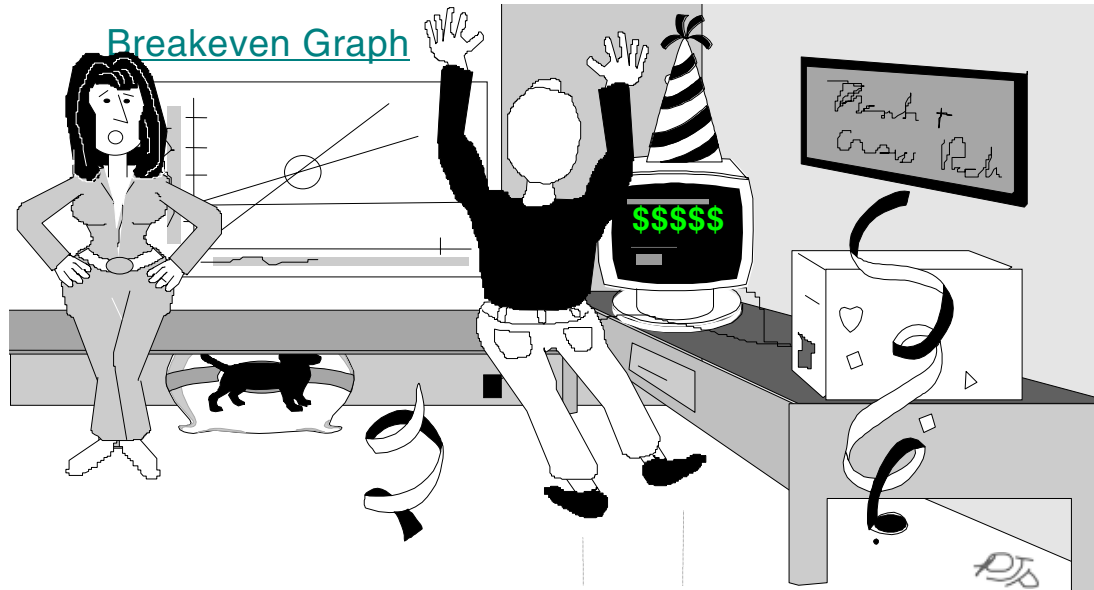
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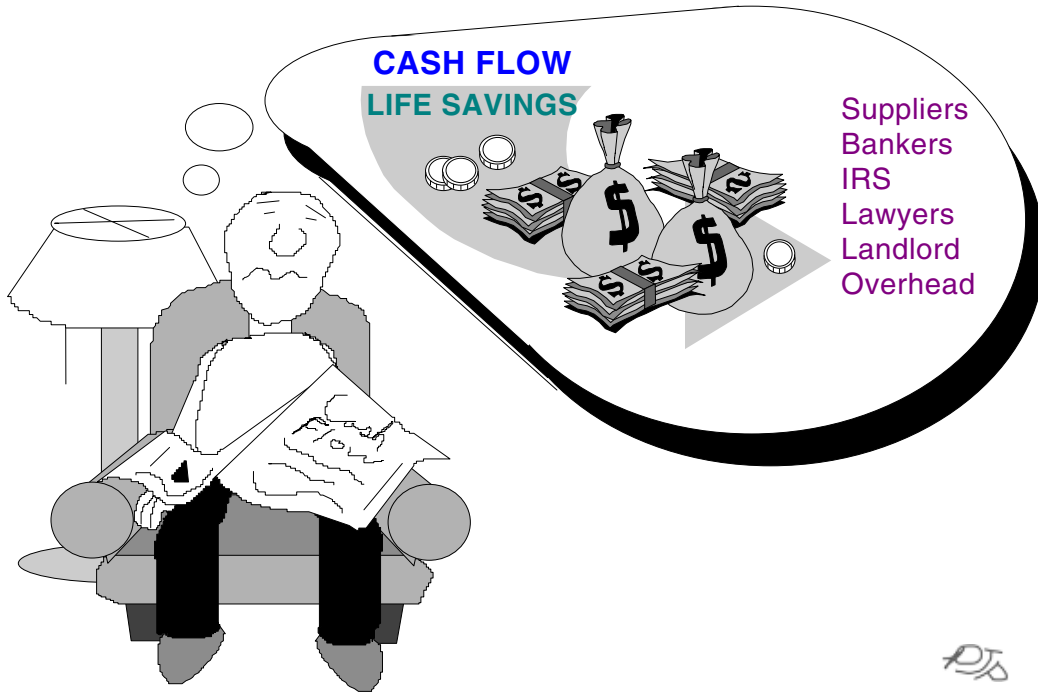
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“Let me guess . . . you just calculated how much money we would make if every dog owner on the planet bought your new Fortified Puppy Chow!”

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PREPARING A BREAKEVEN ANALYSIS, CASH FLOW STATEMENT & INCOME PROJECTION

ALTHOUGH cash flow and income projections are probably the most important planning devices available to you as an entrepreneur, a breakeven analysis can provide you with valuable information to help determine the profit potential of your venture as well as point out the necessity for controlling expenses and overhead.

Specifically, a breakeven analysis can be used to determine the exact amount of sales needed to meet product costs, advertising costs, overhead costs and all other costs associated with selling your product or service, with no profit and no loss. Once you've calculated your breakeven point, you can then factor in any profit goals you have, and along with past or projected sales figures, create an income projection and a cash flow statement.

BASIC BUDGETING TERMINOLOGY

WITHOUT QUESTION the ability to know your cash flow status at any particular moment in time, as well as make accurate income projections on a regular basis is the only way to be sure that you will not come to the office one day and suddenly discover that your company is flat broke and creditors are threatening to repossess your delivery truck. However, before we take a serious look at budgeting, you should familiarize yourself with the following terminology:

- Budget
- Income Projection
- Cash Flow

A budget is a forecast of all cash sources and expenditures.

- Cash Flow Statement
- Working Capital
- Working Capital Cycle
- Cash Capital Conversion Cycle

What is a Budget?

A budget is a forecast of all cash sources and expenditures. It usually follows an Income Statement type format and most commonly covers a month by month 12-month period. At the end of the year, the projected income and expense figures are compared to the actual performance of the business as recorded in the financial statements.

NOTE The two most important budgeting tools are the cash flow budget and the in-

come statement budget.

What is a Breakeven Analysis?

A breakeven analysis determines at what point your income matches your expenses and overhead. This information can help you project the profit potential of your venture as well as point out the necessity for controlling your costs.

What is an Income Projection?

An income projection takes a look at *all* revenues and expenses (including depreciation and mortgages) and attempts to determine the monthly and yearly profitability of a venture.

A cash flow statement (also known as a cash flow projection) refers to an estimate of anticipated cash sales as well as anticipated cash payments of bills.

What is Cash Flow?

The term **CASH FLOW** is used to refer to the amount of money actually available to make purchases and pay current bills and obligations. It is the difference between cash receipts (the money you take in) and cash disbursements (the money you spend) over a specific time period.

What is a Cash Flow Statement?

A **CASH FLOW STATEMENT** (also known as a cash flow projection) refers to an estimate of anticipated cash sales as well as anticipated cash payments of bills. These estimates are usually scheduled on a weekly, monthly, or quarterly basis and are frequently used to help project the amount of

money required to finance your operations on a yearly or even day to day basis.

NOTE Cash flow and income projection statements can sometimes appear unrelated. The difference between the two results from how principal payments and depreciation are recorded. Loan principal payments are included as cash outflow in a cash flow statement but are not recorded on the income statement. On the other hand, depreciation is included as a business expense on the income statement but not as cash outflow on the cash flow statement. Many financial experts in fact like to define cash flow as net income exclusive of depreciation.

Earnings, including profits, and cash flow, although related, are two distinctly different concepts. Profits and earnings are created by accounting conventions and include non-cash items such as depreciation.

POWERPOINT

What is Working Capital?

Working capital is the difference between a business' current assets and its current liabilities. Working capital includes:

- cash
- marketable securities
- accounts receivable
- inventories
- accounts payable
- accrued wages and taxes

Working capital policy thus deals with decisions related to types and amounts of current assets and the means of financing them. These decisions will necessarily involve:

- the management of cash and

inventories

- credit policy and collection of accounts receivable
- short-term borrowing and other financing opportunities such as trade credit
- inventory financing
- accounts receivable financing

Since the average firm has about 40 percent of its capital tied up in current assets, decisions regarding working capital greatly impact business success. This is especially true for smaller businesses which often minimize their investment in fixed assets by leasing rather than buying, but which cannot avoid investing in inventories, cash and receivable.

Since the average firm has about 40 percent of its capital tied up in current assets, decisions regarding working capital greatly impact business success.

It should also be noted that small businesses tend to have a limited number of financing opportunities and less access to capital markets. This requires them to rely heavily on short-term credit such as accounts payable, bank loans and credit secured by inventories and or accounts receivable. The use of any of these financing sources reduces working capital by increasing current liabilities.

NOTE Working capital management, like cash flow management, is primarily concerned with the day-to-day operations rather than long-term business decisions.

What is the Working Capital Cycle?

The working capital cycle involves the

steps a business takes from the time it makes the first cash commitment toward providing a product or a service, to the point when it receives cash payment for its sales (accounts receivable). An individual cycle ends when the full cash amount for the sale is received.

Calculating the Working Capital Cycle – The working capital cycle may be calculated by using the following formula:

$$\text{WCC} = \text{ICP} + \text{RCP}$$

Where,

ICP – (Inventory Conversion Period) refers to the length of time between purchase of raw material, production of the goods or service, and the sale of the fin-

ished product

RCP – (Receivable Conversion Period) refers to the time between the sale of the final product on credit and cash receipts for the accounts receivable

The capital cash conversion cycle is defined as the length of time between the payment of what a business owes (payables), and the collection of what a business is owed (receivables).

What is the Capital Cash Conversion Cycle?

The capital cash conversion cycle, also often called the cash flow cycle – is defined as the length of time between the payment of what a business owes (payables), and the collection of what a business is owed (receivables). Businesses use several techniques to minimize the length of time funds are “tied-up” in order to reduce the amount of working capital needed for operations.

NOTE During this cycle a business' funds are unavailable for other purposes. Cash has been paid for purchases but cash has not been collected from sales.

Calculating the Cash Conversion Cycle – The cash conversion cycle may be calculated by using the following formula:

$$\text{CCC} = \text{ICP} + \text{RCP} - \text{PDP}$$

Where,

ICP – (Inventory Conversion Period) refers to the length of time between purchase of raw material, production of the goods or service, and the sale of the finished product

RCP – (Receivable Conversion Period) refers to the time between the sale of the final product on credit and cash receipts for

the accounts receivable

PDP – (Payable Deferral Period) refers to the time between the purchase of raw material on credit and cash payments for the resulting accounts payable

For example, if it takes 35 days after orders are placed to receive and process the raw material into finished product, the ICP is 35 days. Assuming that 25 days after the arrival of raw material, the firm pays for them, the PDP is 25 days. Finally, if the firm receives cash payment for the sale of its product or service in 30 days, the RCP is 30 days. The CCC is thus $35 + 30 - 25$, or 40 days.

Reducing the Cash Conversion Cycle
– Since there is always a cost to such fi-

$$\text{CCC} = \text{ICP} + \text{RCP} - \text{PDP}$$

nancing, a goal of any business should be to minimize the cash conversion cycle by:

- reducing the ICP – e.g., processing the raw material and producing the goods as quickly as possible
- reducing the RCP – e.g., speeding up collection
- lengthening the PCP – e.g., slowing payments



Profits are the life-blood of the economic system, the magic elixir upon which progress and all good things depend ultimately. But one man's lifeblood is another man's cancer.

**PAUL A.
SAMUELSON**

*Professor of
Economics,
Harvard University*

PREPARING BUDGET

A BUDGET is the single most important tool available to an entrepreneur to monitor and control expenditures that otherwise would eat up all available business resources. Budgets help you determine how much money you have, where to use it, and whether you can achieve your financial goals.

As part of a business plan, a budget can help convince a banker or potential investor that you know your business and have anticipated its needs and problems.

For many entrepreneurs budgeting means little more than monitoring a checkbook balance. However, this simplistic method of money management often results in funds being used for one thing when they should have been reserved for something else.

SBA

A budget will also link your business plan to reality. It shows the flow of money, into, through and out of your business. It helps you determine how to get the most out of scarce resources and give your business a direction.

Specifically, a budget will help you determine:

- cash required for necessary labor and/or materials
- day-to-day maintenance costs
- expected profit
- revenues needed to support business operations
- total start-up costs

The Three Basic Elements of a Budget

The three main elements of a budget are as follows:

- sales revenue
- costs
- profits

Sales Revenues – Sales are the cornerstone of a budget. It is crucial to estimate anticipated sales as accurately as possible. Base estimates on actual past sales figures. Once you target sales, you can calculate the related expenses necessary to achieve your goals.

Costs – Estimating costs can be complicated because you must identify which costs will change and by how much and

which costs will remain unchanged (you must also factor in inflation where applicable). These costs are often defined as:

- fixed costs
- variable costs

Variable Costs – Variable costs are those that vary directly with sales. One example is the purchase cost of inventory. The more inventory you sell, the higher your purchasing costs; the less you sell, the lower your purchasing costs. Similarly,

Freight and special packaging costs will vary directly with sales; these costs will not be incurred without a sale.

Consider the following example: If a storeowner pays \$350,000 for supplies and sells them for \$500,000, then to calculate

Sales are the cornerstone of a budget.

the cost of inventory purchases as a percentage of sales, the owner divides the amount paid by the amount received in sales ($350,000 / 500,000 = 70\%$). This means 70% of sales will go to pay for the cost of inventory. Thus, if the storeowner estimates \$600,000 in sales for the next year, he or she should budget 70% of \$600,000, or \$420,000 for inventory purchases.

Fixed Costs – Fixed costs are those that do not change, regardless of sales volume. Rent is considered a fixed cost because it is totally independent of sales activity and, for the duration of the lease, will not change. For example, a five-year lease with an annual rent of \$24,000 must be paid even if there are no sales.

Semi-variable Costs – Semi-variable costs,

Fixed costs are those that do not change, regardless of sales volume.

such as salaries, wages and telephone expenses, have both variable and fixed components. For budgeting purposes, you may need to break semi-variable costs into these two components. The fixed element represents the minimum cost of supplying a good or service. The variable element is that portion of the cost influenced by changes in activity. Examples of semi-variable costs are the rental of delivery trucks and photocopying machines for a fixed cost per month plus a variable cost based on the volume of usage (which depends on sales).

Profit – Profit should be large enough to make a decent return on your:

- total cash investment
- labor

Your total cash investment is the money you have put into the firm over the years and the profit of prior years that you have left in the firm (retained earnings). If you could otherwise receive 10% interest by investing outside of your business, on a total cash investment of let's say, \$25,000, then you should expect a similar return when investing \$25,000 in equipment and other assets within the business.

When preparing your budget, add this expected return on your total cash investment to your targeted profits on your labor. Check with your trade associations, accountants or bankers to make sure that the rate of return on your investment is what it should be.

NOTE In targeting profits, you want to be

sure you are receiving a fair return on your labor; your weekly paycheck should reflect what you could be earnings elsewhere as an employee.

Basic Budgeting Equation

The following equation shows that every sales dollar you receive is made up partly of a recovery of your costs and partly of profit:

$$\text{Sales} = \text{Cost} + \text{Profit}$$

For example, if you expect \$1,000 in sales income and you know that it costs \$750 to produce, market and sell your product or service, then your profit should be \$250.

A budget tells us what we can't afford, but it doesn't keep us from buying it.

**WILLIAM
FEATHER**

Questions to Ask Yourself Before Preparing a Budget

Before you can create a budget, you must answer three questions:

- How much net profit do you want the business to generate during the calendar year?
- How much will it cost to produce that profit?
- How much sales revenue is necessary to support both profit and costs?

To answer the above questions, consider expected sales and all cost, either direct or indirect, associated with the product or service.

NOTE To make the safest estimates when budgeting, most companies prefer to over-

estimate expenses; conversely, they prefer to underestimate sales revenue.

Constructing a Budget

Once you have answered the above three questions, you can begin to construct your budget using the following five steps:

- Target desired profit.
- Determine operating costs.
- Calculate gross profit margin.
- Estimate sales revenues.
- Adjust figures.

For practical purposes, most small businesses start with a forecast of profits not a forecast of sales (since this is more difficult). In other words, decide what

To make the safest estimates when budgeting, most companies prefer to overestimate expenses; conversely, they prefer to underestimate sales revenue.

profit you want to make and then list the expenses you will incur to make that profit.

To create your budget:

1. **Target Desired Profit** – If for example, Harry Griswald, owner of *Harry's Pet Supplies* has a total of \$300,000 invested in his business and wants a 10% rate of return, and if he also wants a salary of \$35,000 for his labor, then his desired profit is $[(\$300,000 \times 10\%) + \$35,000] = \mathbf{\$65,000}$

Advertising must pay for itself in terms of increased sales.
SUPERTIP

2. **Determine Operating Costs**

– Operating costs should be determined by projecting both *fixed* administrative costs, such as rent and office overhead, and *variable* selling costs, such as cost of goods sold. Fixed costs do not change with sales or output,

while variable costs change in direct proportion to your output i.e., the greater the volume of sales, the higher the cost.

A convenient way of breaking down fixed costs and variable costs is to treat the cost of goods sold and labor as variable costs and all other expenses as fixed costs.

In this example, Harry determined from past experience (and industry operating ratios) that his variable costs averaged out to **70% of sales**. He also calculated that last year his fixed operating costs were \$84,176. By factoring in inflation and expansion costs of 3% and 10% respectively, he projects his fixed operating expenses to be $\$84,176 \times 1.13$

$$= \$95,119$$

3. Calculate Gross Profit Margin –

Since, gross profit margin is equal to net profit (desired profit) plus fixed operating expenses, Harry calculates his GPM to be $= P + FC =$ **\$160,119**

4. Estimate Sales Revenues –

Since Harry's costs of good are 70% of sales, using the basic budgeting equation, he estimates his sales revenues to be:

$$\text{sales} = \text{cost} + \text{profit}$$

$$\text{sales} = (\text{fixed costs} + \text{variable costs}) + \text{profit}$$

$$S = \text{GPM} + \text{VC}$$

$$S = \$160,119 + S(70\%)$$

If you can't realistically generate your projected income then you can adjust your plans by reducing expenditures.

$$S = \$160,119 + .7S$$

$$S - .7S = \$160,119 + .7S - .7S$$

$$S(0.3) = \$160,119$$

$$S = \$160,119/0.3$$

$$S = \$533,730$$

5. Adjust Figures –

If Harry figures he cannot realistically generate an income of \$533,730, then he can adjust his plans by:

- **reducing expenditures** (e.g. hiring fewer employees, purchasing less expensive equipment, eliminating a telephone line)
- **expanding sales** (e.g., selling additional products or services, conducting an aggressive marketing

campaign)

- **lowering profit expectations** (if all else fails, Harry can adjust his projected income by lowering his desired profit)

Strategies for Making Sales, Costs, Income, Cash Flow & Profit Projections

Making projections involving sales revenues, profits and operating costs can be very challenging. However, as accurate as possible projections are critical to the budgeting process. Ideally, projections should indicate the ability of a business to pay off its debts (if the business is interested in obtaining a loan), as well as, earn a reasonable return on labor and investment.

Seasonal fluctuations in cash receipts and cash expenditures should be built into cash flow projections.

NOTE If your first year projections show a loss, it may be difficult to convince potential investors to invest in your business. If, however, the projections show excessive profits, potential inventors may feel the projections are unrealistic.

Strategies for Making Projections

Account for seasonal fluctuations. Seasonal fluctuations in cash receipts and cash expenditures should be built into cash flow projections. This will indicate those months cash should be reserved to

cover excess expenses when “cash out” exceeds “cash in.”

Be conservative when making projections for revenues. Even though phe-

nominal rates of return, such as 100% to 1,000% or higher are possible for small start-up businesses (refer to INC.'s list of "100 Fastest Growing Companies"), these kinds of rates of return, in projecting income to obtain financing, compile figures conservatively.

Be reasonable when projecting profit margins. A reasonable profit margin is in line with the profit margins of the industry. \$40,000 profit, for example, would be a reasonable before-tax profit margin in the case of a business that has an equity level of \$100,000. After income tax is subtracted at an estimated rate of 25%, this leaves \$30,000. If in fact, you quit a job that paid \$20,000 a year to start this business, and maintained this salary as being consistent with your personal liv-

Profit margins for income projections should always be reasonable, especially if outside financing is used.

ing expenses, you would be left with \$10,000 profit. If you compare the remaining profit to the amount of equity invested in your business (i.e., the amount of equity on a current balance sheet), you would realize a 10% rate of return. This rate of return is reasonable for a growing business. However, this rate of return could increase in the future as your business grows and prospers.

NOTE Profit margins for income projections should always be reasonable, especially if outside financing is used.

Don't be overly creative. Financial projections can be silly and mean little if overly optimistic, and worse, ruin your credibility as a responsible business person. Allowing for a reasonable margin of

error in income and expense figures is one thing. However, padding your numbers and assuming stupidity on the part of the person reading them is another.

It is also important to realize that sound financial projections will also tell others a lot about your intrinsic good sense and understanding of the difficulties your company will face i.e., how much thought you have put into your business. Therefore, always bear in mind that your readers, who may be potential financial backers, will be scrutinizing these numbers carefully. Make sure they know exactly how you arrived at your projections. Show them the calculations, but avoid anything that is too mathematical and needs a calculator to be figured out.

Bankers realize that bank loans are paid from the business's cash flow, so you must convince them that there is adequate potential to repay the loan.

SUPERTIP

NOTE Projecting is not an area for positive daydreaming. It is better to be safe than sorry. Some experts even recommend that your projections should be generously against you.

Don't project too far into the future. While future cash flows may be projected for a number of years, for many small businesses it is not possible to project very far into the future before the projections become meaningless. Even with somewhat large and more substantial businesses, it is difficult to project cash flows for more than 5 years.

Make adjustments for inflation and other factors. A budget will be as good as the numbers used to make it.

Therefore, it is important that your estimates and calculations be as accurate as possible.

Make bad times, average times and good times projections. When making sales forecasts it is often advisable to make three kinds of projections:

- bad times (low side)
- average times (best guess)
- good times (high side)

To do this properly, you would need to prepare three separate cash flow statements.

Use industrial averages.

Knowing how a business compares finan-

cially to others, helps the owner who is seeking loans or expansion opportunities. Such knowledge also provides the owner

with both a psychological and planning advantage, adds to the owner's awareness of how well the industry is doing as a whole, and provides an early warning system for market fluctuations and trends.

NOTE There are several studies available which state and compare industry averages and financial ratios (see sidebar on **page 74**). Membership in a trade association includes access to financial averages for the industries in that association.

" My leasing costs are about 7% of gross sales, food costs 30%, labor 27%, other costs 10% and the rest is profit. I spend most of my time cutting and controlling food costs and labor costs, and managing people."
**EDMONTON
 RESTAURANT
 OWNER**

To help prepare estimates for equipment, contact several equipment

suppliers to discuss your needs, the capabilities of specific equipment and prices. Other related expenses associated with equipment should be investigated as well, such as delivery, hookup storage, utilities, installation costs and unusual operating expenses.

To project and determine the cost of a building, choose a layout that can be reduced to a blueprint or a sketch for contractors to bid on. Many contractors provide blueprints in conjunction with the bidding process. After you have blueprints or a layout, obtain competitive bids from several contractors. Bids will allow you to compare the abilities of the individual firms to build efficiently and ultimately can help you achieve lower costs.

If money is a liquid asset than I guess my wallet is water repellent.

FUNQUOTE

NOTE It is customary for a construction contractor to receive periodic payments during a project to cover costs. The new building owner usually pays 90 percent of the cost of work completed until the project is done.

Use a spreadsheet program.

Spreadsheet programs can be extremely helpful for preparing cash flow projections. They simplify “what if “ analysis (bad, average and good projections). In fact, if you already have the software, you can design your own spreadsheet, or you may be able to download templates from business service providers or software developers.

Projecting Costs for Manufacturing a Product or Launching a DM Promotion

If you're planning to manufacture a product or launch a DM promotion, the "Product Costs Sheet" and "Direct Mail Promotion Costs Sheet" on **pages 75** and **76** at the end of this guidebook can be used to help you determine your operating costs. These forms are based on a fictional company (Jack's Jewelry Warehouse) promoting a gold chain to its customers by means of direct mail. Results have been simplified or adjusted to illustrate a point.

Using a "Product Costs Sheet" – The "Product Cost Sheet" on **page 75** at the end of this guidebook, can be used to de-

A breakeven analysis is not a method for heavy-duty business quantitative analysis. It is a method of getting a general feel for a business cost structure.

POWERPOINT

termine the total cost and cost per unit for manufacturing a select number products. These costs include labor, material and plant overhead charges. Under *miscellaneous* costs, you should also consider the effect of expenses such as bank and credit card charges, helpers salaries, instruction sheet costs, and postage costs.

NOTE This form does not factor in selling costs.

Using a "Direct Mail Promotion Costs Sheet" – The "Direct Mail Promotion Costs Sheet" on **page 76** at the end of this guide-

book, can be used to determine the total cost and cost per unit for mailing a select number of brochures, catalogs or direct mail letters. These costs include both fixed

and variable costs that range from writing copy charges to list rental charges. Under *Other* costs, you should consider additional fulfillment charges, helper's salary charges, market research charges, and any other costs incurred.

Preparing a Master Budget

For companies with several departments, the annual budget should be expanded into a master budget. A master budget consists of a group of separate but interconnected budgets. It allows each department to more carefully monitor its sales, production, inventory, marketing and personnel budgets. These separate budgets will help management make better cost cutting and profit building decisions. Management should also consider the pros and cons of

Often annual budgets are divided into small monthly or quarterly budgets.

breaking down each budget in the master budget to quarterly or monthly budgets. Monthly and quarterly budgets can be used to more effectively measure actual results against budgeted goals.

NOTE If monthly or quarterly budgets are used, the annual budget may have to be altered during the year to reflect changing circumstances. This may be due to an unforeseen sharp rise or drop in one or more variable expenses or in revenues.



TYPES OF BUDGETING STATEMENTS

THREE COMMONLY used budgeting tools are as follows:

- breakeven analysis
- income projection
- cash flow statement

Examples of these tools and their uses will be detailed in this section.

Preparing a Breakeven Analysis

Once your fixed and variable operating costs have been determined, you can use this information to prepare a breakeven analysis. Explained below are several

methods for preparing breakeven analyses for retail, manufacturing and service related businesses:

NOTE When preparing a breakeven analysis there are several assumptions you usually must make. These assumptions include:

- selling prices do not change
- total fixed expenses remain the same
- variable expenses increase and decrease in direct proportion to sales

Breakeven Formula

$$\text{Sales} - \text{Cost} = 0$$

Using the “Basic” Breakeven Formula

All B.E. formulas are derived from the following *Basic B.E. Formula*:

Sales - Cost = 0

To illustrate the use of this formula consider the following example: Clara Shoemaker plans to start a widget manufacturing company with \$40,000 in start-up capital. Presently, her competitors are selling similarly featured widgets at a price of \$140 per widget. Clara calculates that each widget will cost her \$80 to manufacture including materials and labor. She also estimates that additional variable costs for each widget (W), including delivery, storage and returns, to be \$10 per widget. Estimating her annual fixed operating expenses to be \$10,000 (not including her own salary), she calculates her breakeven point to be:

$$140W - \$10,000 - 90W = 0$$

Clara calculates that each widget will cost her \$80 to manufacture including materials and labor.

$$50W = \$10,000$$

$$W = 200$$

Clara needs to sell 200 widgets to breakeven. However, if she wants to make a salary of \$30,000 to equal the salary of her old job and a profit of \$6,000 (15%) on her start-up capital investment of \$40,000, she would need to sell an additional 720 widgets.

$$140W - \$10,000 - 90W = \$36,000$$

$$50W = \$46,000$$

$$W = 920$$

However, if Clara finds out from her market research that is nearly impossible to sell 920 widgets annually and that a more realistic volume would be 800 widgets, and if she still wants to maintain her

profit and salary level, than she has to either increase her selling price or find ways of reducing her variable and fixed costs.

To solve this problem she might decide to make the following four changes:

- 1) increase her selling price to \$147 per widget
- 2) decrease her variable costs by \$8 per unit by locating cheaper suppliers
- 3) add an extended warranty service to justify her higher prices at a cost of \$5 per widget
- 4) increase her advertising budget by \$2,000

The end result would look like this:

$$147W - \$12,000 - 87W = \$36,000$$

$$60W = \$48,000$$

$$W = 800$$

Calculating the B.E. Point for a Retail Business

Just like in every other business, the B.E. point for a retail business occurs when sales minus costs equal zero. Rearranging this formula, the B.E. point can be expressed as:

Breakeven Formula

$$\text{Sales} = \text{FC} + \text{VC}$$

$$S = \text{FC} + \text{VC}$$

Where,

S = Sales in dollars at B.E. point

FC = Fixed Costs or operating expenses

VC = Variable Costs or cost of goods

This formula looks harmless enough however, substituting values directly into it is impractical, being that for a retail business variable costs (cost of goods) cannot be known until the end of the year when inventory levels are taken. From a strict accounting standpoint: cost of goods sold = inventory at beginning of a period + purchases during the period - inventory at end of period.

Therefore, to calculate a breakeven point for your business, you must instead use a variation of this formula that asks you to first calculate your gross profit, change this value to your gross margin (also known as the contribution margin), and then substitute this value back into the original breakeven formula.

Gross margin (GM) is equal to Gross Profit (GP) divided by sales (S).

By calculating your gross margin in this way for all merchandise sold, the price structure that generates a level of revenue to purchase goods, pay operating expenses and make a profit for you, can easily be determined. Our new simple more practical breakeven formula can be derived as follows:

Since,

Gross profit (GP) is equal to sales (S) minus the cost of sales (VC).

$$GP = S - VC \quad \text{or} \quad VC = S - GP$$

And,

Gross margin (GM) is equal to Gross Profit (GP) divided by sales (S).

$$GM = GP/S \quad \text{or} \quad GP = GM \times S$$

And,

Sales (S) must equal fixed costs plus variable costs, according to our original B.E. formula.

$$S = FC + VC$$

Then,

By substituting the second formula into the first and the first into the third, the following equality results:

$$S = FC + [S - (GM \times S)]$$

Simplifying this equation leave us with

$$FC = GM \times S \quad \text{or} \quad S = FC/GM$$

$$\text{B.E.} = FC/GM$$

To get a feel for this formula, let's look at the following example. Suppose Jane Bundy opens up a shoe store and sells shoes for \$40 a pair. If her cost is \$25 per

pair then her gross margin per pair is \$15 or 37.5% of the total.

Selling price = \$40 or 100%

Cost of shoes = \$25 or 62.5 %

Gross Margin = \$15 or 37.5%

Now if she calculates her operating expenses (fixed costs) to be \$75,000 per year, her breakeven point would be:

$$FC (\$75,000) / GM (37.5\%) = \$200,000$$

Sales of \$200,000 means Jane must sell 5,000 pairs of shoes at \$40 per pair to breakeven. However, assume that she cannot sell 5,000 pairs of shoes to breakeven. So she decides to raise her price,

| | |
|-----------------------|---|
| B.E. Point | $= \frac{FC \text{ (operating expenses)}}{GM \text{ (gross margin)}}$ |
|-----------------------|---|

which will in turn raise her gross margin. The question is how much will she have to raise her price to breakeven?

Determining that she can sell shoes for \$50 a pair, she calculates her new breakeven point as follows:

Selling price = \$50 or 100%

Cost of shoes = \$25 or 50 %

Gross Margin = \$25 or 50%

With operating expenses of \$75,000 the sales volume to breakeven is:

$FC (75,000) / GM (50\%) = \$150,000$

At a price of \$50 per pair, Jane now has to sell 3,000 pairs of shoes to breakeven.

She is confident she can sell this volume, however she will not make a profit selling at \$50 a pair. Therefore, she has to once

again rethink her strategy. She decides she would like to realize a profit of 10 percent on her operating or fixed costs (\$75,000 x 10% = \$7,500). To calculate the volume of sales required to earn this profit, she adds the profit to the fixed costs. If she

holds the price at \$50 for a gross margin of 50%, the sales needed to realize this profit are:

$FC + \text{profit } (\$75,000 + \$7,500) / GM (50\%) = \$165,000$

To generate \$165,000 in sales, she must sell 3,300 pairs of shoes at \$50 per pair. This level of sales will cover the variable expenses (cost of goods) the fixed expenses (operating expenses) and a profit of \$7,500. However, if she has no competition, and is not confident she can sell this volume of merchandise, then she

At a price of \$50 per pair, Jane now has to sell 3,000 pairs of shoes to breakeven.

may decide to instead raise her gross margin to 55%.

Unit cost of shoes (\$25) / VC% (.45) =
\$55.56 or \$56 selling price

Unit selling price = 100 % = \$56

Variable cost = 45% = \$25

Gross margin = 55% =
\$31

Therefore, with total sales of \$165,000 and cost of sales of \$67,500, her gross margin is \$82,500. With fixed costs of \$75,000, her profit margin is \$7,500.

Calculating the B.E. Point Using Markup Percentage

The formula used in the last example,

$$\text{B.E. Point} = \frac{\text{Operating Expenses}}{\text{Markup Percentage}}$$

can be easily modified to use markup percentage instead of gross margin as one of the unknown variables. Since markup percentage is virtually the same as gross margin, the breakeven point can be determined as follows:

B.E. = Operating Expenses/Markup Percentage

For example if your operating expenses are \$50,000 and your average markup percentage

is 30% then your required sales to breakeven would be \$166,666.67.

NOTE Using this method and knowing each product's contribution to overhead, it is also quite easy to figure breakeven points for individual products or services, so you know which products to promote or

discontinue (assign floor space to etc.).

Calculating the B.E. Point for a Service Provider

Another variation of the *Basic B.E. Formula* is shown below. This formula can be used to help you calculate a B.E. point in terms of total sales required for a service business.

EXAMPLE – Jan London plans to open up a beauty salon. She estimates her fixed costs to be \$17,000 for the year and her variable costs to be \$3,500 for every \$8,500 of sales.

To calculate the *Volume of Sales* she needs to breakeven, she uses the formula:

$$\text{B.E. Point} = \frac{\text{Fixed Costs}}{[1 - (\text{Variable Costs/Sales})]}$$

B.E. = Fixed Costs/[1-(Variable Costs/Sales)]

Where,

B.E. Point = volume of sales to breakeven
Fixed Costs = fixed expenses, deprec., Etc.

Variable Costs = cost of sales & variable expenses

Sales = the corresponding sales volume or income from the sale of goods & services over the same specified period used to determine your variable costs

$$\begin{aligned} \text{B.E. Point} &= \\ \$17,000 / 1 - (\$3,500 / \$8,500) &= \\ \$17,000 / 1 - 0.41 &= \end{aligned}$$

$\$17,000 / 0.59 =$

\$28,813

Calculating the B.E. Point for a Manufacturer

In this last example, using still another variation of the *Basic B.E. Formula*, a manufacturer can calculate the number of products needed to be sold to break-even.

EXAMPLE – James Billings plans to start a tennis racquet manufacturing company. He calculates his fixed costs to be \$80,000 per year and his variable costs per racquet to be \$40 per unit. His selling price to suppliers and retailers is \$90.

**B.E.
Point**

$$= \frac{\text{Fixed Costs}}{\text{Selling Price} - \text{Variable Cost/Unit}}$$

To calculate the *Number of Units* volume of sales he needs to breakeven, he uses the formula:

$$\text{B.E.} = \text{Fixed Costs} / (\text{Selling Price} - \text{Variable Cost/Unit})$$

Where,

B.E. Point = # of units to breakeven

Fixed Costs = fixed expenses, deprec., etc

Variable Cost/Unit = your costs per unit

Selling Price = what you charge suppliers

$$\begin{aligned} \text{B.E. Point} &= \\ & \$80,000 / \$90 - \$50 = \\ & \$80,000 / \$40 \end{aligned}$$

2,000 units

Using a GM, BE, ROI & Projected Profit Sheet

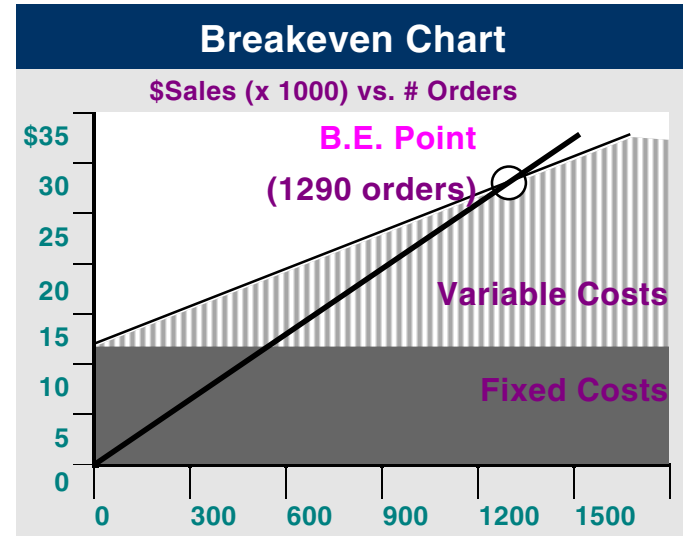
A GM, BE, ROI & Projected Profit Sheet as shown on **page 77** can be used to determine your breakeven point for selling a single item. Follow steps 1 to 34. Explanations of key terms are provided below. Use the results to then draw a graph as shown on the right.

Line 11 – When calculating the cost of your product, make sure you include return charges and losses usually a factor of .95 to .97 x total sales (i.e., 3 to 5% of total sales).

Line 22 – To determine your total variable costs accurately (and thus your gross margin), you may also want to anticipate other costs of doing business including:

- future markdowns for goods that do not

sell quickly enough



The following graph shows the breakeven point for mailing 6,000 brochures for Jack's Jewelry Warehouse promoting a gold chain that sells for \$22.95. Fixed costs are \$12,500. Gross Margin is \$9.69/unit (see "GM, BE, ROI & Projected Profit Sheet" at end of Guidebook on page 77).

- shrinkage (theft or disappearance)
- miscellaneous transportation and delivery costs
- cost of doing any alterations that may be requested by your customer

Line 23 – Calculating your total variable costs is pretty much the same as calculating your cost of goods sold except that the former is used to calculate the costs for one individual item while the later is used to calculate the costs of your entire inventory.

Line 28 – Collectively referred to as gross profit, GM (gross margin) is the difference between sales income and the cost of the

Most textbooks like to approach a breakeven analysis based on the units of production. However, for general kinds of business activities, it is better to base such an analysis on the dollar volume of sales of the business.

SUPERTIP

goods sold before any fixed expenses have been taken out for an individual item. GP (gross profit) is the term used to refer to the total of all gross margins. GP =

Sales - Cost of Goods Sold. GM = Total Selling Price - Total Variable Costs.

Line 29 – A list of fixed operating costs can be found on **page 81**.

Line 30 – In general, your breakeven point is equal to your overhead or fixed operating costs (O) divided by the difference of your unit sales price (P) - your unit variable costs (V). O/(P

- V).

Line 31-32 – ROI refers to your Return on Investment or your Net Income = Revenues - Expenses. In the example in on **page 77**, Jack's Jewelry Warehouse would have to sell 2580 units to have a 100 percent return (net income) on an investment of \$12,500.

What to Do With Your Results?

Once you have figured out your B.E. point, stop and evaluate out how realistic it is. If it is far too high, review your cost figures and breakdown of yearly expenses on a *12-Month Income Projection*. Compare them with industry operating ratios. If any of your cost items are too low or too high, change them. With your revised figures, work out a revised B.E. analysis.

***FIRST**, draw a straight line to represent the dollar value of your fixed expenses.*

If it still doesn't look right, think about ways of decreasing your variable and fixed costs, as well as whether you can raise your per unit selling prices (as long as it won't drastically affect your sales volume). If it looks better, don't pat yourself on the back just yet. Get a contact person at the SBA or other advisor on the subject to take a good look at your figures. They may be able to see something you've missed. The bottom line is you should not back your start-up plan with money until you B.E. point is reachable.

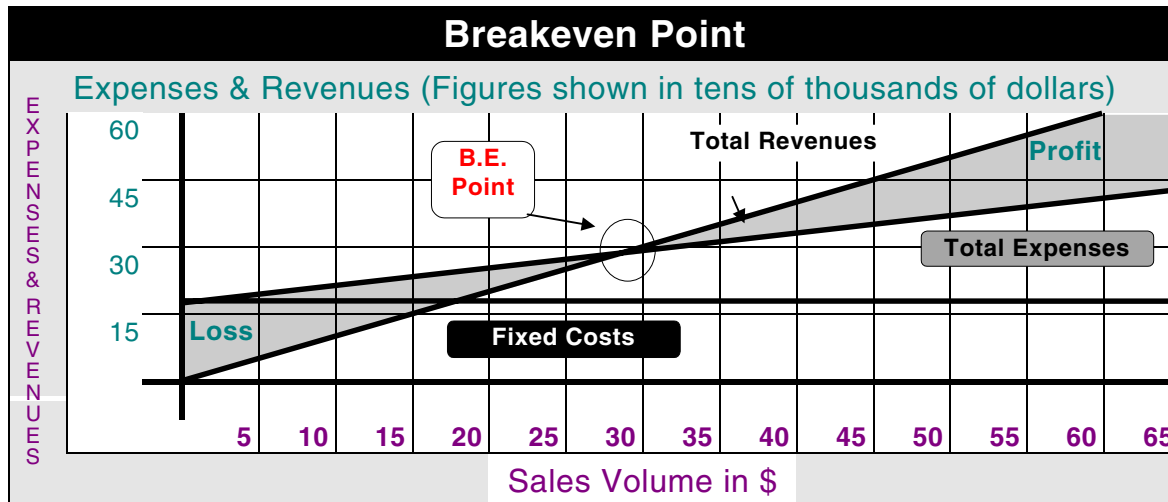
NOTE If your plan is not workable, it is better to learn it now than to realize six months down the road that you are pouring money into a losing venture.

Drawing a Breakeven Graph

Use Form #29 (see Guidebook #8 for a printable copy), or one similar, to graph the results of your breakeven analysis. Use the horizontal axis to represent sales volume in dollars (or number of units sold), and the vertical axis to represent expenses and revenues in dollars.

FIRST, draw a straight line to represent the dollar value of your fixed expenses (see example below).

SECOND, draw a sloping line to a point at the end of the graph where total sales equals total revenues. This line represents your total revenues.



THIRD, starting from your fixed expense line, draw a sloping line to a point where you know your variable expenses derived from a certain amount of sales. This line represents your total expenses. The intersection of lines 2 and 3 is your breakeven point and should agree with your mathematical calculations. The triangular area below that point represents company losses, while the triangular area above represents potential profits.

Preparing a Twelve-Month Income Projection

The “12-Month Income Projection” shown on **page 78** is valuable as both a planning and management tool to help control and monitor your business operations. It allows you to make projections of income generated each month and for the business

Twelve-Month Projections

A & A Pool Supply Company Final Budget, Year 4

| | | |
|-------------------------------|---------|-------|
| Sales | 523,063 | 12.4% |
| Cost of Goods | 366,144 | 70% |
| Gross Profit Margin | 156,919 | 30% |
| Operating Expenses: | | |
| Advertising | 3,605 | 0.7% |
| Depreciation | 4,000 | 0.8% |
| Insurance | 2,900 | 0.6% |
| Legal and accounting expenses | 4,412 | 0.8% |
| Office expenses | 2,995 | 0.6% |
| Rent | 24,000 | 4.6% |
| Repair & maintenance | 437 | 0.1% |
| Salaries | 34,650 | 6.6% |
| Telephone and utilities | 6,683 | 1.3% |
| Miscellaneous | 8,507 | 1.6% |
| Total operating expenses | 91,919 | 17.6% |
| Net profit | 65,000 | 12.4% |

year, based on reasonable predictions of monthly levels of sales, costs and expenses. It is very similar to a cash flow projection except that it keeps track of **ALL** expenses and revenues (not just cash based ones) and also factors in depreciation.

The real value of a “Twelve-Month Income Projection” becomes more apparent when your projected values are compared with actual operating results. This comparison will allow you to make more accurate projections in the future and take steps to correct any serious problems.

To use the “12-Month Income Projection” shown on **page 78**, follow the 12

$$\text{Ind. \%} = \left[\frac{\text{Cost + Expense Items}}{\text{Total Net Sales}} \right] \times 100\%$$

steps show below:

- 1. Find out industry percentages.** Industry figures serve as a useful benchmark against which to compare your cost and expense estimates. These percentages can be obtained from trade associations, accountants or

banks. Also, your reference librarian might be able to refer you to documents that

contain these percentage figures.

These figures are derived by dividing:

$$\text{Ind. \%} = [\text{Cost + Expense Items} / \text{Total Net Sales}] \times 100\%$$

- 2. Determine your total net sales (revenues).** Estimate your total number of units of products or services that

you realistically expect to sell each month at the prices you expect to get. Make sure you take into consideration returns and markdowns.

- 3. Calculate your cost of sales.** Determine how much you paid for your products (cost of good sold). Don't forget to include transportation costs and direct labor.

NOTE The cost of goods sold is often expressed as a percentage of sales. This is called an operating ratio. See **page 84** or check with your trade association to get the operating ratios for your business (see Guidebook #40 "Starting & Operating a Manufacturing Business" for calculating your cost of goods sold for manufacturers).

The largest determining factor of the size and content of this year's budget is last year's budget.

AARON WILDAVSKY
Political Scientist

- 4. Calculate your gross profit.** Subtract the total cost of sales from the total net sales to arrive at your gross profit.

NOTE With a cost of sales operating ratio of 59.4%, and revenues of \$100,000, your gross profit would be \$40,6000.

- 5. Calculate your gross profit margin.** The gross profit is expressed as a percentage of total sales (revenues). It is calculated by dividing gross profits by total net sales.

- 6. Estimate your controllable and fixed expenses.** This task is similar to estimating your expenses for your cash flow statement. However, it is important to include all and non-cash

expense items such as depreciation as well.

NOTE When calculating depreciation expenses, generally, you should depreciate any individual item of equipment, furniture, fixtures, vehicles etc., costing over \$100. To do this divide the cost of each fixed asset item by the number of months over which it will be depreciated. For more information on allowances for depreciation, request free publications and assistance from your local IRS office.

7. **Calculate your net profit before taxes.** Subtract your total expenses from your gross profit.
8. **Estimate your tax payments.** In-

| | |
|---------------------|--|
| Annual % | $= \left[\frac{\text{(Annual Total)}}{\text{Total Net Sales}} \right] \times 100\%$ |
|---------------------|--|

clude inventory and sales taxes (if not taken off in your cost of goods sold calculations), excise tax, real estate tax etc.

9. **Calculate your net profit after taxes.** Subtract taxes from net profit.
10. **Total your monthly columns.** Add each of the monthly sales and expense items across the table.
11. **Calculate your annual percentage.** Compare this figure to the industry percentage in the first column. Use the following formula:

$$\text{Annual\%} = [\text{Cost} + \text{Expense Items} / \text{Total Net Sales}] \times 100\%$$

12. Faithfully, compare your projected 12-month income statement with actual sales and expenses. On a regular monthly basis, fill out a second 12-month income statement using actual results. This final step is the most important step of the entire process. As a business owner, any reliable feedback you can get is as good as gold.

Preparing a Cash Flow Statement

The primary concern of all cash flow projections is to help anticipate cash receipts and cash expenditures, so that at the end of each month you will have a good idea of how much money you have or won't have to pay your bills. Thus the:

A budget is the way to go broke methodically.
ANON

FIRST step in preparing a cash flow statement is to estimate sales and all incoming revenue on a monthly basis. Sales from previous years of similar companies can be used as a guide. Be sure to also consider seasonal trends that may affect your sales volume at different months.

SECONDLY, after you have projected cash receipts from all sources, estimate the expenses necessary to achieve your anticipated sales. Your operating expenses can be expressed in dollars or as an operating ratio in the form of a percentage of the sales. Industry operating ratios can be found at your trade association and can be used as a guide when estimating your own.

THIRDLY, subtract your projected cash expenditures from your sales. The remaining sum will indicate a negative or positive cash flow. A positive cash flow at the end of the year is good, especially if occurring in all twelve months and generating a good profit. However, this is unlikely. Most start-up companies will all have negative cash flows initially (for the first several months anyway), with a breakeven point occurring at some point in the future. On the other hand, a negative cash flow after one year is not so good, unless you have ample financial reserves and substantial evidence that this will change in the future.

NOTE It is important to note that all sales and expenditures in a cash flow statement must be cash sales and expenditures. Ac-

Accounts received and payable are not included in a cash flow chart unless actual cash is received or paid out.

counts received and payable are not included in a cash flow chart unless actual cash is received or paid out. It should also be noted that the cash flow statement deals only with actual cash transactions and not with depreciation and amortization of goodwill or other non-cash expense items. Cash flow is also directly affected by prepaid items such as insurance and supplies contracts in the period they are actually paid.

NOTE Whether you do a 12-month income statement projection before your cash flow budget, or vice versa, doesn't really matter. However, in a business plan, it is usually recommended to start with your income statement first.

Balances Sales and Expenses – In a cash flow statement, it is important that all sales and expenses listed for a particular month be balanced (as balanced as possible), to compensate for situations in which expenses are due at the first of the month but revenue does not come in until the end of the month.

One way to solve this problem is to change your month's beginning and ending dates. This will ensure that one month's cash from sales arrives before expenses are due.

Making Sales Revenues and Costs Forecasts – Before preparing your cash flow statement, it is useful to compile a sales or revenues forecast and individual cost of sales, fixed expenses

Before preparing your cash flow statement, it is useful to compile a sales or revenues forecast and individual cost of sales, fixed expenses and variable expenses budgets.

and variable expenses budget. Two worksheets you can use to do this are located at the end of this guidebook on **page 80 & 81**, “Sources of Cash Worksheet,” and “Cash to be Paid Out Worksheet.”

NOTE Projections in the two worksheets must be made for the same time period (monthly, quarterly or annually).

Preparing a Three-Month Cash Flow Budget

The Income projection on **page 78** estimates how much startup capital will be needed to start a day-care center that serves infants, preschool children, and after school children. Each sales category has a different rate and this rate is reflected on the income

side of the worksheet along with other income.

On the expenses side, disbursements are categorized as either fixed or variable. Fixed costs tend to be the same from month to month. Variable costs depend on the number of items sold, or in this case, on the number of children attending.

This worksheet operate much like a cash flow statement, showing how much capital will be required to sustain operations until a positive cash flow is achieved (shown as Net Gain on line 38).

NOTE This income budget can easily be set up on a spreadsheet program. However, in addition to the categories outlined on the form, you might want to add items to the income side so that you can play

with assumptions about the number of children in each category and the rates charged.

Preparing a 12-Month Cash Flow Budget

Cash flow projections are best made on a spreadsheet. Not only does this allow you to change variables and projections and have the results automatically calculated, but it lessens the need to list similar expenditures over and over again. The

sample cash flow statement on **page 83** (a printable copy can be found in Guidebook #8), can be used as a guide to set up your spreadsheet, or as a worksheet to customize your own personalized cash flow statement.

It is recommended that you do separate

Cash flow projections are best made on a spreadsheet.

cash flow budgets for both worse, average and best case scenarios.

NOTE Results from your various cash flow projections can be posted on a graph such as the one on **page 37**. This will give anyone looking at the information a quick summary of your company's long-term planning. It should also be noted that although a cash flow statement can be prepared for any period of time, it is usually advisable to match your statement with your fiscal year (which may or may not be January 1st).

Explanation of Terms

1a. Projected – Check this box if you are preparing a projected cash flow statement.

NOTE Somewhere on this form, state

whether this projection is a worst case, an average case, or a best case scenario.

1b. Actual – Check this box if you are preparing a cash flow statement based on actual results.

Cash flow is actually quite easy to understand: if your company spends more than it takes in, soon you will be bankrupt.

POWERPOINT

NOTE Preparing an actual cash flow statement is a good way to sharpen your future projections.

2. Beginning CASH

BALANCE – Start with the first month of your business cycle. Enter your start-up capital or cash on hand balance from the previous

month's end (also referred to as your opening cash balance, surplus cash, or total cash in the bank at the first of the month). If you don't know this exact figure, it will have to be projected.

NOTE If your business is new, you will have to base your projections on your market research and industry trends. If you have an established business, you can use previous financial statements.

3. CASH IN – Estimate all cash revenues your company expects to take in during the month (see the chart on **page 84 & 85** at the end of this guidebook for sample operating ratios).

3a. Cash Sales – Estimate all the cash revenues your company expects to take in specifically from the sale of your goods or services. Include cleared checks and credit card slips. Omit accounts re-

The primary source of cash revenue in your business will be from sales but your sales will vary from month to month because of seasonal patterns and other factors.

ceivable sales unless cash is actually received. Also omit orders taken and invoices sent out where no cash has been received. If it is important you may want to further divide this section into several categories, like sales of widgets, sales of shoes, etc., depending on how useful you think this information will be.

NOTE The primary source of cash revenue in your business will be from sales but your sales will vary from month to month because of seasonal patterns and other factors. So it is important to determine if your monthly sales (cash receipts) will produce enough income to pay each month's bills.

Also, keep in mind that it is much easier and more accurate to project expenditures than to project sales; sales projections are very critical to the success of your company and often wildly inaccurate. Thus, more research and extra precautions should be evident and reflected in your actual numbers. This indicates seriousness on your part to accurately represent the future of your company.

3b. A/R Collections – Estimate the amount your company expects to collect from its sales on account. Some cash flow statements further break down this category into: collections from last month's sales, collections of sales from two months ago, and collection from sales more than two months ago. This may be particu-

larly important if the majority of your sales will be credit sales.

3c. Interest Income – Estimate interest from investments, marketable securities and bank accounts.

3d. Sale of Fixed Assets – If you plan to sell any fixed asset your company owns such as a car, building, machine or piece of office furniture, estimate the amount you expect to receive.

3e. Loans Received – Project any borrowed amounts you expect to take possession of during the month.

3f. Other Cash Sources – Estimate all other sources of cash that you expect to receive during the month. Include items like rent income, capital gains

CASH OUT –
*Project all fixed
 and controllable
 expenses for the
 month.*

on shares sold, and dividends received from investments.

4. CASH OUT – Project all fixed and controllable expenses for the month.

Include any amounts that will be written by check, bearing in mind that if, you wrote a check in January for the full year's insurance, the amount of the check would be put in the January column and nothing would be entered for the rest of the year (this procedure is quite different when you enter the payments in your accounting records).

Furthermore, bear in mind that if some of the expense items listed in

A cash flow projection is a management and planning tool that can eliminate much of the anxiety that can plague you when starting out and further down the road during lean periods.

POWERPOINT

this format are not applicable to your business or may be lacking, make sure you add them. Try and make all categories as appropriate to your

situation as possible as well as reflect your bookkeeping system as much as possible.

NOTE A purchase order placed with a suppliers, a bill, or even a mailed check is not a cash expenditure. A check that clears your bank account is a cash expenditure. By keeping all of the above in mind you can forecast cash flow in a reasonably intelligent manner.

Depreciation of machinery, buildings and other equipment and furniture should not be included in a cash flow statement.

4a. *Inventory & Raw Material Purchases* –

Estimate inventory purchases intended to be resold to the public, that you expect to make during the month. Also, include any parts and materials used to manufacture goods intended for sale. You may find it useful to further break down this section to keep track of key items and further control costs.

4b. *Staff Salaries & Wages* –

Estimate all base salaries and wages as well as overtime or bonuses paid. You may want to further breakdown this category to keep track of administrative, manufacturing and selling labor costs.

4c. *Payroll Expenses* – Estimate all extra payroll expenses including paid vaca-

Estimate amounts needed for periodic expenditures such as painting or decorating.

tions, paid sick leave, health insurance, unemployment insurance, security taxes and other payroll taxes. This figure is usually between 10 to 45% of the amount entered for Staff Salaries & Wages.

4d. *Outside Labor & Services* –

Estimate amounts if any expected to be paid for outside labor or temporary services for specialized or overflow work, as well as subcontracting and consulting services.

4e. *General Supplies* – Estimate amounts expected to be paid for office and operating supplies (supplies are items purchased for use in the business but are not for resale).

4f. *Repairs & Maintenance* – Estimate amounts needed for periodic expenditures such as painting or decorating.

4g. *Advertising* – Estimate amount needed for marketing your products or services. Amount should be adequate to maintain sales volume.

4h. *Car & Travel* – Estimate amount for use of personal car if any, as well as, freight, postage and shipping charges. Include parking charges.

4i. *Shipping & Delivery* – Estimate amount for shipping, delivery, postage and freight costs.

4j. *Legal & Accounting Fees* – Estimate legal and bookkeeping services.

4k. *Rent Payments* – Estimate rent or leasehold payments only used in your business.

NOTE It is important when calculating your cash flow that you enter rent and lease payments only when you pay them. If you pay in three-month chunks, enter payments every three months. Do not split them up as you would when you enter them in your accounting books.

4l. *Telephone* – Estimate all telephone charges, including long-distance and computer modem charges.

4m. *Utilities* – Estimate water heat, light and power consumption charges.

*The engine
which drives En-
terprise is not
Thrift, but Profit.*
KEYNES

- 4n. *Insurance* – Estimate amounts needed for coverages on business property and products including fire and liability as well as worker’s compensation. Exclude executive life. This should be included in owner’s withdrawal.
- 4o. *Licenses & Permits* – Estimate amount needed for licenses & permits.
- 4p. *Interest Charges* – Estimate interest charges on loans, bank overdrafts, and lines of credit (accounts payable).

NOTE If the purpose of your cash flow statement is to help you figure out how much money you want to borrow, this interest figure may be very difficult to estimate. Consequently, you may decide to leave the line blank for now. If it is likely to be a small amount, you may decide to omit it altogether.

- 4q. *Federal Income Tax* – Enter estimated quarterly payments you will make to the IRS.

NOTE If you are a new business no quarterly payments are necessary until after your first fiscal year, since the IRS has no information to calculate your payments.

- 4r. *Other Taxes* – Estimate real estate taxes, inventory taxes, sales tax, and excise tax, if applicable.
- 4s. *Other Operating Expenses* – Estimate any other operating expenses for which separate accounts would not be practical such as dues & subscriptions, packaging costs and miscellaneous expenses incurred prior to first month projections and paid for after start-up.

4t. *Loan Principle Payments* – Estimate the monthly amount to be paid if you are paying off a mortgage on any buildings or property, an operating loan or loan for a vehicle. For example, if you borrow \$43,000 to purchase a half-ton truck and monthly payments are \$1,000 with the first payment due in March, then \$1,000 will be entered in line 19 for each month beginning in March.

Enter estimated quarterly payments you will make to the IRS.

NOTE You may want to include interest in this column to simplify calculations.

4u. *Fixed Asset Payments* – Estimate amounts if you are renting, leasing or financing equipment.

4v. *Capital Expenditures & Start-up Costs* – Enter your start-up costs here. As well, estimate money, if any, spent for the purchase of a fixed asset such as a vehicle, equipment, building, leasehold improvements, shelving, computer or a filing cabinet. List the amount for the month when the check was written.

4w. *Owner's Withdrawal* – Estimate here the amount of money you need to live on, the amount of money you pay yourself, or the amount you expect to withdraw from the company bank account for whatever reason. Include payments for such things as owner's income tax, social security, health insurance, executive life insurance premiums, as

well as cash dividends paid to stockholders.

5. **Total CASH OUT** – Total all cash payments for the month.
6. **CASH FLOW** – Cash flow is calculated by subtracting *Total CASH IN* by *Total CASH OUT*. If the result is a loss, put it in brackets, use a red pen (black for a gain), or use a negative sign. And more importantly however, if the deficit is large, an operating loan will be required or increased to cover the deficit. On the other hand, if the surplus is large, excess funds should be applied to any operating existing loans.

NOTE Some owner-managers also like to

include a *Cumulative Cash Flow* entry. *Cumulative Cash Flow* adds the previous months total to the new months total.

7. **CASH Balance** – Your *Cash Balance*, also referred to as your closing cash balance or cash position, is calculated by adding your *Beginning Cash Balance* and your *Cash Flow*. This result is then automatically posted to the next month as your beginning or opening cash balance.

Cash flow problems can result from poorly adjusted mark-ups, pilferage, and incorrect tax reporting.

SUPERTIP

8. **Essential OPERATING DATA** – The following data totals are not part of a cash flow statement but they do provide important information for management decision making. It is from these figures that the complete cash flow projection can

be evolved and shown in the above form.

8a. Sales Volume – This is a very important figure and should be estimated carefully, taking into account size of facility and employee output as well as realistic anticipated sales (do not include orders received. This figure includes all sales on account.

8b. Accounts Receivable – This figure includes previous unpaid credit sales plus current month's credit sales, less amounts received current month. Don't forget to deduct you anticipated bad debts.

Your "Cash Balance," also referred to as your closing cash balance or cash position, is calculated by adding your "Beginning Cash Balance" and your "Cash Flow."

8c. Bad Debts – Your bad debt ratio is usually projected using industry standards as a percentage of your total accounts receivable. Bad debts should be subtracted from **8b** in the month anticipated.

8d. Inventory on Hand – This figure is estimated by taking your estimated last month's inventory plus merchandise received and/or manufactured in the current month minus the amount sold in the current month.

8e. Accounts Payable – This figure is estimated by taking your previous estimated accounts payable plus current month's payable minus amount paid during month.

8f. *Depreciation* – This figure is established by your accountant, or can be estimated by taking the value of all your equipment and dividing it by its useful life (in months) as allowed by Internal Revenue Service.



*Even though
work stops, ex-
penses run on.*
**CATO THE
ELDER**

AVOIDING THE CASH FLOW CRUNCH

WHILE INITIAL under capitalization can often be blamed for causing cash flow problems, more often than not it can also be blamed on poor fiscal management.

During seasonal surges, emergency conditions, slow collection periods, management miscalculations, competitive pressures, inflation, and other uncontrollable external pressures, your cash flow may be insufficient to operate a business effectively.

Thus, in order to save yourself from the bankruptcy blues heed the advice contained in the following **30** strategies for avoiding the cash flow crunch:

Control your overhead as if it was the fuse to a stick of dynamite.

1. **Avoid grand-opening posturing, overblown staffs, grandiose ads, lush office décor, and in general, all uncontrolled poorly thought out overhead expenditures.** This problem is most likely to rear its ugly head if at one time you belonged to a big organization where money was abundant. Don't think you're bigger than you really are. Always keep in mind that small businesses and particularly start-ups don't have the people nor the money to tide it over problem periods. The fundamental rule to follow is don't spend any money until you absolutely have to. Control your overhead as if it was the fuse to a stick of dynamite.
2. **Borrow money only to the extent**

needed. Don't let your equity to debt ratio get out of control. Not only will potential investors pass you by, but having to pay large monthly interest and principle payments on a loan you didn't really need in the first place can create cash flow problems otherwise avoided.

3. **Carefully monitor rapid increases in credit sales.**

In a business in which sales are growing, inventory and accounts receivable are also probably growing. These different areas of growth can affect income and cash flow. For example, as sales rise, inventory is depleted and must be replaced. For many companies, where a large portion of sales are purchased on credit, accounts receivable will also increase. Being that receivables are

Carefully monitor rapid increases in credit sales.

usually collected 30 days after the purchase date, this can create a problem because sales expenses however, are most often incurred before receivables are collected. All in all, this means that because receivables have not yet been collected, a substantial increase in sales can quickly deplete a firm's cash reserves.

This problem of cash reserve depletion can be further compounded by:

- unexpected slow periods
- an increase in accounts receivable processing overhead
- a sudden change in the ratio of accounts receivable to cash sales

To illustrate this third point consider

the following example: if actual A/Rs average \$10,000/month when sales are \$200,000/month, a 1% increase in A/Rs compared with total sales would result in A/Rs of \$12,000, a difference of only \$2,000. However, if your sales are \$1,000,000, a 1% increase translates into a \$10,000 difference. If this is not planned for, it might be difficult if not impossible for you to come up with the extra with \$10,000.

NOTE When sales are increasing rapidly is easily possible for accounts receivable to increase out of proportion with your existing accounts receivable to sales ratio.

13. Control your overhead. One of the

When sales are increasing rapidly is easily possible for accounts receivable to increase out of proportion with your existing accounts receivable to sales ratio.

keys to managing overhead costs is to keep these costs in balance with the sales level (see Guidebook #82 for ways of reducing overhead).

- 4. Don't expand too rapidly.** Often firms who are experiencing rapidly increasing sales run into financial problems. The reason for this is that the cash flow generated by increased sales is not sufficient to pay for increased inventory, labor and other current expenses. For example, while you're waiting to get payment from a big credit sale, the power company turns

off your power, because your credit limit with the banks has been exhausted and you couldn't pay. To prevent this situation, expand only as it

can be afforded and be sure of each step.

5. Don't take excessive cash from the business for living expenses.

Business owners should always keep a tight rein on their monthly withdrawals especially when starting out. Almost every new company begins its life with limited capital. It is necessary to project and manage your withdrawals carefully to manage your business intelligently.

6. Don't use depreciation and accounts receivable for operating cash. If depreciation and money from accounts receivable are used for operating cash flow, this

A pre-established credit line provides operation flexibility and, when used properly, can provide a source of funds to meet emergencies or take advantage of investment opportunities.

can result in a lower equity position, making it difficult to borrow money to replace worn-out assets. In this situation, any depreciation amounts should be retained for future expansion, and profits should be used to retire the loan principal. Such a strategy is important for any business.

7. Establish a line of credit with a bank.

A pre-established credit line provides an operation flexibility. When used properly, it can provide a source of funds to meet emergencies or take advantage of opportunities. Another advantage of establishing a line of credit is that it develops a relationship between you and the bank that could facilitate the acquisition of long-

term financing for expansion.

8. Fine-tune your sales and expense projections.

The better you get at estimating your sales and expenses the better you will be able to anticipate cash flow problems specific to your business. To improve your projections:

First, compare your projected operating ratio with the operating ratios of other companies.

Second, learn to recognize seasonal sales patterns (information on seasonal sales patterns and typical operating ratios can be secured from your trade associations).

Third, improve the accuracy of your

The better you get at estimating your sales and expenses the better you will be able to anticipate cash flow problems specific to your business.

sales and expense projections by comparing your projected cash flow with an actual cash flow prepared using real numbers from your business.

9. Identify and evaluate accelerating techniques for collecting your cash.

Consider the use of lockbox services, preauthorized checks and concentration banking (see **page 70** Strategy #25 for a more detailed explanation of these and other strategies to shorten the cash conversion cycle).

10. If business activity is generated by contracts, consider negotiating the payment time as well as the price. This technique will improve overall cash

flow. It also will affect expenses because less cash is needed to carry the activities of the business, thus reducing interest costs. An example of this technique is as follows: instead of requesting payment at the end of the project, schedule monthly or weekly payments for completed work.

You can accomplish this in part by requiring deposits for materials purchased during the production process.

If credit is being extended to customers, be wary of slow collections.

11. If credit is being extended to customers, be wary of slow collections. It's amazing how many people reveal a warped time perspective when making cash flow projections, as they fail to consider the delay in receiving cash once their business starts as well as the continuing impact

of slow collections once their business is underway. For example, if a credit sale is made during the first week of business, very often the proceeds from that sale won't be collected for ninety days, and so on for the second and third sale. The result being, that if you grant extensive credit to your customers, you need to cover operating expenses for at least 3 months before sales can start to contribute to your cash flow in a meaningful way.

12. If credit is being extended to customers, take steps to control the length of your accounts receivable collection period. It is also a good idea to take steps to control the length of your accounts receivable collection period – the shorter the

better. You can do this by:

- billing as soon as goods are delivered or services rendered (don't wait till some future time or the end of the month)
- invoicing on a regular basis; offering discounts for early payments
- adding penalties to late payments
- being more selective to whom you extend credit
- keeping meticulous track of payment deadlines

Tightening up credit policies too much may result in the loss of valued customers who decide to patronize competitors with more lenient policies.

NOTE Tightening up credit policies too much may result in the loss of valued customers who decide to patronize competitors with more lenient policies.

13. Invest excess cash. Excess cash should be invested in easily accessible, interest bearing low-risk accounts such as savings accounts, short-term certificates of deposit or U.S. Treasury notes. The money should not be used for cash operating expenses or to avoid a shortfall when cash is needed. Keeping excess cash on hand reduces both the growth and the return on investment.

14. Keep a tight rein on inventory. To improve your cash flow position:

- take advantage of discounts offered by your suppliers
- make sure your inventory achieves an optimum turnover rate (buy goods that

are cost-effective and necessary as opposed to ones that just sit on your shelves and gather dust

- periodically discount unsold inventory that costs money for storage and increasingly approaches obsolescence

15. Lease equipment instead of buying it at its full price.

This will help improve your cash flow.

NOTE To its disadvantage leasing, does not allow net worth to build over time (unless you have a lease-purchase option).

16. Make sure you make adequate income tax projections so you can meet those obligations

In good cash flow management, your object is to get your customer's money as fast as possible and keep your own money as long as possible.
SUPERTIP

when they become due. Income and payroll tax obligations can also affect cash flow. If a business is profitable and growing, cash that should be retained for income tax payment and payroll tax can easily be spent for other items that support growth. This results in a cash shortage when income taxes are due. To avoid this shortage, make adequate projections and analyze current income statements to determine future tax obligations. As these obligations are determined, cash should be set aside.

17. Monitor your highest costs. All expense categories on an income statement should be reviewed to identify opportunities to reduce expenses.

The first place to look for cost reduction opportunities is those cost categories highest as a percentage of sales. Determining your highest costs can guide you on how to allocate time and resources toward cost reductions.

- 18. Offer discounts for early payment.** Not taking advantage of cash discounts by paying bills promptly can improve your immediate cash flow, but can also negatively affect profitability. On the other hand, by paying early, your costs will be lower and profit margin higher, but your cash flow could be strained. A business should consider taking advantage of discounts, but should also know when and how to capitalize on them.

To me the important thing is not how much money I have, but what the money is doing.
J. PAUL GETTY

- 19. Perform a quarterly or monthly budget analysis.** Good cash flow management means comparing your projected cash flow statement (budget) with your business's actual performance at least on a quarterly basis,

preferably monthly. If your analysis shows that you have gone over budget in some areas you will have to take steps to make future cuts in those or other areas. Realize that your cash flow can change literally overnight if perhaps several of your key salespersons quit, new competitors open up, or a new technological breakthrough renders half your inventory obsolete.

NOTE It can also be quite helpful to prepare a monthly income statement as well.

20. Prepare your budget yourself. An excellent budget prepared by an employee or accountant is virtually useless if the owner is not committed to it.

Budget preparation educates the owner to the realities of the business. When the owner has someone else prepare the budget, the control of the business has been delegated to that person.

NOTE Flexible budgeting in response to actual business performance is the mark of a shrewd business person. Too rigid adherence to the budget often leads to poor profit performance and even bankruptcy.

21. Reduce owner's compensation if cash flow is tight. One way to re-

One way to reduce costs during an expansion phase is to reduce the owner's compensation until the business is in a position to pay the owner better.

duce costs during an expansion phase is to reduce the owner's compensation until the business is in a position to pay the owner better.

22. Research credit customers carefully to reduce your bad debts ratio.

The credit a company extends to its customers can be crucial in its impact on cash flow if the customers do not pay on time. New businesses and growing businesses often do not have the advantage of previous experience with their customers and can find themselves extending credit to high-risk customers.

NOTE Contact Dun & Bradstreet for a credit report on a potential customer.

23. Set aside money for emergencies.

Many businesses fail simply because they do not have money set aside for emergencies, they operate too close to the margin. After determining cash needs, a certain amount should be budgeted to cover unexpected contingent liability or to compensate for slow turnover in receivable.

NOTE Having an emergency fund should be considered a necessity rather than a luxury.

24. Set aside money for expansion and other opportunities. Having an expansion fund, or a special fund set aside to take advantage of opportunities, not only reduces stress for the owner, but greatly increases

The CCC represents the time in which working capital is tied up in covering production costs.

your flexibility to adapt and change.

25. Shorten the *cash conversion cycle* for your business. The CCC represents the time in which working capital is tied up in covering production costs. If a business owner is able to shorten the CCC, the need for external financing and the resulting interest expense will be smaller, thus creating higher profits. In general, aim at faster collection of receivables and slower disbursement of payables. More specifically:

- *Ask customers to use depository transfer checks (DTC)* – Ask the customer to pay with this simple and relatively inexpensive method of transferring funds.

- *Ask for pre-authorized checks* – Here the customer signs an authorization allowing a bank to draw checks against his or her account at regular intervals.
 - *Concentrate your banking* – Centralize payment receiving locations at one bank.
 - *Consider trade credit discounts for early payment* – Compare the cost of not taking the discount (as explained later) to the benefits of using your cash elsewhere.
 - *Pay as late as possible* – Use pre-authorized checks, depository transfer checks and automated clearing houses to pay as late as possible without passing the discount or the credit period.
- Forecast the timing of receipts based on the past and arrange to pay suppliers accordingly.*
- *Synchronize cash flows* – Forecast the timing of receipts based on the past and arrange to pay suppliers accordingly.
 - *Use a float* – Mail checks from more remote areas, then evaluate and take advantage of the time it takes the supplier to process the payment and the time it may take that bank to clear the check. You can use your cash for other purposes in the meantime
 - *Use a lockbox service* – Lockbox services are offered by your post office. Using this service, a customer has the option of mailing their payment which can then be collected by the bank.
 - *Use a zero-balance account* – Funds

are automatically transferred to these accounts by the bank, when they are needed for clearance of checks.

- *Use an automated clearing house (ACH)* – Using an ACH allows automatic electronic transfer of funds from your customers account to yours.

26. Tighten your credit policy.

As credit and terms are tightened, more customers will pay cash for their purchases, thereby increasing your cash on hand and reducing your potential for bad debts. However, while this policy can be helpful in the short run, it may not be advantageous in the long run. Looser credit allows customers more opportunity to purchase your products or services.

Cash is king.
**ROBERT
MAXWELL**
CEO

27. Try and keep your costs within industry averages. Comparing financial ratios allows a business to identify costs and relationships that are out of line with others in the industry. Following industry averages can improve cash flow.

28. Use short-term financing

when needed. Incorrect use of short-term financing is a major problem for business start-ups. A small business should borrow money only when needed.

Short-term financing is essential to a seasonal business. However, poor planning can turn short-term loans into long-term debt, putting the business in a precarious financial position.

NOTE Loans from various financial institu-

tions are often necessary to cover short-term cash flow problems. Revolving credit lines and equity loans are common examples.



29. Use your customer's funds. To

take advantage of customer funds:

- ask for advance payments or deposits; get signed purchase orders or contracts
- bill long-distance phone calls to customer's account
- charge purchases on customers credit card accounts
- have a cash only policy (this may reduce your overall sales but will increase your cash flow)

Loans from various financial institutions are often necessary for covering short-term cash flow problems.

Where to Find Industry “Financial & Operating Ratios”

THE PUBLICATIONS below should be available at your local public library. You may also be able to find them at SBCs, SBIs, SBA offices and even banks. Each provides useful financial & operating ratios, which can be used as guidelines for making projections.

Dun & Bradstreet Information Services – *Industry Norms & Key Business Ratios*. DeskTop Edition. New York (annual), also available on diskette. Gives balance sheet and income statement statistics, as well as, financial ratios for over 800 lines of business, arranged by 4-digit SIC industries. D&B also publishes *Key Business Ratios* which contains over 700 pages of British financial ratios and % figures for some 378 SIC industries in the U.K.

Financial Research Associates – *Financial Studies of the Small Business*, P.O. Box 7708, Winterhaven, FL 33883-7708 (annual). Contains financial & operating ratios for about 50 lines of small business (those with capitalization under \$1 million – retail, wholesale, services, contractors & professional services, and manufacturers – by asset size categories.

Robert Morris Associates – *Annual Statement Studies*, One Liberty Place, Philadelphia, PA 19103. Contains financial and operating ratios for more than 360 lines of business (by 4-digit SIC number). Includes manufacturers, wholesalers, retailers, services, and contractors.

Tryo, Leo Ph.D – *Almanac of Business & Industrial Financial Ratios*, Englewood Cliffs, NJ 0763: Prentice-Hall (annual). Lists financial & operating ratios for about 160 industries arranged by a 4-digit industry classification similar to the SIC. Features IRS data on 3.7 million U.S. corporations. Provides 50 performance indicators.

U.S. Bureau of the Census – *Quarterly Financial Report for Manufacturing, Mining, and Trade Corporations*, Washington, DC: U.S. Government Printing Office. Contains quarterly income statement and balance sheet data as well as selected financial & operating ratios classified by industry (22 manufacturing industries) and by asset size.

PRODUCT COSTS SHEET

Product Costs Sheet FOR: Fred's Gold Works

DATE: Oct. 15, 1995

Product: 10 kt Gold Plated Chain (wt. 10 g)

Units: 4000

MATERIALS

| Material Description | Quantity | Cost/Unit | Total |
|--|------------|-----------|---------------------|
| <i>10 kt gold</i> | 2000 grams | \$7/g | 14,000.00 |
| <i>yellow metal alloy to create 8000 ft of chain</i> | 30 kg | \$10/kg | 300.00 |
| <i>yellow metal alloy to create 4000 clasps</i> | 0.8 kg | \$10/kg | 80.00 |
| | | | |
| | | | |
| ADD Total Inbound Freight Costs | | | 35.00 |
| A) TOTAL For Materials | | | \$ 14,415.00 |

LABOR

| Activity Description | Hours/Unit | Rate | / Unit | Total |
|--|------------|---------|--------|-------------------|
| <i>Melting alloy and pouring into clasp molds</i> | | \$10/hr | 20 hr | 200.00 |
| <i>Melting alloy and making wire for chain</i> | | \$10/hr | 30 hr | 300.00 |
| <i>Making chains</i> | | \$10/hr | 100 hr | 1,000.00 |
| Assembling Product (<i>adding clasps to chain</i>) | | \$8/hr | 125 hr | 1,000.00 |
| Finishing Product (<i>electroplating; polishing</i>) | | \$8/hr | 125 hr | 1,000.00 |
| ADD Total Tooling Costs | | | | 1,000.00 |
| ADD Total Set-up Charges | | | | 355.00 |
| B) TOTAL For Labor | | | | \$4,855.00 |

ADDITIONAL COSTS

| Packaging Description: 4 x 4 x 0.8 cm box (volume = 12.8 cm ³ ; surface area = 40 cm ²) | | | |
|--|-------------------|---------------------|--------------------|
| Packaging Materials | Quantity | Cost/Unit | Total |
| cardboard (gold cover, white inside) | 18 m ² | \$10/m ² | 180.00 |
| cotton filler | 10 kg | \$7.50/kg | 75.00 |
| ADD Packaging Set-up Charges | | | 45.00 |
| ADD Packaging Tooling Costs | | | 200.00 |
| ADD Packaging Inbound Freight Costs | | | 20.00 |
| ADD Packaging Labor Costs | | | 480.00 |
| TOTAL Packaging Costs | | | \$1,000.00 |
| ADD Royalty Payments to Inventor(s) | | | |
| ADD Plant Overhead (if only product) | | | 550.00 |
| ADD Other Miscellaneous Costs | | | 100.00 |
| ADD | | | |
| C) TOTAL For Additional Costs | | | \$1,650.00 |
| TOTAL Product Costs (A + B + C) | | | \$20,920.00 |
| # of UNITS | | | 4000 |
| COST / UNIT | | | \$5.23 |

DIRECT MAIL PROMOTION COSTS SHEET

PROMOTION: *Brochure Mailing for Jack's Jewelry Warehouse*

Date: *Oct. 15, 1995*

| FIXED COSTS | | Materials & Labor |
|--------------------------|---|-------------------|
| CREATIVE | Writing Copy | 150.00 |
| | Design and Layout | 75.00 |
| | Artwork (mechanicals and finished art) | 350.00 |
| | Photography (photos, models/talent, retouching) | 200.00 |
| PRINTING PREP | Typesetting (typography, proofing, corrections) | 60.00 |
| | Paste up Camera-ready Copy | 160.00 |
| | Half-tones, Color Separations | 40.00 |
| | Platemaking (camera work, proofs, negatives, stripping, plates) | 30.00 |
| LIST | List Selections (zip code, hotline names, other) | 30.00 |
| | Merge/Purge (updating lists) | 20.00 |
| OVERHEAD | Percentage of Overhead for Advertising & Mailing Depts. | (20%) 250.00 |
| OTHER | Marketing research (questionnaire) | 235.00 |
| TOTAL | | \$ 1600.00 |

| VARIABLE COSTS | | Unit Cost |
|-----------------|---|---------------|
| PRINTING | Letter (paper) | 0.015 |
| | Outer Envelope | 0.02 |
| | Reply Envelope | 0.015 |
| | Order Form, Response Vehicle, Reply Card (BRC) | 0.01 |
| | Brochure, Catalog (<i>NOTE price quoted is for 6,000 brochures</i>) | 0.75 |
| | Newsletter | |
| | Other Inserts (lift letter, buck slip, etc.) | 0.01 |
| LIST | List Rental | 0.05 |
| MAILING | Folding & Inserting | 0.01 |
| | Addressing and Labeling | 0.005 |
| | Sorting, Metering and Mailing | 0.01 |
| POSTAGE | First Class, Bulk Rate, Alternative Delivery Methods | 0.75 |
| OTHER | | |
| TOTAL | | \$1.65 |

Calculation Formula (M = # of mailings) 1000 10,000 100,000 Million 6000

| | | | | | | |
|------------------------|---|-------|--------|---------|-----------|--------|
| Cost/# of Units | (Fixed Costs) + (Variable Costs x M) = | 3,250 | 18,100 | 117,100 | 1,651,600 | 11,500 |
| Unit Cost | [(Fixed Costs) + (Variable Costs x M)] / M= | 3.25 | 1.81 | 1.67 | 1.65 | 1.92 |

GM, BE, ROI & PROJECTED PROFIT SHEET

PROMOTION: Gold Chain via. DM for Jack's Jewelry Warehouse

Date: Oct. 15, 1995

| Item # | Description | Formula | Subtotal | Total |
|---|--|-----------------------------|-----------|----------|
| Variable Costs (per unit) & Fixed Operating Costs | | | | |
| 1 | Selling Price of Product or Service (do not include sales tax) | | 19.95 | |
| 2 | ADD Other Charges (postage & handling etc.) | | 3.00 | |
| 3 | TOTAL PRICE OF PRODUCT OR SERVICE | 1 + 2 | | 22.95 |
| 4 | Owner's Cost of Product or Service | | 6.00 | |
| 5 | Handling Expense & Order Processing | | 1.00 | |
| 6 | Package Expenses (mailing carton, tape, etc.) | | .50 | |
| 7 | Shipping (postage or UPS charges) | | 1.50 | |
| 8 | Premium Costs Including Handling (if premium offered) | | | |
| 9 | Special Business Sales, Hidden or Use Tax, if any | 3 x (7) % | 1.68 | |
| 10 | TOTAL COSTS OF FILLING THE ORDER | add 4 TO 9 | | 10.68 |
| 11 | Estimated % of Returns (expressed as a decimal) | | 0.03 | |
| 12 | Postage & Handling of Returns | 5 + 7 | 2.50 | |
| 13 | Refurbishing Returned Merchandise | 10% of 3 | 2.00 | |
| 14 | Total Costs of Handling Returns | 12 + 13 | 4.50 | |
| 15 | CHARGEABLE COSTS OF HANDLING RETURNS | 11 x 13 | | 0.14 |
| 16 | Estimated % of bad debts (expressed as a decimal) | | 0.03 | |
| 17 | CHARGEABLE COSTS OF BAD DEBTS | 3 x 16 | | 0.69 |
| 18 | Estimated % of Sales via Credit Cards (as a decimal) | | 0.90 | |
| 19 | Credit Card Processing Charge | (5) % OF 3 | 1.15 | |
| 20 | CHARGEABLE COST OF CREDIT | 18 x 19 | | 1.04 |
| 21 | ADMINISTRATIVE OVERHEAD PER UNIT | | | .50 |
| 22 | OTHER COSTS PER UNIT | | | .10 |
| 23 | TOTAL VARIABLE COSTS | 10 + 15 + 17 + 20 + 21 + 22 | | 13.15 |
| 24 | Unit Profit After Variable Costs | 3 - 23 | 9.80 | |
| 25 | % of Final Sales (expressed as a decimal) | 1.0 - (11) | 0.97 | |
| 26 | Net Unit Profit | 24 x 25 | 9.51 | |
| 27 | Credit for Returned Merchandise | 4 x 11 | 0.18 | |
| 28 | GROSS MARGIN (NET PROFIT PER ORDER) | 26 + 27 | \$ 9.69 | |
| 29 | TOTAL FIXED OPERATING COSTS (include mailing, advertising etc.) | | \$ 12,500 | |
| Profit Calculations | | | | |
| 30 | NUMBER OF ORDERS TO BREAKEVEN | 29 / 28 | | 1290 |
| 31 | NUMBER OF ORDERS TO OBTAIN 50% ROI | 1.5 x 30 | | 1935 |
| 32 | NUMBER OF ORDERS TO OBTAIN 100% ROI | 2.0 x 30 | | 2580 |
| 33 | PROJECTED PROFIT IF ? # OF ORDERS RECEIVED | (# of orders x 28) - (29) | 1500 | \$2,035 |
| 34 | PROJECTED PROFIT IF ? # OF ORDERS RECEIVED | (# of orders x 28) - (29) | 3000 | \$16,570 |
| COMMENTS : Projections accurate for 6000 brochures mailed at a cost of \$11,500 and \$1,000 for other costs | | | | |

Three-Month Cash Flow Budget

START-UP CASH FLOW BUDGET

| INCOME | Month 1 | Month 2 | Month 3 |
|-------------------------|------------------|------------------|------------------|
| Infants | 4,560.00 | 7,220.00 | 9,120.00 |
| Preschool | 5,040.00 | 7,980.00 | 13,860.00 |
| Aft. School. | 2,160.00 | 3,420.00 | 5,940.00 |
| Other | 200.00 | 200.00 | 200.00 |
| Total | 11,960.00 | 18,820.00 | 29,120.00 |
| EXPENSES | | | |
| Fixed | | | |
| Rent | 4,080.00 | 4,080.00 | 4,080.00 |
| Insurance | 300.00 | 300.00 | 300.00 |
| Auto | 92.00 | 92.00 | 92.00 |
| Office | 400.00 | 400.00 | 400.00 |
| Account. | 126.00 | 126.00 | 126.00 |
| Phone | 100.00 | 100.00 | 100.00 |
| Subscriptions. | 16.00 | 16.00 | 16.00 |
| Startup Costs | 1,000.00 | | |
| Total Fixed | 6,114.00 | 5,114.00 | 5,114.00 |
| Variable | | | |
| Salaries | 6,358.00 | 9,399.00 | 11,820.00 |
| Benefits | 953.70 | 1,409.85 | 1,773.00 |
| Supplies | 150.00 | 198.00 | 210.00 |
| Advert. | 20.00 | 20.00 | 20.00 |
| Food | 875.00 | 1,225.00 | 1,675.00 |
| Equip. Repair | 125.00 | 160.00 | 210.00 |
| Total Variable | 8,481.70 | 12,411.85 | 15,708.00 |
| Total Expenses | 14,595.70 | 17,525.85 | 20,822.00 |
| Monthly Income | 11,960.00 | 18,820.00 | 29,120.00 |
| Less Expenses | 14,595.70 | 17,525.85 | 20,822.00 |
| Carry Forward | 0.00 | -2,635.70 | -1,341.55 |
| Net Gain | | | |
| (Cum. Cash Flow) | -2,635.70 | -1,341.55 | 6,956.45 |

Sources of Cash Worksheet

Cash Flowing INTO Your Business

Cash on Hand

Sales & Revenues

Sales

Service Income

Deposits on Sales or Services

A/R Collections

Miscellaneous Income

Interest Income

Sale of Long-term Assets

Liabilities

Loans Received

Equity

Owner Investments (sole-p or part.)

Contributed Capital (corp.)

Sale of Stock (corp.)

Venture Capital

Other Cash Sources

| |
|----------------------|
| <input type="text"/> |
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TOTAL CASH AVAILABLE

Cash to be Paid Out Worksheet

Cash Flowing OUT OF Your Business

Start-up Capital Expenditures

Business License (annual expense)

DBA Filing Fee (one-time cost)

Other Start-up Costs:

| |
|--|
| |
| |
| |

Inventory

Cash Out for Items for Resale

Raw Materials Purchases

Total Start-up Expenses

Variable Expenses (controllable)

Advertising

Car & Travel

Shipping & Delivery

General Supplies

Legal & Accounting Fees

Outside Labor & Services

Packaging Costs

Payroll Expenses

Repairs & Maintenance

Sales Salaries

Miscellaneous Direct Expenses

Total Variable Expenses

Fixed Expenses (overhead)

Administrative Salaries

Insurance

Interest Charges

Licenses & Permits

Rent Payments

Telephone

Utilities

Miscellaneous Indirect Expenses

Total Fixed Expenses

Long-term Asset Purchases

Fixed Asset Payments

Liability Payments

Debts, Loans and A/Ps

Federal Income Tax

Other Taxes

Owner Equity

Owner's Withdrawal

TOTAL CASH TO BE PAID OUT

Cash Budget

| For three months, ending March 31 19__ | January Budget | Actual | February Budget | Actual | March Budget | Actual |
|--|-------------------|--------|--------------------|--------|-----------------|--------|
| Expected Cash Receipts | | | | | | |
| Cash sales | | | | | | |
| Collection on accounts receivable | | | | | | |
| Other income | | | | | | |
| Total cash receipts | | | | | | |
| Expected Cash Payments | | | | | | |
| Raw materials | | | | | | |
| Payroll | | | | | | |
| Other factory expenses (including maintenance) | | | | | | |
| Advertising | | | | | | |
| Selling Expense | | | | | | |
| Admin. Expense (including salary of owner- manager) | | | | | | |
| New plant and equipment | | | | | | |
| Other payments (taxes, estimated income tax; repayment of loans; interest) | | | | | | |
| Total cash payments | | | | | | |
| Expected cash balance at beginning of the month | | | | | | |
| Cash increase or decrease (4 – 13) | | | | | | |
| Expected cash balance at end of month (14 + 15) | | | | | | |
| Desired working cash balance | | | | | | |
| Short-term loans needed (17 – 16, if 17 is larger) | | | | | | |
| Cash available for dividends, capital cash expen- ditures, and/or short investments (16 – 17, if 16 is larger) | | | | | | |
| Capital Cash: | | | | | | |
| Cash available (item 19 after deducting dividends etc.) | | | | | | |
| Desired capital cash (item 11, new plant equip- ment) | | | | | | |
| Long-term loans needed (21 – 20, if 21 is larger). | | | | | | |

SAMPLE Detailed Operating Ratios for Book, Greeting Cards & Miscellaneous Publishing Businesses

OPERATING RATIOS

| Performance Indicator (in percentages) | All | \$100,000 to \$250,000 in Assets |
|---|------------|---|
| Cost of Operations | 39.5 | 30.0 |
| Rent | 2.3 | 3.4 |
| Taxes Paid | 3.0 | 2.4 |
| Interest Paid | 4.4 | 1.1 |
| Depreciation, Depletion, Amortization | 4.1 | 3.4 |
| Pension and Other Benefits | 2.5 | 1.4 |
| Other | 42.3 | 41.6 |
| Officers Compensation | 3.0 | 11.6 |
| Oper. Margin Before Officers Compensation | 1.9 | 16.7 |

In Thousands of Dollars

| | | |
|-------------------------|-------------|-----------|
| Average Total Revenues | \$2,952,000 | \$527,000 |
| Net Receivables | \$672,000 | \$10,000 |
| Inventories | \$309,000 | \$31,000 |
| Total Assets | \$3,494,000 | \$176,000 |
| Notes and Loans Payable | \$1,157,000 | \$54,000 |

Selected Financial Ratios

| | | |
|--------------------------------|------|------|
| Current Ratio | 1.2 | 1.5 |
| Quick Ratio | 0.6 | 0.7 |
| Net Sales to Working Capital | 14.6 | 22.5 |
| Inventory Turnover | 3.5 | 5.2 |
| Receivables Turnover | 4.1 | — |
| Total Liabilities to Net worth | 2.2 | 1.2 |

Selected Financial Factors (in percentages)

| | | |
|---------------------------------------|---------------|-------------|
| Debt Ratio | 68.9 | 53.7 |
| Return on Assets | 7.9 | 18.5 |
| Profit Margin Before Income Tax | 5.5 | 5.1 |
| Profit Margin After Income Tax | 4.0 | 4.9 |
| Number of Enterprises Compared | 10,864 | 1644 |

Source: Consult *Business and Industrial Financial Ratios* 1996 edition for other businesses.

Selected Operating Ratios for Small Businesses

OPERATING RATIOS

| | Cost of Sales | Gross Profit | Operating Expenses | Operating Profit |
|----------------------------------|---------------|--------------|--------------------|------------------|
| MANUFACTURING | | | | |
| Electronic Components & Acc. | 62.1 | 37.9 | 34.4 | 3.5 % |
| Bread and bakery products | 59.4 | 40.6 | 37.9 | 2.7 |
| Sporting and athletic | 56.7 | 43.3 | 34.5 | 8.7 |
| Jewelry, precious metals | 61.1 | 38.9 | 32.5 | 6.5 |
| Women's dresses | 61.4 | 38.6 | 33.8 | 4.8 |
| Commercial Printing | 59.6 | 40.4 | 35.6 | 4.7 |
| MAIL-ORDER | | | | |
| HOME-BASED | | | | |
| WHOLESALE | | | | |
| Warehouse Businesses | | | | |
| Distributors | | | | |
| Stationery supplies | 66.5 | 33.5 | 31.2 | 2.3 |
| general groceries | 77 | 23.0 | 21.1 | 1.9 |
| Jewelry | 70.1 | 29.9 | 26.1 | 3.8 |
| Sporting Goods and Toys | 68.5 | 31.5 | 29.2 | 2.3 |
| Fresh Fruit and Vegetables | 78.2 | 21.8 | 19.3 | 2.5 |
| SERVICE | | | | |
| Travel agencies | | | 98 | 2 |
| Accounting, & Bookkeeping | | | 86.5 | 13.5 |
| Leasing Equipment | | | 90.8 | 9.2 |
| Motel, hotels and tourist courts | | | 96.5 | 3.5 |
| Computer Programming | | | 95.7 | 4.3 |
| Consulting | | | | |
| RETAIL | | | | |
| Jewelry | 54.0 | 46.0 | 41.2 | 4.8 |
| Books and stationary | 61.5 | 38.5 | 36.7 | 1.8 |
| Women's ready to wear | 59.3 | 40.7 | 37.7 | 3 |
| Gasoline Service Stations | 77.7 | 22.3 | 19.6 | 2.7 |
| Groceries and meats | 76.3 | 23.7 | 21.7 | 2.0 |
| Sporting Goods and Bicycles | 66.2 | 33.8 | 30.1 | 3.7 |

Source: Compiled from *Business and Industrial Financial Ratios* 1996 edition