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## Self Study Guide

### STEP 1: Identify Your Financial Needs

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# STEP 1: Identify Your Financial Needs

## Table of Contents

1.1 Identify Your Financial Needs – Introduction.....	3
1.2 Develop Your Business Plan.....	4
1.3 Analyse Your Current Financial Situation.....	6
1.4 Forecast Your Financial Needs.....	7
1.5 Determine Working Capital Requirements.....	9
1.6 Determine Fixed Assets and Other Costs.....	11
1.7 Test Your Projections.....	13
1.8 Action Items.....	15
Appendix.....	17
Take a Closer Look – New Tech's Financial Statements (see section 1.4).....	17
Income Statements.....	17
Statements of Retained Earnings.....	18
Balance Sheets.....	18
Cash Flow Forecasts.....	20
Statements of Changes in Financial Position.....	20
Financial Ratios.....	21
Key Assumptions.....	23
Monthly Cash Budget.....	24
Sensitivity Analysis.....	26
Break-Even Analysis.....	27
Financial Needs and Financing Requirements.....	29
Take a Closer Look – How to Make Reliable Financial Forecasts (see section 1.4).....	30
Take a Closer Look – Calculating Changes in Working Capital (see section 1.5).....	32
Changes in Financial Position.....	32
Receivables: Collection Period.....	33
Inventory: Turnover.....	33
Payables: Payment Period.....	34
Cash-To-Cash Cycles.....	35
Fluctuating Components.....	35
Take a Closer Look – An Effective Way of Listing Fixed Assets (see section 1.6).....	36
Take a Closer Look – Sensitivity Analysis Tools (see section 1.7).....	37
Take a Closer Look – Break-Even Analysis Tools (see section 1.7).....	43

## 1.1 Identify Your Financial Needs – Introduction

If you're thinking of expanding your business, you'll probably need extra funds to help finance the cost. But how do you determine how much you'll need? Your own company will probably cover some costs, but, ultimately, you'll be borrowing from others. They'll want to know that you're a good risk. It's up to you to prove it.

In Step 1, you take the first important step toward your business's growth. You will gain an understanding of the financial groundwork that must be done (on several fronts) and be better prepared to take actions that will move you forward.

As you look at the scope of the financial work involved, you might decide that you're going to need help and advice from others. This Step will point out some likely resources for you to turn to. In any case, the overview you gain here will keep you on top of the process.

If your finances are already carefully managed and in good order, you're beginning from a position of strength. Well-organized, thorough financial records are a critical starting point for the next levels of financial information you'll need to develop. And if you have good relationships with your banker, your accountant and your lawyer, their knowledge of your current business is another strength to build on.

### **In This Step**

You'll learn the basic process for figuring out how much money you'll need to fund your company's growth. The key activities are described in the pages that follow:

- Develop Your Business Plan
- Analyse Your Current Financial Situation
- Forecast Your Financial Needs
- Determine Working Capital Requirements
- Determine Fixed Assets and Other Costs
- Test Your Projections
- Action Items

### **The New Tech Story**

Follow the fictional company *New Tech Distributors Corp.* (New Tech) as it pursues venture financing. This case example gives you a feeling for the "real" data and strategic decisions you'll be facing.

## **Key Questions**

**Can you answer these key questions about your plans for future growth?**

- How much money does your company need to finance your expansion?
- What about the timing (receiving versus spending cash)?
- Do you need:
  - more fixed assets (machinery or equipment)?
  - more research and development?
  - more working capital (accounts receivable and inventory)?
- How much will you generate from:
  - your own business?
  - commercial banks and other conventional lenders?
  - risk capital investors?
- Which option is best for you?

## **1.2 Develop Your Business Plan**

Before you can decide how much money you require to finance your growing business, you and your management team should be clear about your company's future. Where do you want to be in five years?

You'll need to have a business plan, a written document describing the long-range vision of your company's future. Most business plans include:

- a mission statement outlining corporate priorities;
- a list of the company's strategic and operational objectives; and
- specific plans for meeting the objectives.

As you work through the process of establishing your financial requirements, your business objectives and plans are vital for preparing your short and long-term financial statements and for confirming how financial results will be achieved.

For example, if your plans are to expand into new markets, this will ultimately affect your projected revenue and cost of goods sold, levels of inventories and accounts receivable, and even your fixed asset requirements.

Bfound.com, a Canadian company that successfully attracted venture capital, found that a coherent and compelling business plan was a key foundation in their pursuit of investors. Building Bfound.com's new business plan meant thinking strategically about their future.

### **Think About Your Team**

Preparing to make your case for risk financing will take time, effort and a variety of skills. Plan to draw on the knowledge and expertise of your company's management

team. Also consider whether you should look for help from people such as your accountant or lawyer.

Who on your team could take responsibility for gathering information and describing plans in each of the following aspects of your business? You may want to print this table and complete it for your notes.

<b>Responsibility</b>	<b>Team Member</b>
Company Structure	
Financial Situation	
Products and Services	
Marketing and Sales	
Human Resource Strategies	
Future Opportunities and Challenges	
Research and Development	

### **Tip**

#### **Online Resources for Developing Your Business Plan**

Need to prepare or revise your business plan? There are lots of online resources to help you. Try some of these:

- Interactive Business Planner (<http://www.cbsc.org/ibp/>)
- Business Plans by Bplans.com (<http://www.bplans.com/>)
- Writing a Business Plan with help from inc.com ([http://www.inc.com/advice/writing\\_a\\_business\\_plan](http://www.inc.com/advice/writing_a_business_plan))

### **Entrepreneur Stories**

#### **Bfound.com Plans for Growth**

##### *Planning for Growth*

Canadian success story, Bfound.com, found that building a business plan takes hard work but is essential for preparing for growth - and attracting investors.

Bfound.com (then Beacon Hill Systems) started out primarily as a consulting firm that provided its expertise to other companies. But the firm decided that to grow it would need a new vision of the future. The company's president commented that "the idea is one thing, but the perseverance to get all the pieces to work together can be the hard part." The company partners worked hard to develop a business plan in which Beacon Hill became the developer and marketer of its own turnkey systems and products. For Bfound.com, determining its financing needs meant more than using mathematical formulas to come up with a dollar figure.

The company's partners and advisors had to think strategically about where the company would need to be in the short, medium and long-term. Their plan had to show how Bfound.com could succeed as a small player competing against larger companies and well-financed start-ups from the United States. They decided to act quickly and take

advantage of their status as an early mover. Bfound.com had a good product, but being in the high-tech sector with companies with deep pockets, they had a challenge. They had to demonstrate that their product was vastly superior to what was out there and would service a profitable market niche; or that they had strategic alliances with powerful players in the market.

Their solution was to focus their product development on the most marketable applications for their technology, concentrate their marketing efforts on finding "lighthouse clients" to demonstrate product superiority, and build strategic alliances through consulting to other companies. In this way, Bfound.com was able to demonstrate to investors that they did not just have a good technology, but a product that would sell - and a plan to sell it. Eventually they developed a pitch that included a business plan, a marketing plan, and information on target markets, competition and product positioning.

### 1.3 Analyse Your Current Financial Situation

Once you've developed a business plan describing your company's objectives, then you're ready to start analysing your financial situation. You'll have to figure out how much money you'll need and what it will be used for.

Make sure your financial statements are in order. A list of these statements appears below.

<b>Income Statements</b>	These show a breakdown of your total sales and total expenses.
<b>Statement of Retained Earnings</b>	These show retained earnings accumulated since your company began operations. Retained earnings are important for businesses since this money (internal sources of funds) is used to fund growth (working capital) and buy fixed assets (equipment, machinery, etc.).
<b>Balance Sheets</b>	These show what a company owns (assets) and what it owes its lenders (liabilities) and shareholders (owners' equity).

You begin by examining your financial statements to identify the amount of money you *currently* require in key areas. Then, based on your business objectives and plans, you forecast the amounts you'll need. There are four key areas to consider when you examine your current situation and forecast your needs:

#### Four Key Areas to Consider When Calculating Financial Needs:

1. Working Capital - to pay for day-to-day operating costs;
2. Fixed Assets - for land, buildings, equipment, etc., you need for growth
3. Marketing Costs - for advertising, promotional programs, etc.; and
4. Financial Cushion - a precaution for possible changes in business circumstances.

For example, New Tech, a company producing computer hardware, found that it needed \$1,575,000 to finance its projected growth, including the introduction of a new product line. New Tech's needs break down as shown in the following table.

### **New Tech**

Working Capital	\$200,000
Fixed Assets	\$1,100,000
Marketing Costs	\$225,000
Financial Cushion	\$50,000

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Total	\$1,575,000
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The calculations used to produce these figures are based on careful analysis of financial statements and projections. The next page takes a closer look at how this forecasting is done.

### **FAQ**

#### **How much will it cost to hire someone to prepare financial projections?**

It depends. The more work you do in advance, the less it will cost. Consider other alternatives. For example, you may want to hire a business student to prepare the preliminary financial projections, then hire a professional financial advisor to review them. This would help to reduce the cost of preparing the investment proposal.

Do some preliminary forecasting. Satisfy yourself that the preliminary financial projections indicate a good potential for raising capital. If you do this, you will be more inclined to invest money to prepare a professional investment proposal.

Financial statements that incorporate projections may cost between \$2,000 and \$25,000.

## **1.4 Forecast Your Financial Needs**

Your investment proposal must include forecasts that show how your company will operate as it grows. Once you know your current financial situation and have defined your vision (by setting your growth objectives and producing a business plan), then you can start projecting your financial needs.

### **Why Forecast?**

Your financial statements indicate past performance. This information will certainly interest potential investors. What's more important, they'll look to your company's projected financial statements to see whether your business is a good investment: one that will generate a return on their investment.

Two types of projected financial statements are usually prepared to give investors a clear understanding of where your business is heading:

- annual projections for a period ranging from one to five years; and
- a detailed monthly cash budget for the first year.

## Annual Projections

Detailed annual projections are predictions about your future cash flow. These predictions or forecasts are based on your financial statements. Here are some projections that New Tech used to forecast its financial situation. The company will be asking investors to help finance the building of a new facility - that's an extra \$1.1 million in fixed assets.

This example (forecasts from New Tech's income statements) shows how revenue and expenses are expected to change over the next two years.

	2000 (actual)	2001 (projected)	2002 (projected)
Sales Revenue	\$3,000,000	\$3,900,000	\$4,700,000
General and Administrative Expenses	\$445,000	\$490,000	\$555,000
Special Marketing Expenses	\$17,000	\$220,000	\$100,000

This example (forecasts from New Tech's balance sheets) shows the need for funds for additional fixed assets and indicates the expected growth in accounts receivable.

Balance Sheets Projections	2000 (actual)	2001 (projected)	2002 (projected)
Fixed Asset Addition	\$200,000	\$1,100,000	\$740,000
Accounts Receivable	\$450,000	\$550,000	\$650,000

See a detailed example of a set of financial statements including forecasts in Appendix.

## Monthly Cash Budget

The monthly cash budget identifies your cash balances for each month during the forthcoming operating year. This information will help you decide how much money to keep in the bank for month-to-month expenses and help in negotiating a line of credit. For an example of what a monthly cash budget looks like, see Appendix, *Cash budget projection*.

## Making Reliable Financial Forecasts

Trust is something that is earned, not given. You have to build a relationship with investors, even before they invest in your business. You do this, partly, by presenting reasonable and credible forecasts. Show that you understand and are comfortable with your forecasts.

Financial forecasting must be based on your company's vision, moderated by the experience and insight of your management team. And your forecasts must be supported by reasonable assumptions.

Here is an overview of the process:

- Review your past operating results.
- Analyse expected future market conditions for your various products or services.



- Estimate your future sales volume, price and revenue for each product.
- Estimate future costs based on forecast sales volume and expected cost relationships.
- Deduct income taxes.
- Make accounting adjustments, such as depreciation and amortization.
- Deduct what you expect you will spend on fixed assets, working capital, and financing.
- Include the proposed investments in the forecast.

If you have some experience with accounting and are interested in a more detailed description of the forecasting process, select: Appendix, *How to Make Reliable Financial Forecasts*.

### **Make Your Assumptions Reasonable and Explicit**

The assumptions used to prepare your projected financial statements must be stated clearly, reasonably and consistently. Be sure that:

- the working capital needs, production capacity and personnel requirements you predict are consistent with the level of growth you forecast;
- the growth rate you forecast is reasonable for the market you are in; and
- you can really achieve any gains in market share that you forecast.

For a closer look at how financial assumptions enter into forecasting, see Appendix, *Key Assumptions*.

## **1.5 Determine Working Capital Requirements**

Let's take a look at how you can figure out your working capital requirements.

- Read how it's done
- See an example
- Check your understanding with an exercise

### **How Working Capital Needs Are Determined**

To figure out how much you'll need to fund business growth, consider the four key areas in the financial needs equation:

$\text{working capital} + \text{fixed assets} + \text{marketing costs} + \text{financial cushion} = \text{your financial needs}$
--

Let's look at the first of these four important components — your working capital requirements. Working capital is the amount you need to pay for the day-to-day operating costs of your business. It consists of:

- either cash or near cash accounts that can be converted into cash within the current fiscal year (current assets such as accounts receivable and inventories); and

- financial obligations that will have to be paid within the current operating year (current liabilities such as accounts payable).

To determine working capital requirements for your investment proposal, you build projections for these items (accounts receivable, inventories, accounts payable). Then you compare your actual amounts to the figures you've forecasted. The increase in current liabilities (e.g. accounts payable) is then subtracted from the increase in current assets (e.g. accounts receivable and inventories). The difference — or change in working capital — represents the amount of money you'll need.

$$\text{change in working capital} = (\text{increase in accounts receivable} + \text{increase in inventory}) - \text{increase in accounts payable}$$

Besides accounts receivable, accounts payable, and inventory, there are other working capital accounts that may enter into the equation. These include sources of funds that reduce the need for working capital (bank and other loans) and uses of funds that require working capital (marketable securities, prepaid expenses, other assets, supplies and accruals). In this case, the equation becomes:

$$\text{change in working capital} = (\text{increase in accounts receivable} + \text{increase in inventory}) - \text{increase in accounts payable} + \text{change in other working capital accounts}$$

### An Example: New Tech's Working Capital

Based on its balance sheet projections and statement of changes in financial position, New Tech identified the following increases in accounts receivable, inventory, accounts payable, and other working capital accounts. The company will need \$200,000 to fund the changes it is predicting.

Accounts Receivable	\$100,000
Inventory	\$ 75,000
<hr/>	
Subtotal	\$175,000
Less: Accounts Payable	\$ 50,000
<hr/>	
Net Working Capital	\$125,000
Other Working Capital Accounts	\$ 75,000
<hr/>	
Net Change In Working Capital	\$200,000

For a closer look at the information that supports this calculation, see the example in Appendix, *Calculating Changes in Working Capital*.

### Check Your Understanding

Learning-Designs.com, a new high tech start-up, projected the following increases in working capital:

- \$300,000 increase in accounts receivable
- \$ 50,000 increase in inventory
- \$ 100,000 increase in accounts payable
- \$ 50,000 increase in other working capital accounts

How much working capital will this fast moving firm need?

**ANSWER:** \$300,000

### Entrepreneur Stories

#### Innov International's Working Capital Needs

*Quebec-based Innov International Inc. had to be flexible in raising the funds needed for growth.*

Innov International was looking for financing of around \$4 million to launch the new office products company. Having assessed that this amount would be very difficult to raise at the start-up stage, management and its advisors revised their plans and decided to rent a building rather than buy one.

Innov International then decided to seek a little more than \$1 million in financing. This included operational costs of about \$600,000 and capital costs of some \$400,000. This financing was allotted for the start-up of operations, to buy all necessary manufacturing equipment and a delivery truck, and to renovate a rented manufacturing facility.

## 1.6 Determine Fixed Assets and Other Costs

On the previous page, you learned about calculating working capital requirements. To establish your financial needs, you need to consider three other important components: fixed assets, marketing costs and a financial cushion. Remember the equation:

$$\text{working capital} + \text{fixed assets} + \text{marketing costs} + \text{financial cushion} = \text{your financial needs}$$

### Fixed Assets

Fixed assets, or capital assets include:

- land
- buildings

- machinery and equipment used to make a product, provide a service or sell, store or deliver goods (e.g. office furniture, business machines, computers, display cases, store fixtures).

To determine fixed assets, you compare the actual amount spent on these items with a forecasted amount. For example, if your company's actual gross fixed assets are \$1,500,000 and your forecasted gross fixed assets are \$2,600,000, then this represents a \$1,100,000 increment. The figure of \$1,100,000 would be entered into your calculation of financial needs.

In your investment proposal, you'll have to list and cost your fixed assets accurately, preferably based on supplier quotations. There are several benefits (beyond satisfying potential investors) in identifying fixed assets precisely:

- to help maintain control over depreciable assets;
- for insurance purposes;
- so the company's reserve for replacement of machinery and equipment doesn't get too low;
- to help create a cost budget.

For a closer look at how to present fixed assets, see Appendix, *An Effective Way of Listing Fixed Assets*.

## Marketing Costs and Financial Cushion

You'll also have to project **marketing** costs such as advertising and promotional programs.

And finally, you need to consider a **financial cushion**. Although you may have been careful in estimating working capital, fixed assets and marketing costs, these estimates are not always 100% correct. Anything can happen! There is a chance that some of your estimates will be higher or lower. Business managers typically determine best (optimistic) and worst (pessimistic) scenarios to identify the level of financial cushion that may be needed if their base case estimates are not realized. A financial cushion reduces the element of surprise and informs potential investors about the "possible" financial increments.

## Try It Out

Now that you've learned about the four key areas to consider when determining your financial needs, try estimating your own needs.

- **Working Capital** - to pay for day-to-day operating costs
- **Fixed Assets** - for land, buildings, equipment, etc., you need for growth
- **Marketing Costs** - for advertising, promotional programs, etc.

- **Financial Cushion** - a precaution for possible changes in business circumstances

### Your Company's Requirements for Growth

Working Capital	\$ _____
Fixed Assets	\$ _____
Marketing Costs	\$ _____
Financial Cushion	\$ _____
Total	\$ _____

### FAQ

#### Why does an investor want more fixed assets?

Investors may want more than market appraisals on your fixed assets because those assets are only part of the equation. Value depends largely on the potential resale value of your assets. For businesses expected to continue to operate and grow, value is more directly related to the ability of your business to generate cash flow.

## 1.7 Test Your Projections

### Sensitivity Analysis

The financial forecasts you prepare are based on assumptions and predictions that may or may not be accurate. For instance you may assume interest rates will rise, or you may predict that your sales will grow at a certain rate. Make sure that you test your financial forecasts so that you can plan effectively.

Sensitivity analysis allows you to look at various "what if" scenarios to assess how your company's financial health and targets may be affected by changes in circumstances. The analysis may also show where you need to gather more information to support your assumptions.

### An Example: The Impact of a Drop in Sales Revenue

Here's an example of a sensitivity analysis. New Tech's business plans and its financial needs are based on projected sales revenue. What happens if in reality this revenue drops?

Study on the following scenarios to see how New Tech's assumptions about sales revenue affect its forecasts of financial performance.

<i>Base case</i>	<b>2000 Actual</b>	<b>2001 Forecast</b>	<b>2002 Forecast</b>
Sales revenue (\$)	3,000,000	3,900,000	4,700,000
Gross margin (\$)	1,815,000	2,435,000	3,075,000
Operating income (\$)	403,000	425,000	990,000
Income after taxes (\$)	204,500	205,000	548,000
Return on total assets (%)	8.50	5.95	11.66

<i>Scenario A Sales revenue decrease by 5%</i>	<b>2000 Actual</b>	<b>2001 Forecast</b>	<b>2002 Forecast</b>
Sales revenue (\$)	3,000,000	3,705,000	4,465,000
Gross margin (\$)	1,815,000	2,314,000	2,896,000
Operating income (\$)	403,000	310,000	831,000
Income after taxes (\$)	204,500	131,000	445,000
Return on total assets (%)	8.50	3.79	11.03

<i>Scenario B Sales revenue decrease by 10%</i>	<b>2000 Actual</b>	<b>2001 Forecast</b>	<b>2002 Forecast</b>
Sales revenue (\$)	3,000,000	3,510,000	4,230,000
Gross margin (\$)	1,815,000	2,182,000	2,731,000
Operating income (\$)	403,000	182,000	671,000
Income after taxes (\$)	204,500	47,000	341,000
Return on total assets (%)	8.50	1.37	8.44

### **Sensitivity Analysis Tool**

See our sensitivity analysis tool in the Appendix. This spreadsheet is programmed so you can plug in your own financial information and projections and examine "what if" scenarios.

### **Break-Even Analysis**

You might also want to know at which point, either in sales or production levels, your business will break even. When you know your break-even point, you have a definite target that you can plan to reach through carefully reasoned decisions.

To learn more, see the example in Appendix, *New Tech's Break-Even Analysis*.

To get a working break-even analysis spreadsheet you can use for your business, see our Break-Even Analysis Tool in the Appendix.

## 1.8 Action Items

In Step 1, you have seen that to prepare to attract risk capital, you must understand your current financial statements and forecast your future needs. You've got to know where you are and where you are heading.

The following checklist will help you to:

- assess your understanding of the ideas covered in this Step;
- gauge your progress; and
- plan your company's approach.

### Checklist

	Status?	Target Date?	Responsibility?
Develop a business plan, including mission statement, objectives and plans to achieve those objectives.			
Assemble a team to carry out the plan and make your company "investor ready".			
Prepare financial statements with projections based on your objectives and plans.			
Prepare annual projections ranging from one to five years and one year's monthly cash budget.			
Determine your financial needs (e.g. working capital, fixed assets, marketing costs, and financial cushion).			
Formulate your company's financial objectives for liquidity, leverage, management and profitability.			
Examine the assumptions that underpin your financial projections and working capital needs; look at these assumptions from all perspectives.			
Produce several financial scenarios to determine how changes in these assumptions would affect the company's projected profit and cash flow.			
Calculate your company's break-even point.			

## **Tips**

Here are some other actions you should consider:

### ***Get Expert Advice***

- Determine whether to hire a financial advisor, and if so, when and whom.
- Retain a lawyer for advice about complying with legal and securities requirements.

### ***Manage the Team***

- Assign someone to take the lead on expansion and manage it as a project.
- Determine what information and assistance will be needed from various members of the management team.
- Invite your management team to a kick-off meeting for the company's next phase in growth, and use the checklist (above) to guide discussion.
- Create a milestone chart (or other similar visual record of progress) based on the checklist and post it in your boardroom or meeting room as a continuing reminder of items to push ahead on.
- Send out regular updates about team members' progress toward completing their areas of responsibility; try to make these updates feel like a positive reminder to everyone that it's worthwhile keeping on track.



## Appendix

### Take a Closer Look – New Tech's Financial Statements (see section 1.4) *Income Statements*

New Tech is planning to add a new product line. The income statements show New Tech's actual performance for 2000 and projected 2001 and 2002 results. As you can see, the company realized \$3 million in sales revenue in 2000 and will launch a new product line in 2001 that needs additional funding for working capital and to buy capital assets.

In 2001, the new product line will generate a \$900,000 increase in sales revenue, or 30% over 2000. But there's little change in income after taxes (\$204,000 in 2000 versus \$205,000 in 2001), which reflects the company's extensive additional expenses, particularly marketing costs (see advertising and special promotional program expenditure lines), research and development, and other related expenses to produce, launch and sell the new product line.

<b>New Tech Distributors Corp.</b>				
<b>Income Statements</b>				
(\$000)	<b>2000</b>	<b>2001</b>	<b>2002</b>	
	<b>Actual</b>	<b>Forecast</b>	<b>Forecast</b>	
<b>Sales revenue</b>	<b>3,000</b>	<b>3,900</b>	<b>4,700</b>	
<b>Cost of goods sold</b>				
Purchases	610	710	800	
Freight in	60	70	85	
Labour	380	480	510	
Depreciation and amortization	110	175	195	
Utilities, insurance, etc.	<u>25</u>	<u>30</u>	<u>35</u>	
<b>Total cost of goods sold</b>	<b>1,185</b>	<b>1,465</b>	<b>1,625</b>	
<b>Gross margin</b>	<b>1,815</b>	<b>2,435</b>	<b>3,075</b>	
<b>Selling expenses</b>				
Salaries	620	780	820	
Commissions	60	80	110	
Travelling	60	90	115	
Advertising	70	100	105	
Depreciation and amortization	30	50	70	
Special promotional program	<u>17</u>	<u>220</u>	<u>100</u>	
<b>Total selling expenses</b>	<b>857</b>	<b>1,320</b>	<b>1,320</b>	
<b>Administrative expenses</b>				
Salaries	395	420	465	
Leasing	50	70	90	
Depreciation and amortization	60	100	110	
Research and development	<u>50</u>	<u>100</u>	<u>100</u>	
<b>Total administrative expenses</b>	<b>555</b>	<b>690</b>	<b>765</b>	

<b>Total operating costs</b>	<b>1,412</b>	<b>2,010</b>	<b>2,085</b>
<b>Operating income</b>	<b>403</b>	<b>425</b>	<b>990</b>
Interest income	5	6	8
Interest charges	95	115	155
Extraordinary expense	<u>0</u>	<u>0</u>	<u>0</u>
<b>Income before taxes</b>	<b>313</b>	<b>316</b>	<b>843</b>
Income taxes	<u>109</u>	<u>111</u>	<u>295</u>
<b>Income after taxes</b>	<b>204</b>	<b>205</b>	<b>548</b>

### *Statements of Retained Earnings*

As you can see in the statements of retained earnings, the company accumulated \$500,000 at the beginning of 2000, with \$204,000 in earnings (income after taxes) added by the end of the year. In that same year, \$50,000 in dividends was paid to the shareholders. By the end of 2001, the company will have accumulated \$839,000 in retained earnings, which is expected to increase to \$1,277,000 by the end of 2002.

Retained earnings are important for this analysis since this money (internal sources of funds) is used to fund growth (working capital) and buy fixed assets (equipment, machinery, etc.).

Note that the retained earnings (end of year) amount shown on this statement is brought forward to the balance sheet under the heading "Owners' equity".

#### **New Tech Distributors Corp. Statements of Retained Earnings**

(\$000)	<b>2000 Actual</b>	<b>2001 Forecast</b>	<b>2002 Forecast</b>
<b>Retained earnings (beginning of year)</b>	<b>500</b>	<b>654</b>	<b>839</b>
Net earnings for the year	<u>204</u>	<u>205</u>	<u>548</u>
Subtotal	704	859	1,387
Dividends	<u>50</u>	<u>20</u>	<u>110</u>
<b>Retained earnings (end of year)</b>	<b>654</b>	<b>839</b>	<b>1,227</b>

### *Balance Sheets*

The balance sheets show New Tech's financial structure, that is, what it owns (assets) and what it owes its lenders (liabilities) and shareholders (owners' equity). During 2000, New Tech's total assets will increase by \$1,049,000 for a substantial 43.7% growth. This reflects the additional finances needed to launch the new product line.

As you can see, total current assets (accounts receivable, inventories, etc.) will increase by \$274,000, or 24.1%, while gross fixed assets will show a \$1,100,000 increment, or 62%. This reflects the acquisition of new fixed assets to produce the new line of products.

**New Tech Distributors Corp.  
Balance Sheets**

(\$000)	2000 Actual	2001 Forecast	2002 Forecast
<b>Assets</b>			
<b>Current assets</b>			
Cash	20	30	45
Marketable securities	100	110	120
Prepaid expenses	60	70	80
Accounts receivable	450	550	650
Inventory	350	425	475
Other assets	70	103	120
Supplies, etc.	<u>84</u>	<u>120</u>	<u>140</u>
<b>Total current assets</b>	<b>1,134</b>	<b>1,408</b>	<b>1,630</b>
<b>Capital assets</b>			
Gross capital assets	1,775	2,875	3,615
Accumulated depreciation	<u>560</u>	<u>885</u>	<u>1,260</u>
<b>Total net capital assets</b>	<b>1,215</b>	<b>1,990</b>	<b>2,355</b>
Goodwill	45	45	45
Other assets	<u>5</u>	<u>5</u>	<u>7</u>
<b>Total assets</b>	<b>2,399</b>	<b>3,448</b>	<b>4,037</b>
<b>Current liabilities</b>			
Accounts payable	550	600	650
Term loan	125	140	170
Working capital loan	50	59	150
Accruals	60	50	80
Current portion of long-term debt	<u>30</u>	<u>30</u>	<u>30</u>
<b>Total current liabilities</b>	<b>815</b>	<b>879</b>	<b>1,080</b>
<b>Total long-term debts</b>	<b><u>400</u></b>	<b><u>600</u></b>	<b><u>550</u></b>
<b>Total liabilities</b>	<b>1,215</b>	<b>1,479</b>	<b>1,630</b>
<b>Owners' equity</b>			
Capital shares	530	1,130	1,130
Retained earnings	<u>654</u>	<u>839</u>	<u>1,277</u>
<b>Total owners' equity</b>	<b>1,184</b>	<b>1,969</b>	<b>2,407</b>
<b>Total liabilities and owners' equity</b>	<b>2,399</b>	<b>3,448</b>	<b>4,037</b>

*Lower Portion of the Balance Sheet*

The lower portion shows the sources of the funds. Total current liabilities (accounts payable, term loan, etc.) will increase by only \$64,000, or 7.8%. These short-term sources will be used to finance the current asset accounts (i.e. receivables and inventory).

### *Long-Term Liabilities*

The long-term portion of the liabilities will show a \$200,000 increase, or 50%, while shareholders will invest an additional \$600,000 for an increase of 132%. Retained earnings (income earned for the year) will increase by \$185,000, or 28%.

The largest increase from external financing will come from shareholders. This amount reflects how much money will have to be invested in the business by the existing owners and risk capital investors.

### *Prognosis*

This opportunity is too risky for conventional lenders to invest substantial amounts in the new product line; equity funds will have to be injected into New Tech to launch the new product line.

### *Cash Flow Forecasts*

New Tech's cash flow forecasts show that both internal and external sources will be used to finance the company's future growth. In the first year, the business itself (internal sources) will provide \$330,000, and investors (financing activities) will provide \$780,000. The funds will be used to buy fixed assets of \$1,100,000, with another \$10,000 coming from the company's cash account.

<b>New Tech Distributors Corp.</b>		
<b>Cash Flow Forecasts</b>		
<b>(\$000)</b>	<b>2000 Actual</b>	<b>2001 Forecast</b>
<b>Operating activities</b>		
Income after taxes	205	548
Depreciation and amortization	325	375
Working capital changes	<u>-200</u>	<u>-6</u>
Operating cash flows	330	917
<hr/>		
<b>Financing activities</b>		
Capital shares	600	0
Long-term debts	200	-50
Dividends	<u>-20</u>	<u>-110</u>
Cash flow from financing activities	780	-160
<hr/>		
<b>Investing activities</b>		
Capital assets additions	-1,100	-742
<hr/>		
Cash bank balance	-10	-15,000
Net cash flow	0	0
<hr/>		

### *Statements of Changes in Financial Position*

The statements of changes in financial position show the sources and uses of funds grouped in three categories:

- Operating activities - internal sources;
- Financing activities - external sources of funds; and
- Investing activities - where funds will be spent.

<b>New Tech Distributors Corp.</b>				
<b>Statements of Changes in Financial Position</b>				
(\$000)	2001 Forecast	Total	2002 Forecast	Total
<b>Operating activities</b>				
Income after taxes	205		548	
Depreciation and amortization	325		375	
Marketable securities	-10		-10	
Prepaid expenses	-10		-10	
Accounts receivable	-100		-100	
Inventory	-75		-50	
Other assets	-33		-17	
Supplies, etc.	-36		-20	
Accounts payable	50		50	
Term loan	15		30	
Working capital loan	9		91	
Accruals	-10		30	
Current portion of long-term debt	<u>0</u>		<u>0</u>	
<b>Total operating activities</b>		<b>330</b>		<b>917</b>
<hr/>				
<b>Financing activities</b>				
Capital shares	600		0	
Total long-term debts	200		-50	
Dividends	<u>-20</u>		<u>-110</u>	
<b>Total financing activities</b>		<b>780</b>		<b>-160</b>
<hr/>				
<b>Investing activities</b>				
Gross capital assets	-1,100		-740	
Goodwill	0		0	
Other assets	0		-2	
Adjustment	<u>0</u>		<u>0</u>	
<b>Total investing activities</b>		<b>-1,100</b>		<b>-742</b>
<hr/>				
Increase (Decrease)	-10	<b>-10</b>	-15	<b>-15</b>
Cash — Beginning of year	20		30	
Cash — End of year	30		45	
<hr/>				
<b>Total — Net cash flow</b>		<b>0</b>		<b>0</b>

### ***Financial Ratios***

The way to define and measure a company's targets is with financial ratios. Financial ratios are used to see how a firm is doing, the way a doctor uses medical tests to assess a

patient's health. Here are some samples from our case example firm, New Tech Distributors Corp.

Financial ratios can be grouped under four categories:

- Liquidity
- Leverage
- Management
- Profitability

#### *Liquidity Ratios*

Does the company have sufficient cash and near cash to pay its bills and payroll on time? Basically, liquidity ratios indicate the company's ability to discharge its current obligations in times of stress.

	<b>2000 Actual</b>	<b>2001 Forecast</b>	<b>2002 Forecast</b>
<b>Liquidity Ratios</b>			
Working capital (\$000s)	319	529	550
Current ratio (times)	1.39	1.60	1.51
Cash ratio (times)	0.15	0.16	0.15
Quick ratio (times)	0.96	1.12	1.07
Working capital turnover (times)	9.40	7.37	8.55

#### *Leverage Ratios*

What is the proportion of a company's debt versus equity? These ratios display the methods and sources of financing used in acquiring assets and their impact on the earnings available to shareholders.

	<b>2000 Actual</b>	<b>2001 Forecast</b>	<b>2002 Forecast</b>
<b>Leverage Ratios</b>			
Debt to total assets (percent)	50.65%	42.89%	40.38%
Debt to equity (times)	1.03	0.75	0.68
Times interest earned (times)	4.29	3.75	6.44
Fixed charges coverage ratio (times)	3.06	2.71	4.44

#### *Management Ratios*

How efficiently is the management team using the company's assets to generate sales and profits? These ratios are useful in tracking the performance of managers in charge of specific operating functions such as production, marketing, inventories, accounts receivable or cash.

	<b>2000 Actual</b>	<b>2001 Forecast</b>	<b>2002 Forecast</b>
<b>Management Ratios</b>			
Average collection period (days)	54.75	51.47	50.48
Accounts receivable turnover (times)	6.67	7.09	7.23
Inventory turnover (times)	3.39	3.45	3.42
Day's sales to inventory (days)	108	106	107
Fixed assets turnover (times)	2.47	1.96	2.00
Total assets turnover (times)	1.25	1.13	1.16

### *Profitability Ratios*

Is the business generating a sufficient return on its investments? These ratios show the relationship between profit and revenue generated, resources employed (assets) and shareholders' equity.

	<b>2000 Actual</b>	<b>2001 Forecast</b>	<b>2002 Forecast</b>
<b>Profitability Ratios</b>			
Gross margin to sales (percent)	60.50%	62.44%	65.43%
Operating income sales (percent)	13.43%	10.90%	21.06%
Income after taxes to sales (percent)	6.80%	5.26%	11.66%
Return on total assets (percent)	8.50%	5.95%	13.57%
Return on invested capital (percent)	12.88%	7.98%	18.53%
Return on equity (percent)	17.23%	10.41%	22.77%

### *Key Assumptions*

This is a list of the most important quantitative assumptions that New Tech used to develop its financial projections. The figures relating to sales and expenses are derived from the income statements. Other assumptions have to do with external factors (such as income tax and interest rates) and key ratios (such as inventory turnover).

<b>New Tech Distributors Corp. Key Assumptions (Base Case)</b>			
	<b>2000 Actual</b>	<b>2001 Forecast</b>	<b>2002 Forecast</b>
Sales revenue	\$3,000,000	\$3,900,000	\$4,700,000
Annual sales growth (%)	15.0%	30.0%	20.5%
Sustainable growth (%)	14.95%	10.37%	22.24%
Financial health score (Z score)	2.93	2.86	3.47
Gross margin (% of sales)	61.0%	62.0%	65.0%
Selling expenses (% of sales)	29.0%	34.0%	28.0%
General and adm. expenses	\$445,000	\$490,000	\$555,000
Research and development expenses	\$50,000	\$100,000	\$100,000
Depreciation and amortization	\$200,000	\$325,000	\$375,000

Income taxes and research development tax credits			
Income tax rate	35.0%	35.0%	35.0%
Research and development expenses	\$50,000	\$100,000	\$100,000
Investment tax credit rate	35.0%	35.0%	35.0%
SR&D credit (cash refund)	\$17,500	\$35,000	\$35,000
Net research and development expenses	\$32,500	\$65,000	\$65,000
<hr/>			
Balance sheet/working capital			
Average collection period (days)	54.75	51.47	50.48
Inventory turnover (times)	3.39	3.45	3.42
Average payment period (days)	30	28	27
Fixed assets addition	\$200,000	\$1,100,000	\$740,000
<hr/>			
Interest rates			
Working capital loan	7.0%	7.0%	7.0%
Excess cash and marketable securities	4.0%	4.0%	4.0%
Term loan	10.0%	10.0%	10.0%
<hr/>			

### ***Monthly Cash Budget***

Here's an example of a monthly cash budget for our case example firm, New Tech Distributors.

#### *Receipts and Disbursements Are Key*

New Tech identified these receipts and disbursements for each month:

- all future receipts from cash sales and collections; and
- all cash disbursements for individual expenses.

#### *Items to Consider*

New Tech considered the following items in preparing their cash budget:

- percentage of cash sales;
- accounts receivable collection - % 30 days, % 60 days, % 90 days, % bad debts;
- seasonal pattern of sales;
- payment policy/experience (e.g. within 30 days);
- pattern of ordering supplies; and
- other cash receipts/disbursements (wages, interest, taxes, etc.).



	Oct.	Nov.	Dec.
Sales revenue (previous year)	325.0	325.0	325.0
Purchases			59.2
Payment schedule			
Cash sales=10%		10%	
30-day payment=70%		70%	
60-day payment=20%		20%	
Purchase schedule			
Paid in first month=40%		40%	
Paid during second 60 days=60%		60%	

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Sales revenue	325	300	275	325	350	375	400	375	350	300	275	250	3,900
Cash sales	33	30	28	33	35	38	40	38	35	30	28	25	390
30-payment =70%	228	228	210	193	228	245	263	280	263	245	210	193	2,783
60-payment =20%	<u>65</u>	<u>65</u>	<u>65</u>	<u>60</u>	<u>55</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>75</u>	<u>70</u>	<u>60</u>	805
Total monthly receipts	325	323	303	285	318	348	373	393	378	350	308	278	
Purchases	59.0	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	710
Paid during first month =40%	24	24	24	24	24	24	24	24	24	24	24	24	284
Paid during second 60 days =60%	<u>36</u>	<u>36</u>	<u>36</u>	<u>36</u>	<u>36</u>	<u>36</u>	<u>36</u>	<u>36</u>	<u>36</u>	<u>36</u>	<u>36</u>	<u>36</u>	426
Total monthly purchases	50.0	45.0	50.0	55.0	80.0	75.0	72.0	60.0	58.0	55.0	50.0	60.0	710
<b>Total receipts</b>	<b>325</b>	<b>323</b>	<b>303</b>	<b>285</b>	<b>318</b>	<b>348</b>	<b>373</b>	<b>393</b>	<b>378</b>	<b>350</b>	<b>308</b>	<b>278</b>	<b>3,978</b>
Disbursements													
Purchases	50	45	50	55	80	75	72	60	58	55	50	60	710
Freight in	4.2	4.0	5.1	5.4	7.3	6.5	6.7	6.6	6.1	7.0	5.8	5.7	70
Labour	40.0	39.0	38.0	42.0	38.4	44.3	42.5	41.0	38.0	39.0	39.5	38.0	480
Utilities, insurance, etc.	2.5	2.2	2.4	2.5	2.5	2.8	2.7	2.5	2.6	2.6	2.6	2.4	30
Salaries — selling	60.0	62.0	65.8	62.8	62.7	67.9	71.6	62.8	64.9	66.9	68.0	65.0	780
Commissions	5.9	5.0	5.8	6.8	6.9	7.4	8.0	7.8	6.5	6.8	6.4	6.4	80
Travelling	7.0	7.1	6.9	6.8	7.6	7.8	8.4	7.5	7.7	7.7	7.9	7.4	90
Advertising	6.0	6.5	7.0	9.0	8.5	8.7	8.3	8.1	7.0	7.2	6.0	7.5	90
Other charges — selling	5.0	6.0	3.0	40.0	50.0	21.5	18.3	18.7	18.9	16.0	8.5	14.0	220
Salaries — administration	35.0	35.0	34.0	33.0	36.0	36.0	38.0	39.0	35.0	33.0	32.0	34.0	420
Leasing	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	70
Research and development	8.3	10.3	15.6	7.5	8.3	7.7	7.9	6.2	6.7	6.9	6.3	8.3	100

Interest income	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-6
Interest charges	9.4	9.6	9.7	9.5	9.6	9.8	9.8	9.5	9.6	9.8	9.5	9.5	115
Taxes	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	112
Purchase of assets	40.0	45.0	33.0	350.0	500.0	16.8	23.8	23.0	18.0	20.0	20.0	10.0	1100
<b>Total disbursements</b>	<b>288</b>	<b>291</b>	<b>291</b>	<b>645</b>	<b>832</b>	<b>327</b>	<b>333</b>	<b>307</b>	<b>294</b>	<b>293</b>	<b>277</b>	<b>283</b>	<b>4,461</b>
Surplus (-)/ month	37	31	12	-360	-515	20	40	85	84	58	30	-5	
Surplus (-)/ cumulative	37	68	80	-280	-795	-775	-735	-650	-566	-508	-478	-483	
Beginning bank balance	20	57	88	100	-260	-775	-755	-715	-630	-546	-488	-458	
Receipts	325	323	303	285	318	348	373	393	378	350	308	278	
Disbursements	288	291	291	645	832	327	333	307	294	293	277	283	
Ending bank balance	57	88	100	-260	-775	-755	-715	-630	-546	-488	-458	-463	
Long-term financing													
Debt	10.0	20.0	20.0	60.0	50.0	8.0	20.0	6.0	4.0	2.0	0.0	0.0	200
Equity	10.0	20.0	50.0	200.0	250.0	44.4	10.0	5.0	5.0	4.0	2.0	0.0	600
Total	20.0	40.0	70.0	260.0	300.0	52.4	30.0	11.0	9.0	6.0	2.0	0.0	800
Cash flow after financing													
Monthly	57	71	82	-100	-215	73	70	96	93	64	32	-5	
Cumulative	37	108	190	90	-125	-52	18	114	207	270	303	297	

## Sensitivity Analysis

### New Tech Distributors Corp. Sensitivity Analysis

<i>Base case</i>	2000 Actual	2001 Forecast	2002 Forecast
Sales revenue (\$)	3,000,000	3,900,000	4,700,000
Gross margin (\$)	1,815,000	2,435,000	3,075,000
Operating income (\$)	403,000	425,000	990,000
Income after taxes (\$)	204,000	205,000	\$548,000
Income after taxes to sales (%)	6.80	5.26	11.66
Return on total assets (%)	8.5	5.95	13.57
Economic value added (\$)	71,000	-28,000	247,000
Sustainable growth rate (%)	14.95	10.37	22.24
Financial health score (Z score)	2.93	2.86	3.47

#### Scenario A

*Sales revenue decrease by 5%*

Sales revenue (\$)	3,000,000	3,705,000	4,465,000
Gross margin (\$)	1,815,000	2,314,000	2,896,000
Operating income (\$)	403,000	310,000	831,000
Income after taxes (\$)	204,500	131,000	445,000
Income after taxes to sales (%)	6.80	3.53	9.96
Return on total assets (%)	8.50	3.79	11.03

Economic value added (\$)	71,500	-93,000	168,000
Sustainable growth rate (%)	14.95	6.07	16.76
Financial health score (Z score)	2.93	2.63	3.15

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### **Scenario B**

#### *Sales revenue decrease by 10%*

Sales revenue (\$)	3,000,000	3,510,000	4,230,000
Gross margin (\$)	1,815,000	2,182,000	2,731,000
Operating income (\$)	403,000	182,000	671,000
Income after taxes (\$)	204,500	47,000	341,000
Income after taxes to sales (%)	6.80	1.34	8.06
Return on total assets (%)	8.50	1.37	8.44
Economic value added (\$)	71,500	-166,000	88,000
Sustainable growth rate (%)	14.95	1.45	11.46
Financial health score (Z score)	2.93	2.39	2.83

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### **Break-Even Analysis**

Calculating the break-even point can be simple (for a one-product business) or complex (for a multi-line business), but the basic technique is the same. Here is an example from our case study company, New Tech Distributors.

The break-even point is based on the fact that some costs vary in direct proportion to the volume of production, while others remain fixed regardless of the level of output.

Variable costs include: direct labour and direct material expenses for manufacturing or service organizations, and cost of goods sold (purchases) for retail establishments.

Fixed costs refer to items such as rent, office salaries, interest and insurance.

#### **New Tech Distributors Corp.**

##### **Break-even Analysis**

(\$)	<b>2000</b>	<b>2001</b>	<b>2002</b>
	<b>Actual</b>	<b>Forecast</b>	<b>Forecast</b>
Sales revenue	3,000,000	3,900,000	4,700,000
Variable costs			
Purchases	610,000	710,000	800,000
Freight in	60,000	70,000	85,000
Labour (cost of goods sold)	300,000	390,000	410,000
Commissions	<u>60,000</u>	<u>80,000</u>	<u>110,000</u>
Total variable costs	<u>1,030,000</u>	<u>1,250,000</u>	<u>1,405,000</u>
Contribution margin	1,970,000	2,650,000	3,295,000
Fixed costs			
Labour (cost of goods sold)	80,000	90,000	100,000
Depreciation and amortization	200,000	325,000	375,000

Utilities, insurance, etc.	25,000	30,000	35,000
Salaries (selling)	620,000	780,000	820,000
Travelling	60,000	90,000	115,000
Advertising	70,000	100,000	105,000
Other charges (selling)	17,000	220,000	100,000
Salaries (administration)	395,000	420,000	465,000
Leasing	50,000	70,000	90,000
Research and development	50,000	100,000	100,000
Interest charges (net)	<u>90,000</u>	<u>109,000</u>	<u>147,000</u>
Total fixed costs	<u>1,657,000</u>	<u>2,334,000</u>	<u>2,452,000</u>
Profit (loss)	313,000	316,000	843,000
Profit/volume ratio	0.66	0.68	0.70
Break-even point (in revenue)	2,523,350	3,343,943	3,497,542
% of sales revenue	84.1%	88.1%	74.4%
<b>Assets</b>	<b>\$2,399,000</b>	<b>\$3,448,000</b>	<b>\$4,037,000</b>
<b>Before taxes</b>			
Income before taxes	\$313,000	\$316,000	\$843,000
Return on total assets	13.0%	9.2%	20.9%
<b>After taxes</b>			
Income after taxes	\$204,000	\$205,000	\$548,000
Return on total assets	8.5%	6.0%	13.6%
<b>Before tax objective</b>			
To earn a return on assets of...		15.0%	25.0%
your income before taxes should be...		\$517,000	\$1,009,000
and your sales revenue should be...		\$4,195,811	\$4,936,783

## *Financial Needs and Financing Requirements*

<b>New Tech Distributors Corp.</b>		
<b>Financial Needs and Financing Requirements</b>		
(\$)	<i>Uses</i>	<i>Sources</i>
	<i>Financial Needs</i>	<i>Financing Requirements</i>
<b>Short-term needs/requirements</b>		
<i>Working capital accounts</i>		
Accounts receivable		100,000
Inventory	75,000	
Accounts payable		50,000
<i>Other working capital accounts</i>		
Marketable securities	10,000	
Prepaid expenses	10,000	
Other assets	33,000	
Supplies, etc.	36,000	
Accruals	10,000	
<i>Conventional financing</i>		
Term loan		15,000
Working capital loan		<u>9,000</u>
<b>Total short-term financing Needs/requirements</b>	<b><u>274,000</u></b>	<b><u>74,000</u></b>
<b>Long-term needs/requirements</b>		
<b>Capital assets (needs)</b>	1,100,000	
<i>External sources</i>		
Dividends	20,000	
Equity		600,000
Long-term debt		<u>200,000</u>
<b>Total long-term needs/requirements</b>	<b><u>1,120,000</u></b>	<b><u>800,000</u></b>
<i>Internal sources</i>		
Increase in the cash account	10,000	
Income after taxes		205,000
Depreciation and amortization		<u>325,000</u>
<b>Total internal sources</b>	<b><u>10,000</u></b>	<b><u>530,000</u></b>
<b>Total needs/requirements</b>	<b><u>1,404,000</u></b>	<b><u>1,404,000</u></b>
Marketing costs and cushion	<u>171,000</u>	* <u>171,000</u>
	1,575,000	1,575,000

## **Take a Closer Look – How to Make Reliable Financial Forecasts (see section 1.4)**

Two key financial statements in the forecasting process are the cash flow forecast and the statement of changes in financial position. Here's what you do.

### **1. Review Past Operating Results**

Determine:

- past sales growth rates by product;
- cost relationships to distinguish among fixed variable costs;
- items of income and expenses that are unusual, non-recurring or not indicative of expected results;
- income derived from assets that may not be included in the company during the forecast period (i.e. non-operating assets that may be withdrawn from the company before completion of the investment, such as excess cash balances, investment portfolios, art or excess land); and
- break-even volume for the new product line. (You can use a Break-Even Analysis Tool to help with this. Check the Resources section.)

### **2. Make Estimations**

- Estimate sales volume, price and revenue for each product, monthly for the first year and annually, thereafter, for years two, three, four and five based on an analysis of future market conditions for your various products.
- Estimate costs for each future period based on forecast sales volume and expected cost relationships. Additional fixed and variable costs associated with forecast growth should be included in the estimates.

### **3. Make Deductions**

- Deduct income taxes based on projected tax rates.  
If there are significant differences between expenses recorded for accounting and for tax purposes, you may want to make these adjustments in a separate calculation. The primary adjustment would relate to the difference between depreciation recorded for accounting purposes and capital cost allowance recorded for tax purposes. Also consider the impact of tax losses carried forward.

### **4. Make Adjustments**

- Adjust net income to cash flow from operations by adding back all non-cash charges included in the determination of net income. The main non-cash items are depreciation and amortization.
- Based on your forecast operating cash flow, deduct the following:  
forecast capital spending based on the capital budget;
  - increase in working capital required to meet the forecast growth in operations;
  - dividends consistent with prospective dividend requirements; and
  - interest payments consistent with existing and proposed lending agreements.

- Add cash inflows not included in cash flow from operations such as interest and proceeds from the sale of assets.

#### **5. Include Proposed Investments**

- Finally, include the proposed investments in the forecast.

**Take a Closer Look – Calculating Changes in Working Capital (see section 1.5)**

***Changes in Financial Position***

New Tech's projected changes in financial position show that it will need an additional:

- \$100,000 in accounts receivable;
- \$75,000 in inventory;
- \$50,000 in accounts payable; and
- \$75,000 in other working capital accounts.

<b>New Tech Distributors Corp.</b>				
<b>Statements of Changes in Financial Position</b>				
(\$000)	2001 Forecast	Total	2002 Forecast	Total
<b>Operating Activities</b>				
Income after taxes	205		548	
Depreciation and amortization	325		375	
Marketable securities	-10		-10	
Prepaid expenses	-10		-10	
Accounts receivable	-100		-100	
Inventory	-75		-50	
Other assets	-33		-17	
Supplies, etc.	-36		-20	
Accounts payable	50		50	
Term loan	15		30	
Working capital loan	9		91	
Accruals	-10		30	
Current portion of long-term debt	<u>0</u>		<u>0</u>	
<b>Total operating activities</b>		<b>330</b>		<b>917</b>
<hr/>				
<b>Financing activities</b>				
Capital shares	600		0	
Total long-term debts	200		-50	
Dividends	<u>-20</u>		<u>-110</u>	
<b>Total financing activities</b>		<b>780</b>		<b>-160</b>
<hr/>				
<b>Investing activities</b>				
Gross capital assets	-1,100		-740	
Goodwill	0		0	
Other assets	0		-2	
Adjustment	<u>0</u>		<u>0</u>	
<b>Total investing activities</b>		<b>-1,100</b>		<b>-742</b>
<hr/>				
Increase (Decrease)	-10	<b>-10</b>	-15	<b>-15</b>
Cash — Beginning of year	20		30	
Cash — End of year	30		45	



<b>Total — Net cash flow</b>	<b>0</b>	<b>0</b>
------------------------------	----------	----------

***Receivables: Collection Period***

Accounts receivable is money your regular business customers owe you for buying your products or services. Usually it's collected within 30 to 90 days. Accounts receivable also refers to sales made on credit for which payment has not yet been received.

New Tech's balance sheets show a projected increase in accounts receivable from \$450,000 to \$550,000. New Tech plans to offset this increase in part by improving the way collections are managed: reducing the average collection period is projected to improve from 54.75 days in 2001 to 51.47 days in 2002.

*Calculating the Average Collection Period*

The average collection period is calculated in two stages as follows:

<b>1. Calculate the Average Daily Sales</b>		
	2001	2002
Sales	\$3,000,000	\$3,900,000
Average Daily Sales	----- = \$ 8,219 365	----- = \$10,685 365
<b>2. Calculate the Average Collection Period</b>		
	2001	2002
Accounts Receivable	\$450,000	\$550,000
Average Daily Sales	----- = 54.75 days \$8,219	----- = 51.47days \$10,685

***Inventory: Turnover***

Inventory refers to the material or goods a company has bought or made. Inventory usually accounts for the greatest share of current assets of most manufacturing companies; however, money invested in inventory does not earn a return. In fact, it costs money to maintain inventory because it must be stored, moved about, insured and protected from theft and deterioration.

Inventory serves two main purposes. First, it acts as a safety mechanism to compensate for uncertainties in the timing and volume of supply and demand. Second, it acts as a buffer between supply and demand that take place at different rates.

### Three Types of Inventory

Usually, a manufacturer like New Tech has three types of inventory: raw materials (the goods bought from various suppliers to be used for manufacturing purposes); finished goods (the products ready for sale); and the work-in-progress (the goods or materials tied up in various stages of the production process, somewhere between raw materials and finished goods).

Since inventory is not a source of income, management makes an effort to keep it at low levels or to move it as fast as possible. This is measured by the inventory turnover ratio, which is calculated by the dividing the cost of goods sold by the value of the inventory.

New Tech's balance sheet projects an inventory increase from \$350,000 to \$425,000. This \$75,000 increment is due to a 30% increase in sales revenue offset by a small improvement in the management of inventory (from 3.39 times in 2001 to 3.45 times in 2002).

<i>Calculating the Inventory Turnover</i>		
Here is how inventory turnover is calculated.		
	2001	2002
Cost of Goods Sold	\$1,185,000	\$1,465,000
	----- = 3.39 times	----- = 3.45 times
Inventory	\$350,000	\$425,000

### *Payables: Payment Period*

Accounts payable represent your company's most current debt. It's money you owe your suppliers for goods or services bought on credit. Some of the increased needs to finance accounts receivable and inventories are provided spontaneously by creditors who are likely to permit a company to increase its levels of accounts payable as business activity expands.

New Tech's accounts payable are projected to increase from \$550,000 to \$600,000. This \$50,000 increment is due to a 24% increase in cost of goods sold. New Tech's average payable period decreased from 30 days in 2001 to 28 days in 2002. The company's strategy is to continue paying its bills as they become due in order to maintain a good credit standing with its suppliers. A company that is paying its bills faster may be taking advantage of trade discounts.

### *Calculating Average Payment Period*

The average payment period is calculated in two stages.

<b>1. Calculate the Average Daily Purchases</b>			
	2001		2002
Purchases	\$610,000		\$710,000
Freight in	\$ 60,000		\$ 70,000
Total	\$670,000		\$780,000
Average Daily Purchases	----- = \$1,835		----- = \$2,137
	365		365
<b>2. Calculate the Average Payment Period</b>			
	1998		1999
Accounts Payable	\$550,000		\$600,000
	----- = 30 days		----- =28 days
Average Daily Purchases	\$1,835		\$2,137

### ***Cash-To-Cash Cycles***

These cycles (also called cash conversion cycles) represent the flow of funds that circulate in a business.

Example: Let's say you order raw materials. After receiving them, you borrow from a bank to finance your inventories and pay your suppliers. Then you begin making your product, building an inventory and shipping to customers. After billing your customers, you receive cash to repay your loan and you put the remainder in the bank.

### ***Fluctuating Components***

Be sure to distinguish between temporary and permanent working capital. Why? Because these two components are financed differently.

- Temporary working capital, which may fluctuate greatly during the year, is financed by short-term loans and seasonal increases in accounts payable.
- Permanent working capital, the normal level of receivables and inventories during the year, can be financed by permanent liabilities (i.e. normal level of accounts payable as well as the current portion of long-term debt and even long-term debts and owners' equity).

**Take a Closer Look – An Effective Way of Listing Fixed Assets (see section 1.6)**

*Here's an effective way to present your list of fixed assets.*

Fixed Assets	Model	List Price of Assets
Addition to Buildings		\$ 550,000
Architectural Costs		\$35,000
Engineering Costs		\$60,000
Equipment		
Item 1	SS8-77T	\$65,000
Item 2	S33-8SS	\$87,000
Etc.		\$27,000
Machinery		
Item 1	666-S44S	\$75,000
Item 2	T-44-SS	\$81,000
Etc		\$120,000
	Total	\$1,100,000

## Take a Closer Look – Sensitivity Analysis Tools (see section 1.7)

### NEW TECH DISTRIBUTORS CORP. - SENSITIVITY ANALYSIS TOOL DOCUMENTATION AND GUIDELINES FOR USE

*The following integrated spreadsheet is provided for illustrative purposes only without any representation or warranty, either expressed or implied, that the results are complete, accurate or will meet the users specific objectives. You assume sole responsibility to independently verify any results obtained from using this tool.*

#### DESCRIPTION:

The following integrated spreadsheet file has been created using Microsoft Excel 5.0. The spreadsheet is a learning tool to illustrate the sensitivity of various elements of the financial forecasts for New Tech Distributors. The spreadsheet allows the user to change various assumptions and see the effects on the forecasted results.

#### WORKING WITH THE INTEGRATED SPREADSHEET FILE:

The integrated spreadsheet is organized as a Workbook. Each sheet in the workbook is a standalone schedule. However, all sheets are interconnected via formulas and references. In order to perform sensitivity analysis on the results and changes in assumptions, the following guidelines must be followed:

- Cells marked in *italic* font indicate cells containing values which may be changed.
- Cells marked with a **bold** font represent formulas and may not be changed by the user.

#### Sections/Worksheets

The following worksheets are included in the integrated spreadsheet file:

**SENSITIVITY:** - A summary of key accounts to quickly analyse results.

**ASSUMPTIONS:** - List of assumptions used to drive the forecasted results; you can make most changes here.

**PROFIT AND LOSS:** - Forecasted profit and loss statement, generated from assumptions in previous worksheet.

**BALANCE SHEET:** - Forecasted balance sheet, generated from assumptions in previous worksheet. Some changes can be made here as well.

**CASHFLOW:** - Forecasted cashflow statement, generated from forecasted balance sheets and forecasted profit and loss statements.

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#### Assumptions Available for Changes

##### ASSUMPTIONS WORKSHEET

**Sales:** Input annual sales amounts for each year.

**Gross Margin %:** Input the gross margin % age earned on sales for each year.

**Selling Expenses:** Input selling expenses as a % age of sales for each year.

**Distribution Expenses:** Input distribution expenses as a % age of sales for each year.

**General and Administrative Expenses:** Input the total dollar amount of administrative expenses for each year.

**Research and Development (R&D) Expenses:** Input the total dollar amount of research and development expenses for each year.

**Depreciation and Amortization:** Input the total dollar amount of depreciation and amortization expenses for each year.

**Income Tax Rate:** Input the income rate for each year.

**Investment Tax Credit Rate:** Input the rate for earning investment tax credits on R&D expenses for each year.

**Accounts Receivable (A/R) Turnover:** Enter the days sales outstanding for accounts receivable for each year.

**Inventory Turnover:** Enter the days of inventory on hand for each year, based on cost of sales.

**Accounts Payable (A/P) Turnover** Enter the days of payables outstanding, based on sales.

**Fixed Asset Additions** Enter the amount of fixed asset additions for each year.

*The following integrated spreadsheet is provided for illustrative purposes only without any representation or warranty, either expressed or implied, that the results are complete, accurate or will meet the users specific objectives. You assume sole responsibility to independently verify any results obtained from using this tool.*

### **BALANCE SHEET**

In addition to the assumption sheet, several items may be adjusted on the balance sheet itself, including:

#### **Marketable Securities**

Enter the balance of marketable securities on hand at the end of each year of the forecast period.

#### **Prepaid Expenses**

Enter the balance of prepaid expenses at the end of each year of the forecast period.

#### **Other Assets**

If applicable, enter the balance of any other assets at the end of each year of the forecast period.

#### **Term Debt**

Enter the amount of new term debt financing and repayments for each year of the forecast period. Repayments should be entered using a minus (-) sign before the amount.

#### **Other Long Term (L/T) Debt**

Enter the balance of other long term debt, if applicable, at the end of each year of the forecast. In this case, new financing or repayment amounts do not have to be entered separately, the cashflow schedule will illustrate the change in the balance of this account.

#### **Capital Stock**

Enter the amount of new term equity financing and any share redemptions for each year of the forecast period. Redemptions should be entered using a minus (-) sign before the amount.

#### **Dividends**

Enter the amount of dividends paid for each year of the forecast period. Dividends paid should be entered with a (-) minus sign in front of the amount.

NEW TECH DISTRIBUTORS CORP.  
SENSITIVITY ANALYSIS - SUMMARY OF KEY VARIABLES

	Actual 2000	Forecast 2001	Forecast 2002	Forecast 2003	Forecast 2004	Forecast 2005
<b>Sales</b>	\$3,000	\$4,000	\$4,800	\$5,600	\$6,700	\$7,500
<b>Gross Margin %</b>	27%	27%	28%	30%	33%	34%
<b>EBITDA</b>	\$115	(\$215)	\$236	\$439	\$774	\$985
<b>EBIT</b>	\$65	(\$295)	\$161	\$369	\$704	\$920
<b>Cashflow</b>	\$6	(\$216)	(\$19)	\$70	\$323	\$511
<b>Cash Position</b>	(\$179)	(\$295)	(\$314)	(\$244)	\$78	\$590

NEW TECH DISTRIBUTORS CORP. ASSUMPTIONS

	Actual 2000	Forecast 2001	Forecast 2002	Forecast 2003	Forecast 2004	Forecast 2005
Operations						
Sales	<b>\$3,000</b>	<i>\$4,000</i>	<i>\$4,800</i>	<i>\$5,600</i>	<i>\$6,700</i>	<i>\$7,500</i>
Annual Sales Growth %	<b>10.00%</b>	<b>33.30%</b>	<b>20.00%</b>	<b>16.70%</b>	<b>19.60%</b>	<b>11.90%</b>
Gross Margin %	<b>27%</b>	27%	28%	30%	33%	34%
Selling Expensives (% of Sales)	<b>6%</b>	6%	6%	6%	6%	6%
Distribution Expenses (% of Sales)	<b>10%</b>	10%	10%	10%	10%	10%
General and Administrative Exp	<b>\$150</b>	\$525	\$275	\$280	\$300	\$300
Research & Development (R&D) Exp.	<b>\$100</b>	\$200	\$100	\$100	\$100	\$100
Depreciation and Amortization	<b>\$50</b>	\$80	\$75	\$70	\$70	\$65
<b>Income Taxes and R&amp;D Tax Credits</b>						
Income Tax Rate	<b>30%</b>	30%	30%	30%	30%	30%
R & D Expenses (from above)	<b>\$100</b>	<b>\$200</b>	<b>\$100</b>	<b>\$100</b>	<b>\$100</b>	<b>\$100</b>
Investment Tax Credit (ITC) Rate	<b>35%</b>	35%	35%	35%	35%	35%
SR&D Credit (Cash Refund)	<b>\$35</b>	<b>\$70</b>	<b>\$35</b>	<b>\$35</b>	<b>\$35</b>	<b>\$35</b>
Net R&D Expenses	<b>\$65</b>	<b>\$130</b>	<b>\$65</b>	<b>\$65</b>	<b>\$65</b>	<b>\$65</b>
<b>Balance Sheet/Working Capital</b>						
A/R Turnover (Sales/Acct Rec)	<b>60</b>	65	65	65	65	65
Inventory Turnover (COS/Inv)	<b>45</b>	50	52	52	52	52
A/P Turnover (COS/Acct Pay)	<b>40</b>	40	40	40	40	40

Fixed Asset Additions	<b>\$25</b>	\$400	\$100	\$100	\$75	\$75
<b>Interest Rates:</b>						
Operating Line	<b>7%</b>	7%	7%	7%	7%	7%
Excess Cash & Mkt Securities	<b>4%</b>	4%	4%	4%	4%	4%
Term Debt	<b>10%</b>	10%	10%	10%	10%	10%

**NEW TECH DISTRIBUTORS CORP. PROFIT and LOSS**

	Actual 2000	Forecast 2001	Forecast 2002	Forecast 2003	Forecast 2004	Forecast 2005
Sales	\$3,000	\$4,000	\$4,800	\$5,600	\$6,700	\$7,500
Cost of sales	\$2,190	\$2,920	\$3,456	\$3,920	\$4,489	\$4,950
Gross Profit	\$810	\$1,080	\$1,344	\$1,680	\$2,211	\$2,550
<b>OPERATING EXPENSES</b>						
Selling Expenses	\$180	\$240	\$288	\$336	\$402	\$450
Distribution Expenses	\$300	\$400	\$480	\$560	\$670	\$750
General and Administrative Exp	\$150	\$525	\$275	\$280	\$300	\$300
Research & Development (net of ITCs)	\$65	\$130	\$65	\$65	\$65	\$65
Depreciation and Amortization	\$50	\$80	\$75	\$70	\$70	\$65
Total Operating Expenses	\$745	\$1,375	\$1,183	\$1,311	\$1,507	\$1,630
Operating income (EBIT)	\$65	(\$295)	\$161	\$369	\$704	\$920
Interest - Operating Line	\$13	\$13	\$21	\$22	\$17	\$ -
Interest - Excess Cash & Short-Term Inv.	(\$2)	(\$2)	\$ -	\$ -	\$ -	(\$3)
Interest - Term Debt	\$ -	\$ -	\$15	\$12	\$9	\$6
Interest & Financing Costs	\$11	\$11	\$36	\$34	\$26	\$3
Earnings before income taxes	\$54	(\$306)	\$125	\$335	\$678	\$917
Income Taxes	\$16	(\$92)	\$38	\$101	\$203	\$275
Net income after taxes	\$38	(\$214)	\$88	\$235	\$475	\$642

**NEW TECH DISTRIBUTORS CORP. BALANCE SHEET**

	Opening 1999	Actual 2000	Forecast 2001	Forecast 2002	Forecast 2003	Forecast 2004	Forecast 2005
<b>Cash</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$78	\$590
<b>Marketable Securities</b>	\$50	\$50	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Accounts Receivable</b>	\$400	\$493	\$712	\$855	\$997	\$1,193	\$1,336
<b>Inventory</b>	\$175	\$270	\$400	\$492	\$558	\$640	\$705
<b>Prepaid Expenses</b>	\$85	\$85	\$90	\$95	\$105	\$110	\$115
<b>Total current assets</b>	\$710	\$898	\$1,202	\$1,442	\$1,661	\$2,021	\$2,745



<b>Fixed Assets</b>							
<i>Opening - NBV</i>	\$500	\$525	\$500	\$820	\$845	\$875	\$880
<i>Additions</i>	\$25	\$25	\$400	\$100	\$100	\$75	\$75
<i>Depreciation</i>	\$ -	(\$50)	(\$80)	(\$75)	(\$70)	(\$70)	(\$65)
<b>Fixed Assets, net</b>	\$525	\$500	\$820	\$845	\$875	\$880	\$890
<b>Other Assets</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Assets</b>	\$1,235	\$1,398	\$2,022	\$2,287	\$2,536	\$2,901	\$3,635
<b>Bank</b>	\$185	\$179	\$295	\$314	\$244	\$ -	\$ -
<b>Indebtedness</b>							
<b>Accounts Payable</b>	\$100	\$240	\$320	\$379	\$430	\$492	\$542
<b>Income Taxes Payable</b>	\$25	\$16	(\$92)	\$38	\$101	\$203	\$275
<b>Total current liabilities</b>	\$310	\$435	\$523	\$730	\$775	\$695	\$818
<b>Term Debt</b>							
<i>Opening Balance</i>	\$ -	\$ -	\$ -	\$150	\$120	\$90	\$60
<i>New Borrowings</i>	\$ -	\$ -	\$150	\$ -	\$ -	\$ -	\$ -
<i>Repayments</i>	\$ -	\$ -	\$ -	(\$30)	(\$30)	(\$30)	(\$30)
<b>Term Debt</b>	\$ -	\$ -	\$150	\$120	\$90	\$60	\$30
<b>Other Long Term Debt</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total long-term debt</b>	\$ -	\$ -	\$150	\$120	\$90	\$60	\$30
<b>Capital stock</b>							
<i>Opening Balance</i>	\$500	\$500	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100
<i>Shares Issued</i>	\$ -	\$ -	\$600	\$ -	\$ -	\$ -	\$ -
<i>Shares Redeemed</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Capital Stock</b>	\$500	\$500	\$500	\$1,100	\$1,100	\$1,100	\$1,100
<b>Retained Earnings</b>							
<i>Opening Balance</i>	\$300	\$425	\$463	\$249	\$337	\$571	\$1,046
<i>Net Income</i>	\$125	\$38	(\$214)	\$88	\$235	\$475	\$642
<i>Dividends</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Retained Earnings</b>	\$425	\$463	\$249	\$337	\$571	\$1,046	\$1,688
<b>Total equity</b>	\$925	\$963	\$1,349	\$1,437	\$1,671	\$2,146	\$2,788
<b>Total liabilities &amp; equity</b>	\$1,235	\$1,398	\$2,022	\$2,287	\$2,536	\$2,901	\$3,635
<b>Ratio analysis</b>							
<b>Current Ratio</b>	2.29	2.06	2.3	1.97	2.14	2.91	3.36
<b>Total Debt/Equity Ratio</b>	0.2	0.19	0.33	0.3	0.2	0.03	0.01

**NEW TECH DISTRIBUTORS CORP. CASHFLOW**

	Actual 2000	Forecast 2001	Forecast 2002	Forecast 2003	Forecast 2004	Forecast 2005
Net Income	\$38	(\$214)	\$88	\$235	\$475	\$642
Depreciation and Amortization	\$50	\$80	\$75	\$70	\$70	\$65
<b>Working Capital Changes</b>						
Marketable Securities	\$ -	\$50	\$ -	\$ -	\$ -	\$ -
Accounts Receivable	(\$93)	(\$219)	(\$142)	(\$142)	(\$196)	(\$142)
Inventory	(\$95)	(\$130)	(\$92)	(\$66)	(\$81)	(\$66)
Prepaid Expenses	\$ -	(\$5)	(\$5)	(\$10)	(\$5)	(\$5)
Other Assets	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accounts Payable	\$140	\$80	\$59	\$51	\$62	\$51
Taxes Payable	(\$9)	(\$108)	\$129	\$63	\$103	\$72
Changes in Working Capital Items	(\$57)	(\$332)	(\$52)	(\$105)	(\$117)	(\$91)
Operating Cash Flows	\$31	(\$466)	\$111	\$200	\$428	\$616
Fixed Asset Additions	(\$25)	(\$400)	(\$100)	(\$100)	(\$75)	(\$75)
<b>Financing Activities</b>						
New Term Debt	\$ -	\$150	\$ -	\$ -	\$ -	\$ -
New Other Long-Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Equity	\$ -	\$600	\$ -	\$ -	\$ -	\$ -
Repayment - Term Debt	\$ -	\$ -	(\$30)	(\$30)	(\$30)	(\$30)
Repayment - Other Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Redeemed - Equity	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Financing Activities	\$ -	\$750	(\$30)	(\$30)	(\$30)	(\$30)
Dividends	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net changes in cash	\$6	(\$116)	(\$19)	\$70	\$323	\$511
Opening cash/bank indebtedness	(\$185)	(\$179)	(\$295)	(\$314)	(\$244)	\$78
Closing cash/bank indebtedness	(\$179)	(\$295)	(\$314)	(\$244)	(\$78)	\$590

## Take a Closer Look – Break-Even Analysis Tools (see section 1.7)

**BREAK-EVEN FORMULA:**

$$\# \text{ of Units} = \text{Total Fixed Costs} / \text{Contribution Margin per Unit}$$

$$\text{Contribution Margin per Unit} = \text{Gross Margin per Unit} - \text{Variable Costs per Unit}$$

### ASSUMPTIONS

Price Per Unit	<i>\$ 250</i>
Gross Margin per Unit (% of Price)	<i>40%</i>

### Variable Costs

Selling Expenses (% of Price)	<i>6%</i>
Distribution Expenses (% of Price)	<i>10%</i>
Other Variable Costs (% of Price)	<i>0%</i>
	-----
	<i>16%</i>

### Fixed Costs

Administration (\$)	<i>\$ 100,000</i>
Overhead (\$)	<i>\$ 50,000</i>
Other Fixed Costs	<i>\$ -</i>
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<b>TOTAL FIXED COSTS</b>	<b><i>\$ 150,000</i></b>

### BREAKEVEN ANALYSIS - RESULTS

Price per Unit (\$\$\$)	Gross Margin per Unit (\$\$\$)	Variable Costs per Unit (\$\$\$)	Contribution Margin per Unit (\$\$\$)	Total Fixed Costs	Breakeven Volume (# of Units)
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<i>\$ 250</i>	<i>\$ 100</i>	<i>\$ 40</i>	<i>\$ 60</i>	<i>\$ 150,000</i>	<i>2,500</i>