

# Financial Analysis Guide

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## I. Overview

This document provides additional guidance to application reviewers for the 2009 CED Program, based on the Program Announcement (PA) dated March 6, 2009 (modified April 17, 2009). This is a companion document to the Guidelines for Evaluating 2009 CED Applications, which requires reviewers to determine whether the proposed project is *economically viable* and proposed costs are *reasonable and necessary*. The financial analysis described in this Guide provides a robust methodology for evaluating these factors for the applications being reviewed. This Guide will be most useful and applicable in the review of Section 2.c Approach – Financial Strategies and Section 2.d Approach – Financial Viability.

A financial analysis is an evaluation of a project's financial position not just at the time of the award but over time (or projections thereof). Financial analysis is a way to measure a project's performance over time or against industry standards. The process is part science and part art, requiring the reviewer to make the best decision possible using the information provided.

The CED program's goal is that the positions created and new businesses developed will be sustainable after Federal support ends. Positions and businesses must be in place at least one year before the anticipated project end date, and must be viable for **at least 2 years** beyond the end of the grant. For the purposes of application review, "economically viable" means that the financial documentation provided by the applicant shows that the proposed project will need no additional external cash infusions by the end of the grant period, and that the businesses and jobs will be viable for a minimum of 2 years thereafter.

The following financial reports are necessary to conduct the analysis:

- Narrative explanations of historical financial data and detailed assumptions for projections;
- Profit and loss statements (or an operating Pro-Forma);
- Sources and uses of funds for all funding sources, including CED;
- Cash flow statements;
- Balance sheets; and

If the applicant fails to provide all of the documentation necessary to conduct a thorough financial analysis, please perform as much of the analysis as possible and score the application section based on the confidence you have in the results. Make sure the score reflects the fact that the analysis was based on incomplete information; in other words, incomplete documentation should result in a lower score.

In all cases, be sure to document your reasoning for the score you give to the Financial Strategies and Financial Viability evaluation criteria. Include in your strengths and weaknesses on the RMM comment and scoring form a summary of your analysis of the financial documentation presented by the applicant, and be sure to cite any ratios that you calculated as well as the benchmarks against which you compared them. The Financial

Analysis Worksheets provided as an Excel attachment to this Guide are designed to assist you with your analysis, but you are not required to use them.

## II. Financial Reports

This section identifies and describes the financial reports that are likely to be submitted as part of an application to the CED program, explains the kinds the information they provide, and suggests ways to evaluate the information. In addition, this section provides instructions for using the Financial Analysis Worksheets that are provided as an Excel attachment to this Guide, should you choose to use them.

### A. Narrative Explanations

#### *What Are They?*

Each application should include a narrative explaining the assumptions used in generating the information on the financial reports. The applicant may write a separate narrative for each financial report, or one over-arching narrative that attempts to explain the assumptions behind the financial projections as a whole. Either way, to be considered complete the narrative should convincingly show that projected expenses are necessary and reasonable, and that projected revenues are realistic and well-grounded.

#### *Samples*

Below are two samples of narrative explanations. Please note that one sample is based on an operating company in a particular industry; a narrative for a different industry may look quite different, and may be more or less detailed depending on the complexity of the business. The second narrative is for an income-producing real estate property. Both samples are abbreviated.

Narrative Explanation of Financial Projections (Proposed Catering Business)
<p>The project's financial projections are based on conservative assumptions. The business is projected to break even in Year 2, and to achieve X% net margins starting in Year 3, based on revenues of \$X. By Year 4, the business will be fully self-sustaining.</p>
<p>Revenue projections are based on an average of X major events and X minor events per week in year X, growing to X major events and X minor events per week by year X. Product offerings are expected to include meetings/lunches (20 people avg., \$X/person), cocktail parties (60 people average, \$X/person) and dinners (40 people average, \$X/person), all of which will be buffet style. All events are expected to be staffed by project participants, to be billed at a rate of \$X/person. See market analysis for details. All sales prices are projected to increase by 3% per year.</p>
<p>Cost of Goods is based on labor costs, materials costs, and the amount of time it takes to prepare, deliver and close out each type of event. Staff will be paid as follows: Manager (1 @ \$X / year plus benefits of \$X / year); Head Cook (1 @ \$X / year plus benefits of \$X / year); Assistant Cooks (3 @ \$X / hour); and Apprentices (10 @ \$X / hour). All labor costs are projected to increase by 3% per year. Fixed expenses include rent for facilities and equipment at a rate of \$X / month.</p>

**Narrative Explanation of Financial Projections  
(Income-Producing Real Estate Business)**

The project's financial projections are based on conservative assumptions. The property is projected to be pre-lease with all units leased by construction completion.

Lease rates are projected at \$XX per sq. ft. which is the middle range of rates for comparable properties in the city.

ABC Property Management company has been selected to manage this property. The projected fees and costs associated with the management of this property were developed by ABC and are based on similar property costs in their rental portfolio. ABC is an operating company wholly owned by the CDC.

Utilities were based on rates obtained from the local water and sewer authority and gas and electric company.

Insurance quotes were received from three local independent insurance companies and the quote in the middle is used in the projections.

Etc.

***How to Analyze Narrative Explanations***

The reviewer should assess the validity of the assumptions based on their knowledge of the community, the market, the industry and the economic conditions. In addition, the assumptions should appear supportive of, and be supported by, the rest of the application (in particular, the Project Implementation and Budget and Budget Justification subsections).

Assumptions that appear realistic, complete, and well thought out should result in a higher overall score for the Financial Strategies and Financial Viability evaluation criteria. Assumptions that appear unrealistic, incomplete, or poorly thought out should result in a lower overall score for the Financial Strategies and Financial Viability evaluation criteria.

***Using the Worksheets***

This Guide does not include a separate Worksheet for the Narrative Explanations. Describe your observations about the Narrative Explanations as strengths and/or weaknesses on the RMM comment and scoring form.

**B. Profit and Loss Statement and Pro-Forma**

***What Are They?***

A Profit and Loss Statement (sometimes called an income statement) is the financial report of a company's operation over time. This statement reflects the company's *actual* sales, expenses and profitability from operations on an annual basis or for an interim period.

An operating Pro-Forma is a **projection** of a business' estimated annual revenues, expenses and profits over time, usually a 3-5 year period. A Pro-Forma includes a detailed narrative of the assumptions used to generate the numbers. The reviewer should review the assumptions for their validity, as above, and use that assessment as an indicator of a company's likely success.

**Sample**

Below is a sample of what an operating Pro-Forma for a proposed business might look like. Please note that the sample shows only two years of projected operations, while an actual operating Pro-Forma should show three to five years.

Pro-Forma for Proposed Business			
Item	2009 (\$)	2010 (\$)	Etc.
<b>1. Sales/Revenues</b>	<b>341,400</b>	<b>493,900</b>	
<b>2. Cost of Goods Sold</b>	<b>183,500</b>	<b>266,200</b>	
a. Purchases	<i>100,000</i>	<i>145,068</i>	
b. Production Labor – Beneficiaries	<i>25,000</i>	<i>36,252</i>	
c. Production Labor – Other	<i>48,500</i>	<i>70,373</i>	
d. Production Overhead	<i>10,000</i>	<i>14,507</i>	
<b>3. Gross Profit (Line 1 - Line 2 =)</b>	<b>157,900</b>	<b>227,700</b>	
<b>4. Operating Expenses</b>	<b>117,300</b>	<b>186,400</b>	
a. Selling Expenses	<i>57,100</i>	<i>82,600</i>	
b. General Expenses	<i>12,200</i>	<i>15,000</i>	
c. Administrative	<i>12,000</i>	<i>12,800</i>	
d. Rent	<i>0</i>	<i>0</i>	
e. Depreciation	<i>36,000</i>	<i>36,000</i>	
f. Plant Manager's Salary	<i>0</i>	<i>40,000</i>	
<b>5. Operating Profit (Line 3 - Line 4 =)</b>	<b>40,600</b>	<b>41,300</b>	
<b>6. Interest</b>	<b>32,500</b>	<b>30,800</b>	
<b>7. Earnings before Taxes</b> (Line 5 - Line 6 =)	<b>8,100</b>	<b>10,500</b>	
<b>8. Taxes</b>	<b>3,100</b>	<b>4,000</b>	
<b>9. Profit after Taxes (Line 7 - Line 8 =)</b>	<b>5,000</b>	<b>6,500</b>	
<b>Assumptions</b>			
1. Sales assumed to grow 45% from Y1 to Y2, thereafter by 10% per annum (see market analysis).			
2. Pricing strategy based on keeping cost of goods sold a fixed percentage of sales revenue.			
3. Facilities to be provided rent-free for first three years, see MOU with Non-Profit X.			
4. Project plans to use straight-line depreciation method.			
5. Depreciation schedule – 10 years office furniture, 15 years machinery & equipment, 30 years real estate			
6. Project to be run by existing CDC staff, no plant manager salary required in 2009 but is needed in 2010			
7. Interest – mortgage loan @ 6.25%; interest on bank short term loan is prime plus ½% ( 2010 - \$30,000 mortgage interest & \$800 bank short term debt interest)			
Etc.			

### ***How to Analyze a Profit and Loss Statement or Pro-Forma***

The reviewer should make a preliminary determination on whether the Profit and Loss Statement or Pro-Forma compares favorably with the reviewer's professional experience and with industry standards. For the preliminary analysis, the review should compare common-sized numbers and consider some key analytical questions. Additional indicators of (projected) performance are discussed in the Ratio Analysis section below.

#### Comparing Common-Sized Numbers

One way to analyze a Profit and Loss Statement or Pro-Forma is to "common size the number", which means to represent each line item as a percentage of total sales or revenues. The reviewer may then compare the information to a company's past years' Profit and Loss Statements or to an industry standard. Trying to compare actual dollar values can be misleading; percentages provide a more relevant measure when making comparisons.

#### Analytical Questions

Some analytical questions to consider when reviewing a Profit and Loss Statement or Pro-Forma include:

1. Do the actual revenues and expenses, or the assumptions on which the Pro-Forma's revenues and expenses are based, appear reasonable based on your knowledge of this industry or market? (If not, you should consider what impact that might have on the company's economic viability.)
2. Are sales growing, or projected to grow, year over year? (If sales are growing or projected to grow, the company's profits must be able to sustain its growth. Take a look at the Cash Flow Statement to see if the company will be able to cover expenses that rise as a result of this growth.)
3. If losses are projected, when is the company expecting to achieve profitability? (The company's lenders, if any, may be able to call their loans if the company experiences sustained losses, which could jeopardize the company's ability to operate.)
4. Are resources available in case sales are lower, or expenses higher, than expected? (For example, discretionary expenses that could be cut if sales are lower, and a cash cushion or available bank line of credit that could offset higher expenses.)
5. How do the actual or projected gross profit and net profit margins compare to other companies in the industry? (Use the resources provided at the end of this Guide.)

#### ***Using Worksheet 1***

Worksheet 1 provided as an attachment to this Guide is for a proposed business or business expansion. The Worksheet provides space in the first blank column to enter the data from the applicant's Profit and Loss Statement or Pro-Forma into a standard format. The next column calculates the "common sized" values. The column thereafter is for entering the values that represent the industry standard, to allow for comparison. Please be sure to note the source of the standard you use.

The Worksheet also includes space to write notes as you compare the applicant’s data to the industry standard, and to record your thoughts as you consider the Analytical Questions. However, be sure to summarize your observations as strengths and/or weaknesses on the RMM comment and scoring form.

See Appendix for a completed example of and detailed instructions for Worksheet 1.

### C. Sources and Uses of Funds Statement

#### *What is It?*

The Sources and Uses of Funds statement (or simply a “Sources and Uses” statement) lists where a company gets its cash and how it spends it. As part of the application, the applicant must provide a list of what the business needs to start up or expand in order to create jobs. Additionally, applicants must list all sources of funds that will be used to support the business uses. All uses of CED funds must be eligible under the Program.

#### *Sample*

Below is an example of a Sources and Uses statement.

<b>Sources and Uses Statement (Proposed Light Manufacturing Business)</b>	
Uses	Amount
1. Equipment	\$100,000
2. Machinery	\$50,000
3. Office Furniture	\$100,000
4. Permanent Working Capital	\$50,000
5. Inventory	\$50,000
6. Real Estate	\$600,000
7. Direct Support to Beneficiaries	\$25,000
8. Other	\$25,000
<b>Totals</b>	<b>\$1,000,000</b>
Sources	Amount
1. CED	\$400,000
2. Loan from X Bank	\$450,000
3. Other Grants	\$50,000
4. Suppliers	\$25,000
5. Owner	\$75,000
<b>Totals</b>	<b>\$1,000,000</b>
<b>Notes</b>	
1. Commitment from X Bank to loan required funds is documented in the attached letter. 2. Appraisal documentation is enclosed supporting the value of the real estate acquired. 3. Commitments from suppliers X, Y and Z to extend credit are documented in letters attached to the application. 4. State is providing a \$30,000 grant and the City is providing a \$20,000 grant. See attached letters. 5. See attached financial statements as documentation of owner's ability to contribute. Etc.	

### ***How to Analyze a Sources and Uses Statement***

The analysis of the Sources and Uses statement involves determining compliance with program requirements and determining the strength of backup documentation provided to substantiate the sources of funds.

#### **Compliance with Program Requirements**

As part of a viable economic plan, the total uses of funds must equal the total sources of funds. In addition, reviewers should look closely at proposed uses of CED funds to ensure that they are eligible under the Program as per the PA dated March 6, 2009 (modified April 17, 2009). Please note that, depending on how the applicant compiled the application, these compliance issues may be addressed in the Budget and Budget Justification section.

#### **Backup Documentation**

If any third-party sources of funds are listed in the source and uses statement, reviewers should evaluate evidence of third-party commitments to the business such as bank loan commitment letters, grant agreements and letters from suppliers indicating the terms of any credit extended. If CED funds are used to acquire real estate, additional back up documentation supporting the value of the real estate should be submitted. If the owner's investment is listed, the reviewer should also evaluate the owner's Personal Financial Statement, if provided, to determine their ability to contribute initial capital to the venture. The backup documentation should support the applicant's claim that these are viable sources of funds.

### **D. Cash Flow Statement**

#### ***What is It?***

When evaluating a company's financial viability it is important to analyze how the business gets its cash and where it spends its cash (or projections thereof), to ensure that it has enough on hand to pay its bills. A Cash Flow Statement is the report detailing this activity.

#### ***Sample***

Below is a sample of how a typical Cash Flow Statement looks. Please note that this sample only shows cash flow for one year, while an actual Cash Flow Statement (or projections thereof) should show values for three to five years.

Cash Flow Statement		
Item	2010 (\$)	Etc. (\$)
<b>A. Operating Activities</b>		
1. Net Income	6,500	
2. Adjustments to Net Income	37,500	
a. Deferred income taxes	1,500	
b. Depreciation and amortization	36,000	
3. Changes in Current Assets and Liabilities	-61,000	
a. Accounts receivable	-37,500	
b. Inventories	-41,600	
c. Prepaid expenses	-3,200	
d. Accounts payable	16,500	
e. Accrued expenses	5,100	
f. Income taxes	-300	
<b>4. Net Cash from Operations (Lines A1+A2+A3=)</b>	<b>-17,000</b>	
<b>B. Investing Activities</b>		
1. Additions to / Sale of Fixed Assets	-21,600	
2. Other	-2,200	
<b>3. Net Cash from Investing (Lines B1+B2=)</b>	<b>-23,800</b>	
<b>C. Financing Activities</b>		
1. Net short term borrowing	3,200	
2. Proceeds from long term obligations	50,000	
3. Payments on long-term debt and capital leases	-5,300	
4. Infusion of equity	2,000	
<b>5. Net Cash from Financing (Lines C1+C2+C3+C4=)</b>	<b>49,900</b>	
<b>D. Net Change in Cash (Lines A4 + B3 + C5 =)</b>	<b>9,100</b>	
<b>E. Cash Balances</b>		
1. Beginning of Year	-7,900	
2. End of Year	1,200	
<b>Assumptions</b>		
1. The assumptions that affect the Cash Flow Statement are the same as those provided in the operating pro forma and the Balance Sheet.		

### ***How to Analyze a Cash Flow Statement***

The PA did not stipulate the format for the Cash Flow Statement so the reviewer may not receive information related to the timing of a company's cash needs. Based on the materials received, the reviewer should assess the cash flow to determine the ability of a company to generate sufficient cash to meet the obligations of the business. If the business cannot do so, the reviewer must determine what other resources are available to provide a source of cash to support not only the operational needs of the business, but to pay obligations as they come due.

### Spot-Checking the Calculations

Two easy spot-checks of the calculations are useful. First, the net changes in cash from operating, investing and financing activities should equal the total net change in cash. Second, the cash balance at the end of the year should equal the total net change in cash plus the cash balance at the beginning of the year.

### Analytical Questions

The rest of the analysis is geared toward determining one fundamental issue: whether the business is generating (or is projected to generate) enough cash to support its projected growth. The opposite and undesirable possibility is that the business is using (or is projected to use) cash in a way that may require additional support outside of its own cash reserves. The following analytical questions are designed to assist the reviewer in making this determination:

1. What is the largest (projected) source of cash and how likely is it to re-occur?
2. What is the largest (projected) use of cash and how likely is it to re-occur?
3. Does the company generate (or expect to generate) sufficient cash to meet its various obligations over time?
4. How may a change in the timing of collections or payables affect net cash flow?
5. In the event that a company projects a negative cash flow in the first few years of operation, does it have access to cash as needed, for example a line of credit with a bank, or the owner's personal resources?

## **E. Balance Sheet**

### ***What is It?***

The Balance Sheet is a report that presents the company's financial position **at a single point in time**. It lists a company's assets (resources owned), liabilities (what is owed) and net worth (shareholder or owner's equity interest in the assets). The Balance Sheet provides information on a company's liquidity (how quickly they can convert their sales to cash) and a company's solvency (whether the resources are greater than the debts owed on them).

For proposed businesses, the Balance Sheet will be based on projections. For existing businesses that are proposed to expand, the applicant should submit both historical and projected Balance Sheets.

### ***Additional Accounting Terms***

Accounts listed in current assets are items that either convert to cash in less than a one-year period or expire within a year (such as a prepaid expense). Investments can be both a current asset and a long term asset. Usually a long term asset is restricted for a particular use in the future. Fixed assets are tangible goods/resources required by the business in order to operate, such as equipment, real estate that is owned by the business to house the operation, machinery, furniture, etc. Goodwill is an intangible asset that has value but has no physical structure.

Current liabilities mature within one year, while long term liabilities are the amounts due in 13 months and later.

Retained earnings are the cumulative amount of previous years' net profit less the dividends paid to the owner plus the current year's net profit less any dividends paid out. Owner's equity is the owner's investment in the business, and may include a variety of categories like common stock, additional paid in capital, partner's share, etc.

**Sample**

A standard format for a Balance Sheet is as follows:

Balance Sheet for a Proposed Business Year 2010			
ASSETS (\$)		LIABILITIES AND NET WORTH (\$)	
Cash	1,200	Accounts Payable	28,700
Investments	0	Notes Payable to Banks	25,000
Accounts Receivable	48,100	Current Maturities Long Term Debt	5,300
Inventory	56,500	Accrued Payroll	15,000
Prepaid Expenses	4,500	Other Accruals	0
Other Current Assets	7,500	Taxes Payable	4,000
<b>Total Current Assets</b>	<b>117,800</b>	<b>Total Current Liabilities</b>	<b>78,000</b>
Fixed Assets	850,000	Long Term Debt less Current Maturities	444,800
Less Accumulated Depreciation	(72,000)	Other Long Term Debt	0
<b>Net Fixed Assets</b>	<b>778,000</b>	<b>Total Long-Term Liabilities</b>	<b>444,800</b>
Restricted Investments	28,900	<b>TOTAL LIABILITIES</b>	<b>522,800</b>
Goodwill	0	Owner's Equity	396,500
Other Long Term Assets	6,100	Retained Earnings	11,500
<b>Total Long-Term Assets</b>	<b>35,00</b>	<b>Total Net Worth</b>	<b>408,000</b>
<b>TOTAL ASSETS</b>	<b>930,800</b>	<b>TOTAL LIABILITIES &amp; NET WORTH</b>	<b>930,800</b>

**How to Analyze a Balance Sheet**

Analyzing a Balance Sheet provides insight into a company's ability to utilize its assets, its capital structure (borrowed funds vs. owner's funds) and its overall financial solvency. Remember that a Balance Sheet is reflective of the accounts at a single point in time and are subject to change.

In evaluating the information on a Balance Sheet, the reviewer should focus on the ability of the business to utilize its assets effectively and efficiently. Determine if the business has the appearance of good liquidity to meet their obligations and keep the operation

funded. It is also important the business is solvent and the owner's equity provides adequate cushion if the assets must be liquidated to retire the debt owned.

The following analytical questions are designed to assist the reviewer in making these determinations.

1. What are the company's credit policies and terms?
2. What is the aging of the receivables, i.e. how many days has it been since the invoice was sent out; 0 – 30 days, 30 – 60 days, 60 – 90 days or older?
3. What is the quality of the inventory? (If the company has a lot of aged inventory on hand, it may mean there is no market for the product. Conversely, too little inventory could indicate a supplier problem. Also, manufacturing inventory that is work-in-process is difficult to sell compared to raw inventory or finished goods.)
4. What is the condition of the fixed assets? (The company may need resources to replace, enlarge or enhance fixed assets that are needed to meet the projected sales volume.)
5. Who are the company's suppliers and how many are there?
6. Are payments on bills and debt current?
7. If the firm is currently in operation, are there any unpaid taxes? If so, to whom and what are the implications of not paying them?
8. How much does the owner have invested?

### **III. Ratio Analysis**

Ratio analysis is frequently used by a company or a creditor to assess a company's financial condition. This section identifies, describes, and explains and how to calculate certain ratios of performance or projected performance and compare them to industry standards for similar businesses. The reviewer should first complete the evaluation of each of the individual financial reports, as explained above, then move on to conduct ratio analysis.

Ratio analysis should be performed as the last piece in assessing the viability of a business, as the ratios alone are merely just one number divided by another and may be misleading if taken out of the overall context of the company's financial information. It is important to note that there is no one number for a ratio that is correct for all companies. For example, a current ratio for a grocery store may be very different from a current ratio for an automobile parts manufacturer.

While comparing a ratio to an industry norm is a way to judge a company's performance, there may be times when the manner in which a particular company operates deviates from the norm for justifiable reasons. In these instances it is also important to review a company's financial ratios year over year, if available, to see if there is a pattern of consistency within the company.

Ratio analysis provides indicators of four major financial categories:

- Liquidity;
- Solvency;
- Efficiency; and
- Profitability.

The remainder of this section identifies specific key ratios for each indicator, along with the method to calculate the ratio, and what it means. The numbers required for the calculations will come from the financial reports included in the application. Some ratios may use numbers from the same financial report such as the Balance Sheet or may require numbers from two different financial reports such as the Cash Flow Statement and the Balance Sheet.

Additionally, Worksheet 2 provided as an attachment to this Guide allows reviewers to enter the required values for the ratios presented in this section, and automatically calculates the result. To do this, reviewers will need to identify and enter relevant financial data from the application and enter them into either **Input A** or **Input B** columns. The **Applicant Value** column will be automatically calculated. Do not enter information in that column. The last column provides space to enter the industry value against which you are comparing the calculated ratios. Be sure to summarize your observations as strengths and/or weaknesses on the RMM comment and scoring form.

See Appendix for a completed example of Worksheet 2.

## A. Liquidity

Liquidity is an indicator of the assets that are readily available to meet a company's obligations. Ratios to determine this capacity are:

### Working Capital

Working Capital is the excess of current assets over current liabilities. There are two types of Working Capital to consider when analyzing financial information for a start up or expansion – Permanent Working Capital or Operating Working Capital needed in the normal course of operations. Permanent Working Capital is normally financed with a source of financing that is longer in term than the sources of cash available to the company from normal operations.

To calculate Working Capital, reviewers should refer to the Balance Sheet to obtain the values for Current Assets and Current Liabilities and enter these values into the **Input A** and **Input B** columns, respectively, of Worksheet 2. In this case:

$$\textit{Working Capital} = \text{Current Assets } (\$117,800) - \text{Current Liabilities } (\$78,000) = \mathbf{\$39,800}$$

### Current Ratio

This ratio measures the number of times current assets cover current liabilities. In most instances, the larger this number, the better. A number less than one should generate questions.

To calculate the Current Ratio, reviewers should refer to the Balance Sheet to obtain the values for Current Assets and Current Liabilities and enter these values into the **Input A** and **Input B** columns, respectively, of Worksheet 2. In this case:

$$\text{Current Ratio} = \frac{\text{Current Assets } (\$117,800)}{\text{Current Liabilities } (\$78,000)} = \mathbf{1.51}$$

The following are additional ratios that may help in determining a company's liquidity.

### Quick Ratio

This ratio is also known as the acid test, and is a more conservative test of liquidity than the Current Ratio. It removes the value of inventory from the calculation, as a company in duress may have to deeply discount the inventory in order to liquidate it. It also removes prepaid expenses, as in liquidation it may be difficult to obtain a refund. Like the Current Ratio, the general rule is the larger this number, the better it is.

To determine this ratio, reviewers should refer to the Balance Sheet to obtain the values for Cash, Investments, and Accounts Receivable. The sum of these values should be entered into the **Input A** column for Worksheet 2.

Reviewers should also refer to the Balance Sheet to obtain the value for Current Liabilities and enter this number into the **Input B** column for Worksheet 2. In this case:

$$\text{Quick Ratio} = \frac{\text{Cash } (\$1,200) + \text{Investments } (\$0) + \text{Accounts Receivable } (\$48,100)}{\text{Current Liabilities } (\$78,000)} = \mathbf{.63}$$

### Percentage of Sales

This ratio indicates the percentage of sales required to meet the current obligations, which is another test of liquidity.

To determine the Percentage of Sales, reviewers should refer to the Balance Sheet to obtain the value for Current Liabilities and the Pro-Forma to obtain the value for Sales/Revenues, and enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\% \text{ of Sales} = \frac{\text{Current Liabilities } (\$78,000)}{\text{Sales/Revenues } (\$493,900)} = \mathbf{15.79\%}$$

## Other Liquidity Measurements

There are other liquidity measurements that may be useful in the analysis of some companies, such as the number of days operations in cash or the number of days sales in cash. These ratios indicate a cushion or coverage is provided by the amount of cash on hand. In certain circumstances a lender may require a company to have a certain amount of cash on hand to provide assurances that a company will be able to operate for a period of time in the event that revenues do not materialize as projected.

To determine Days operation in cash, reviewers should refer to the Balance Sheet to obtain the values for Cash and Investments. The sum of these values should be entered into the **Input A** column for Worksheet 2. In this case:

Reviewers should then refer to the Pro-Forma to obtain the value for Operating Expenses, divide it by 365 (the number of days in a year) and enter this value into the **Input B** column of Worksheet 2.

$$\text{Days operation in cash} = \frac{\text{Cash } (\$1,200) + \text{Investments } (\$0)}{\text{Operating Expenses}/365 (\$186,400/365)} = \mathbf{2.4 \text{ days}}$$

To determine Days sales in cash, reviewers should refer to the Balance Sheet to obtain the values for Cash and Investments. The sum of these values should be entered into the **Input A** column for Worksheet 2.

Reviewers should then refer to the Pro-Forma to obtain the value for Sales/Revenues and divide it by 365 (the number of days in a year) and enter this value into the **Input B** column of Worksheet 2.

$$\text{Days sales in cash} = \frac{\text{Cash } (\$1,200) + \text{Investments } (\$0)}{\text{Sales}/365 (\$493,900/365)} = \mathbf{.89 \text{ days}}$$

## **B. Solvency**

Solvency represents the ability of a company to pay debts when the obligations come due. These ratios are used to measure the amount of risk the creditors and owners have to receiving repayment of the loans or a return on their investment. A reviewer should be concerned that the debt of the company will be repaid, primarily from a company's cash flow but secondarily from a liquidation of a company's assets.

### Debt Coverage Ratio (DCR)

The Debt Coverage Ratio determines the ability of a company to pay its debt by calculating the total amount of a company's current change in cash divided by its current maturities of long term debt (this represents the principal amount only). A reviewer should determine that this is a positive number. Most conventional lenders look for a 1.2

to 1.5 while public providers are often comfortable with a 1.1 to 1.15 DCR. If the coverage is less than 1, the reviewer should question the ability of the company to repay its obligations. If it is less than 1 in the beginning years of a start up, a reviewer should review the requirements of the conventional lender who may have made provisions for that event.

To determine the Debt Coverage Ratio, reviewers will need to obtain information from two statements: Cash Flow Statement and Balance Sheet. Reviewers should refer to the Cash Flow Statement to identify the amount of the Net Change in Cash. This number should be entered into the **Input A** column of Worksheet 2.

Reviewers should refer to the Balance Sheet to obtain the value for Total Current Maturities of Long Term Debt and enter this value into the **Input B** column of Worksheet 2. In this case:

$$\text{Debt Coverage Ratio} = \frac{\text{Net Change in Cash } (\$9,100)}{\text{Current Maturities of Long Term Debt } (\$5,300)} = 1.72$$

#### Debt to Net Worth

This ratio compares the ownership balance of a company between its creditors and its owners/investors. The greater the number, the more the creditor's interest is in the company.

To determine the Debt to Net Worth Ratio, reviewers should refer to the Balance Sheet to obtain the values for Total Liabilities and Total Net Worth and enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\text{Debt to Net Worth} = \frac{\text{Total Liabilities } (\$522,800)}{\text{Total Net Worth } (\$408,000)} = 1.28$$

#### Current Liabilities to Net Worth

This ratio compares the relationship between the short term creditors and the owners. Again, the larger this ratio is, the greater the risk to the short term creditor.

To determine this ratio, reviewers should refer to the Balance Sheet to obtain the values for Total Current Liabilities and Total Net Worth, and enter these values into the **Input A** and **Input B** columns of Worksheet 2, respectively. In this case:

$$\text{Current Liabilities to Net Worth} = \frac{\text{Total Current Liabilities } (\$78,000)}{\text{Total Net Worth } (\$408,000)} = 0.19$$

### Net Fixed Assets to Net Worth

This ratio shows the portion of the owner's investment in fixed assets. The higher this ratio is, the greater the cushion is for the creditors.

To determine this ratio, reviewers should refer to the Balance Sheet to obtain the values for Net Fixed Assets and Total Net Worth, and enter these values into the **Input A** and **Input B** columns of Worksheet 2, respectively. In this case:

$$\text{Net Fixed Assets to Net Worth} = \frac{\text{Net Fixed Assets } (\$778,000)}{\text{Total Net Worth } (\$408,000)} = \mathbf{1.91}$$

### **C. Efficiency**

It is important for companies to use their resources efficiently. Some ratios are indicative of this factor and should be considered in reviewers' analyses of a company's viability. These indicators are calculated in a variety of ways, but the four demonstrated below are in days and turnover.

#### Collection Period in Days

If the amount of credit sales is known, using this indicator results in a more accurate representation of efficient resource usage. The number of days receivable reflects the ability of a company to collect its debts. The closer this number is to the credit terms a company offers, the more efficiently they manage their accounts receivable. If this number is much greater than the credit terms, it may indicate there are problems with some of the accounts or that some of the accounts are uncollectible. If an account has to be written off, this has an impact on a company's profitability and cash flow.

To determine the Collection Period in Days, reviewers should refer to the Balance Sheet to obtain the value for Accounts Receivable. This value should be entered into the **Input A** column of Worksheet 2.

Reviewers must then calculate the Sales per Day. To calculate Sales per Day, reviewers must divide annual Sales/Revenues value from the Pro-Forma, by 365 (# of days in the year). This number should be entered into the **Input B** column of Worksheet 2. In this case:

$$\text{Collection Period in Days} = \frac{\text{Accounts Receivable } (\$48,100)}{\text{Sales}/365 (\$493,900/365)} = \mathbf{35.55}$$

#### Payables Period in Days

This ratio measures the control of payables. The more closely it resembles the number of days of the suppliers' credit terms, the more effectively the company is managing its debt to its suppliers. If this number greatly exceeds the terms provided, it may mean that the company does not have adequate cash to meet its obligations.

To determine Payables Period in Days, reviewers should refer to the Balance Sheet to obtain the value for Accounts Payable. This value should be entered into the **Input A** column of Worksheet 2.

Reviewers must then calculate the Cost of Goods Sold per day. To calculate this number, reviewers must divide the Cost of Goods Sold value from the Pro-Forma, by 365 (the number of days in a year). This number should be entered into the **Input B** column of Worksheet 2. In this case:

$$\text{Payables Period in Days} = \frac{\text{Accounts Payable } (\$28,700)}{\text{Cost of Goods Sold}/365 (\$266,200/365)} = \mathbf{39.35}$$

### Inventory Turnover

This is a measure of how many times a company's inventory turns over in a year. If the Inventory Turnover is 4 times, it means that on average the inventory sells in three months. If the Inventory Turnover time is 2, inventory sells in six months. Different types of inventory may have different turnover rates. A restaurant may turn its inventory every week while a jewelry store may only turn its inventory 2 times a year. Comparing this internally within the company for each year may indicate changes in demand for the product.

To determine the Inventory Turnover, reviewers should refer to the Pro-Forma to obtain the value for the Cost of Goods Sold and the Asset section of the Balance Sheet to obtain the Inventory number at the end of the year, and enter these values into the **Input A** and **Input B** columns of Worksheet 2, respectively. In this case:

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold } (\$266,200)}{\text{Inventory at the end of the year } (\$56,500)} = \mathbf{4.71}$$

### Fixed Asset Turnover

This turnover indicates the level of capital required to generate sales. The smaller the turnover, the more fixed assets are required to generate sales. Manufacturing operations may require more fixed assets than a service company.

To determine Fixed Asset Turnover, reviewers should refer to the Pro-Forma to obtain the value for Sales/Revenues and the Balance Sheet to obtain the value for Net Fixed Assets, and enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\text{Fixed Asset Turnover} = \frac{\text{Sales/Revenues } (\$493,900)}{\text{Net Fixed Assets } (\$778,000)} = \mathbf{.64}$$

## D. Profitability

A company's profitability is a key factor in its success. There are various ways to test profitability. Three ratios expressed as percentages are provided for the reviewer's use.

### Profit Margin

The Profit Margin or Return on Sales indicates the percentage of sales that results in a company's profit. The higher the Profit Margin, the more profitable a company is.

Profit Margin is a part of the calculation computed in Worksheet 1, but is also a common ratio used for comparison against an industry standard. It is calculated using information from the Pro-Forma.

To determine the Profit Margin, reviewers should refer to the Pro-Forma to obtain the values for Profit after Taxes and Total Sales/Revenues and enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\text{Profit Margin} = \frac{\text{Profit After Taxes } (\$6,500)}{\text{Total Sales } (\$493,900)} = 1.32\%$$

### Return on Assets

Return on Assets (ROA) indicates the amount of profit made for every dollar tied up in the business. ROA is a measure of the effective management of resources resulting in profitability. The number determines the relationship between profit after taxes and total assets.

To determine Return on Assets, reviewers should refer to the Pro-Forma to obtain the value for Profit after Taxes and the Balance Sheet to obtain the value for Total Assets, and enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\text{Return on Assets} = \frac{\text{Profit After Taxes } (\$6,500)}{\text{Total Assets } (\$930,800)} = .71\%$$

### Return on Net Worth

Return on Net Worth or Return on Equity (ROE) measure the efficiency of the use of the owner's investment in generating profits. How a reviewer uses this ratio in the analyses may depend on a number of other factors to consider. In small or closely held companies, ROE may not represent the only return an owner receives. They may receive salaries and/or bonuses throughout the year.

To determine Return on Net Worth, refer to the Pro-Forma to obtain the value for Profit after Taxes and to the Balance Sheet to obtain the value for Total Net Worth. Enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\text{Return on Net Worth} = \frac{\text{Profit After Taxes } (\$6,500)}{\text{Total Net Worth } (\$408,000)} = 1.59\%$$

## IV. Real Estate Analysis

The financial documentation for a proposed business will contain different information, and require a different kind of analysis, if the business involves real estate. This section of the Guide deals with two different scenarios: the acquisition of real estate by a business to house its operations, and the use of real estate to generate an income for the owner (for example, an incubator facility, a commercial office building, or a warehouse).

This section of the Guide presents useful ratios for analyzing the acquisition of real estate to house a business's operations; presents Sources and Uses and Operating Pro-Forma samples for income-producing real estate; and explains how to calculate analytical ratios for income-producing real estate.

### A. Real Estate Analysis for an Operating Company

An additional set of analytical ratios are necessary when the applicant proposes to use CED funds to acquire real estate to house the operations of the company's business. For example, an applicant may purchase a building for a grocery store or a plant facility for a window-making operation. This section identifies, describes and explains how to calculate ratios that will indicate the ability of the company to service the mortgage debt, the relationship between the value of the real estate and the level of debt that it must maintain, and the return on the asset.

The data for these ratios is included in the financial statements used in the previous analyses. See the Appendix for a completed example of Worksheet 3.

#### Debt Coverage Ratio (DCR)

The Debt Coverage Ratio, when analyzing real estate acquisition, determines the ability of an operating company to pay its mortgage debt. It is obtained by calculating the amount of a company's net change in cash and the interest expense attributable to the mortgage loan, and dividing it by the annual principal and interest payments on the mortgage. Most conventional lenders look for a minimum DCR of 1.25, and it may be higher depending on additional debt the company may have. Public financing providers are often more comfortable with DCR of 1.1 to 1.15. Reviewers should assess the ability of the company to repay its debt, and ensure that the DCR is not less than 1.

To determine the DCR, reviewers will need to obtain information from three statements: the Cash Flow Statement, the Pro-Forma, and the Balance Sheet. The reviewer should refer to the Cash Flow Statement to identify the amount of the Net Change in Cash and the Pro-Forma to identify the Interest Expense on the mortgage loan. The sum of these two numbers should be entered into the **Input A** column of Worksheet 3.

Reviewers should refer to the Balance Sheet to obtain the value for the Total Current Maturities of the mortgage loan, and to the Pro-Forma to obtain the Interest expense on the mortgage loan. The sum of these two numbers should be entered into the **Input B** column of Worksheet 3.

$$\begin{aligned} \text{DCR} &= \frac{\text{Net Change in Cash } (\$9,100) + \text{Mortgage Interest Expense } (\$30,000)}{\text{Current Maturities Mortgage Loan } (\$5,300) + \text{Mortgage Interest Expense } (\$30,000)} \\ &= \mathbf{1.11} \end{aligned}$$

### Loan to Value

This ratio compares the amount of the mortgage loan to the value or the cost of the real estate. The lower this ratio is, the more protected a lender's loan is in the event of default. Conventional lenders usually lend between 70% and 85% of the value or cost of commercial real estate. Public providers are often more comfortable with a higher percentage.

To determine this ratio, reviewers should refer to the Sources and Uses statement to obtain the value of the Mortgage loan and the original value of the real estate. Enter these values into the **Input A** and **Input B** columns of Worksheet 3. If the reviewer is unable to determine these values from the Sources and Uses statement, the supporting documentation provided by the applicant will be needed. The mortgage loan may be provided by a bank, a public or non-profit lender, or a combination of the two. The value of the real estate is included in the appraisal; if the appraised value is not available, the cost of the real estate could be used if supported by a purchase agreement or a sales option.

$$\text{Loan to Value} = \frac{\text{Total Mortgage Loan } (\$400,000)}{\text{Value or Cost of Real Estate } (\$600,000)} = \mathbf{67\%}$$

### Return on Real Estate

Return on Real Estate indicates the amount of profit made for every dollar tied up in real estate. Return on Real Estate is a measure of the effective management of a major resource resulting in profitability. The number is the relationship between profit after taxes and real estate.

To determine Return on Real Estate, reviewers should refer to the Pro-Forma to obtain the value for Profit after Taxes and the Balance Sheet to determine the asset value of the Real Estate (original value less depreciation) and enter these values into the **Input A** and **Input B** columns for Worksheet 3, respectively.

$$\text{Return on Real Estate} = \frac{\text{Profit after Taxes } (\$6,500)}{\text{Net Asset Value of Real Estate } (\$600,000 - 36,000)} = 1.15$$

See the Appendix for a completed example of Worksheet 3.

### B. Sources and Uses for Income-Producing Real Estate

When a proposed business involves real estate *to generate an income for the owner* (for example, an incubator facility, a commercial office building, or a warehouse), the Sources and Uses statement should reflect that type of operation. A Sources and Uses Statement for income-producing real estate reflects all of the costs associated with acquiring and/or constructing the real estate, along with any costs to outfit the common space and complete the landscaping. The statement also includes all sources of funds provided to acquire and/or construct the property. A sample Sources and Uses statement follows.

Sources and Uses Statement (Income-Producing Real Estate Company)	
Uses	Amount
1. Land	\$400,000
2. Building	\$1,800,000
3. Landscaping	\$200,000
4. Closing Costs	\$50,000
5. Furniture and Fixtures for Common Space	\$50,000
<b>Totals</b>	<b>\$2,500,000</b>
Sources	Amount
1. CED	\$650,000
2. Loan from X Bank	\$1,560,000
3. City Grant	\$215,000
4. Owner	\$75,000
<b>Totals</b>	<b>\$2,500,000</b>
<b>Notes</b>	
1. Appraisal documentation is enclosed supporting the \$2,400,000 value of the real estate acquired.	
2. Commitment from X Bank to loan \$1,560,000 at 6.5% interest for 30 years with an annual principal and interest payment of \$119,461 is documented in the attached letter.	
3. The City is providing a \$215,000 grant. See attached letters.	
4. See attached financial statements as documentation of owner's ability to contribute.	
Etc.	

### C. Operating Pro-Forma for Income-Producing Real Estate

For a business that involves income-producing real estate, the Operating Pro-Forma should show line-items and assumptions that reflect the income stream and expenses associated with real estate. A sample three-year Pro-Forma is shown below:

<b>Pro-Forma for Income Producing Real Estate</b>			
<b>Item</b>	<b>2009 (\$)</b>	<b>2010 (\$)</b>	<b>2011 (\$)</b>
<b>1. Gross Rents</b>	<b>324,000</b>	<b>333,720</b>	<b>343,732</b>
<b>2. Rent Loss (Lines 2a + b + c)</b>	<b>46,464</b>	<b>30,034</b>	<b>28,064</b>
a. Vacancies (6%)	19,464	20,023	20,564
b. Rent Concessions	27,000	0	0
c. Delinquent Rents	0	10,011	7,500
<b>3. Effective Gross Rents</b>	<b>277,536</b>	<b>303,686</b>	<b>315,668</b>
<b>4. Other Income</b>	<b>4,500</b>	<b>6,000</b>	<b>7,500</b>
<b>5. Total Income</b>	<b>282,036</b>	<b>309,686</b>	<b>323,168</b>
<b>6. Operating Expenses</b>	<b>104,044</b>	<b>108,586</b>	<b>114,388</b>
a. Property Management Fee	22,208	24,295	25,249
b. Salaries & Benefits	45,000	46,350	50,058
c. Office Expenses	12,000	12,360	12,730
d. Professional Fees	6,500	6,695	6,896
e. Utilities	18,336	18,886	19,455
<b>7. Maintenance Expenses</b>	<b>27,600</b>	<b>33,338</b>	<b>35,198</b>
a. Salary & Benefits	18,000	18,540	19,096
b. Repairs	3,000	6,500	6,500
c. Grounds maintenance	2,400	2,472	2,546
d. Materials	0	1,500	2,600
e. Pest Control	2,400	2,472	2,546
f. Waste Collection	1,800	1,854	1,910
<b>8. Insurance</b>	<b>8,100</b>	<b>8,748</b>	<b>9,010</b>
<b>9. Real Estate Taxes</b>	<b>1,500</b>	<b>1,545</b>	<b>3,190</b>
<b>10. Total Expenses (Lines 6 + 7+ 8 + 9)</b>	<b>141,244</b>	<b>152,217</b>	<b>161,786</b>
<b>11. Net Operating Income (Line 5 – Line 10)</b>	<b>140,792</b>	<b>157,469</b>	<b>161,382</b>
<b>12. Mortgage Payment</b>	<b>119,461</b>	<b>119,461</b>	<b>119,461</b>
<b>13. Replacement Reserves</b>	<b>8,000</b>	<b>9,500</b>	<b>9,500</b>
<b>14. Net Cash Flow (Line 11 – Line 12 – Line 13)</b>	<b>13,331</b>	<b>28,508</b>	<b>32,421</b>
<b>Assumptions</b>			
1. 22,000 square foot incubator building.			
2. 18,000 sq. ft. rentable space (6 units), 2,000 sq. ft. office space, 2,000 sq. ft. common space.			
3. Rents \$18 /sq. ft. includes insurance on the building, taxes and maintenance (with annual escalation at the CPI).			
4. 50% tax abatement in Years 1 & 2; full taxes in Year 3.			
5. Property management fee is 8% of Effective Gross Rents.			
6. Full-time Office Manager onsite along with ½ time maintenance person.			
7. Insurance quoted by Ajax Insurance company – see binder included with application.			
8. Tenant pays utilities for rented space – building is responsible for common space.			
9. Revenues and expenses projected to increase by 3% per year.			
Etc.			

## D. Ratio Analysis for Income-Generating Real Estate

Different financial analysis tools are also necessary when CED funds are used to acquire income-generating real estate. These tools aid the reviewer in assessing the ability of the rental income to cover all operating expenses of the real estate; the amount of cash flow available to service the mortgage debt; the relationship between the value of the real estate and the level of debt that it must maintain; and the return on the asset to the owner.

### Debt Coverage Ratio (DCR)

The Debt Coverage Ratio, when analyzing income producing real estate, indicates the ability of the real estate to generate sufficient Net Operating Income (NOI) to pay its mortgage debt, with a remaining cushion. Most conventional lenders look for a minimum DCR of 1.2, and it may be higher depending on the commercial rental market conditions. Public financing providers are often more comfortable with a DCR of 1.1 to 1.15. Reviewers should assess the ability of the company to repay its debt, and ensure that the total DCR is not less than 1.

To determine the DCR, reviewers will need to obtain information from two statements: the Sources and Uses Statement and the operating Pro-Forma. The reviewer should refer to the Pro-Forma to identify the Net Operating Income in Year 2, which is more representative of a stabilized number than Year 1. This number should be entered into the **Input A** column of Worksheet 4.

Reviewers should refer to the Sources and Uses Statement to obtain the value for the payment on the mortgage loan and enter it into the **Input B** column of Worksheet 4.

$$DCR = \frac{\text{Net Operating Income } (\$157,469)}{\text{Mortgage Payment } (\$119,461)} = 1.32$$

### Loan to Value

This ratio compares the amount of the mortgage loan to the value or the cost of the real estate. The lower this ratio is, the more protected a lender's loan is in the event of default. Conventional lenders usually lend between 60% and 85% of the value or cost of commercial real estate. Public providers are often more comfortable with a higher percentage.

To determine this ratio, reviewers should refer to the Sources and Uses statement to obtain the value of the mortgage loan and the original value of the real estate. Enter these values into the **Input A** and **Input B** columns of Worksheet 4. If the reviewer is unable to determine these values from the Sources and Uses statement, supporting documentation provided by the applicant will be needed. The mortgage loan may be provided by a bank, a public or non-profit lender, or by a combination of the two. The value of the real estate is included in the appraisal; if the appraised value is not available,

the cost of the real estate could be used if supported by a purchase agreement or a sales option.

$$\text{Loan to Value} = \frac{\text{Total Mortgage Loan } (\$1,560,000)}{\text{Value or Cost of Real Estate } (\$2,400,000)} = 65\%$$

### Return on Investment

Return on Investment indicates the owner's financial benefit for every dollar invested in the real estate. There are a number of ways to calculate the return to the owner, but for purposes of this analysis, a cash-on-cash return will be calculated. This return is the relationship between Net Cash Flow and the owner's investment.

To determine Return on Investment, reviewers should refer to the Pro-Forma to obtain the value for Net Cash Flow Year 2, and to the Sources and Uses Statement to determine the Owner's Investment. Enter these values into the **Input A** and **Input B** columns for Worksheet 4, respectively.

$$\text{Cash on Cash Return (Year 2)} = \frac{\text{Net Cash Flow Year 2 } (\$28,508)}{\text{Owner's Investment } (\$75,000)} = 38.0\%$$

See the Appendix for a completed example of Worksheet 3.

## Appendix: Financial Analysis Worksheets

All worksheets are provided as an attachment to this document. The attachment is an MS Excel file where reviewers can enter data identified from the application and formulas will be automatically calculated. Below are detailed instructions for completing each of the worksheets as well as completed examples.

### Instructions for Completing Worksheets

In order to complete Worksheets 1 through 4, reviewers will need to identify information from the financial data presented in the application and input the corresponding numbers into the worksheets. As appropriate, reviewers should identify and use data from the following reports provided in the application to complete Worksheets 1 through 4:

- Pro-Forma
- Balance Sheet
- Cash Flow Statement

For purposes of illustrating which data from the application the reviewer should identify and use, the financial information from the following reports will be used to complete the examples below.

Pro-Forma for Proposed Business			
Item	2009 (\$)	2010 (\$)	Etc.
<b>1. Sales/Revenues</b>	341,400	493,900	
<b>2. Cost of Goods Sold</b>	183,500	266,200	
a. Purchases	<i>100,000</i>	<i>145,068</i>	
b. Production Labor – Beneficiaries	<i>25,000</i>	<i>36,252</i>	
c. Production Labor – Other	<i>48,500</i>	<i>70,373</i>	
d. Production Overhead	<i>10,000</i>	<i>14,507</i>	
<b>3. Gross Profit</b> (Line 1 - Line 2 =)	<b>157,900</b>	<b>227,700</b>	
<b>4. Operating Expenses</b>	<b>117,300</b>	<b>186,400</b>	
a. Selling Expenses	<i>57,100</i>	<i>82,600</i>	
b. General Expenses	<i>12,200</i>	<i>15,000</i>	
c. Administrative	<i>12,000</i>	<i>12,800</i>	
d. Rent	<i>0</i>	<i>0</i>	
e. Depreciation	<i>36,000</i>	<i>36,000</i>	
f. Plant Manager's Salary	<i>0</i>	<i>40,000</i>	
<b>5. Operating Profit</b> (Line 3 - Line 4 =)	<b>40,600</b>	<b>41,300</b>	
<b>6. Interest</b>	<b>32,500</b>	<b>30,800</b>	
<b>7. Earnings before Taxes</b> (Line 5 - Line 6 =)	<b>8,100</b>	<b>10,500</b>	
<b>8. Taxes</b>	<b>3,100</b>	<b>4,000</b>	
<b>9. Profit after Taxes</b> (Line 7 - Line 8 =)	<b>5,000</b>	<b>6,500</b>	

Balance Sheet for a Proposed Business Year 2010			
ASSETS (\$)		LIABILITIES AND NET WORTH (\$)	
Cash	1,200	Accounts Payable	28,700
Investments	0	Notes Payable to Banks	25,000
Accounts Receivable	48,100	Current Maturities Long Term Debt	5,300
Inventory	56,500	Accrued Payroll	15,000
Prepaid Expenses	4,500	Other Accruals	0
Other Current Assets	7,500	Taxes Payable	4,000
<b>Total Current Assets</b>	<b>117,800</b>	<b>Total Current Liabilities</b>	<b>78,000</b>
Fixed Assets	850,000	Long Term Debt less Current Maturities	444,800
Less Accumulated Depreciation	(72,000)	Other Long Term Debt	0
<b>Net Fixed Assets</b>	<b>778,000</b>	<b>Total Long-Term Liabilities</b>	<b>444,800</b>
Restricted Investments	28,900	<b>TOTAL LIABILITIES</b>	<b>522,800</b>
Goodwill	0		
Other Long Term Assets	6,100	Owner's Equity	396,500
<b>Total Long-Term Assets</b>	<b>35,00</b>	Retained Earnings	11,500
		<b>Total Net Worth</b>	<b>408,000</b>
<b>TOTAL ASSETS</b>	<b>930,800</b>	<b>TOTAL LIABILITIES &amp; NET WORTH</b>	<b>930,800</b>

<b>Cash Flow Statement</b>		
Item	2010 (\$)	Etc. (\$)
<b>A. Operating Activities</b>		
1. Net Income	6,500	
2. Adjustments to Net Income	37,500	
a. Deferred income taxes	1,500	
b. Depreciation and amortization	36,000	
3. Changes in Current Assets and Liabilities	-61,000	
a. Accounts receivable	-37,500	
b. Inventories	-41,600	
c. Prepaid expenses	-3,200	
d. Accounts payable	16,500	
e. Accrued expenses	5,100	
f. Income taxes	-300	
<b>4. Net Cash from Operations</b> (Lines A1+A2+A3=)	<b>-17,000</b>	
<b>B. Investing Activities</b>		
1. Additions to / Sale of Fixed Assets	-21,600	
2. Other	-2,200	
<b>3. Net Cash from Investing</b> (Lines B1+B2=)	<b>-23,800</b>	
<b>C. Financing Activities</b>		
1. Net short term borrowing	3,200	
2. Proceeds from long term obligations	50,000	
3. Payments on long-term debt and capital leases	-5,300	
4. Infusion of equity	2,000	
<b>5. Net Cash from Financing</b> (Lines C1+C2+C3+C4=)	<b>49,900</b>	
<b>D. Net Change in Cash</b> (Lines A4 + B3 + C5 =)	<b>9,100</b>	
<b>E. Cash Balances</b>		
1. Beginning of Year	-7900	
2. End of Year	1,200	
<b>Assumptions</b>		
The assumptions that affect the Cash Flow Statement are the same as those provided in the Operating Pro-forma and the Balance Sheet.		

<b>Sources and Uses Statement (Income Producing Real Estate Company)</b>	
<b>Uses</b>	<b>Amount</b>
1. Land	\$400,000
2. Building	\$1,800,000
3. Landscaping	\$200,000
4. Closing Costs	\$50,000
5. Furniture, Fixtures for common space	\$50,000
<b>Totals</b>	<b>\$2,500,000</b>
<b>Sources</b>	<b>Amount</b>
1. CED	\$650,000
2. Loan from X Bank	\$1,560,000
3. City Grant	\$215,000
4. Owner	\$75,000
<b>Totals</b>	<b>\$2,500,000</b>
<b>Notes</b>	
<ol style="list-style-type: none"> <li>1. Commitment from X Bank to loan \$1,560,000 at 6.5% interest for 30 years with an annual principal and interest payment of \$119,461 which is documented in the attached letter.</li> <li>2. Appraisal documentation is enclosed supporting the \$2,400,000 value of the real estate acquired.</li> <li>3. The City is providing a \$215,000 grant. See attached letters.</li> <li>5. See attached financial statements as documentation of owner's ability to contribute.</li> </ol> Etc.	

Pro-Forma for Income Producing Real Estate			
Item	2009 (\$)	2010 (\$)	2011 (\$)
<b>1. Gross Rents</b>	<b>324,000</b>	<b>333,720</b>	<b>343,732</b>
<b>2. Rent Loss (Lines 2a + b + c)</b>	<b>46,464</b>	<b>30,034</b>	<b>28,064</b>
a. Vacancies (6%)	19,464	20,023	20,564
b. Rent Concessions	27,000	0	0
c. Delinquent Rents	0	10,011	7,500
<b>3. Effective Gross Rents</b>	<b>277,536</b>	<b>303,686</b>	<b>315,668</b>
<b>6. Other Income</b>	<b>4,500</b>	<b>6,000</b>	<b>7,500</b>
<b>7. Total Income</b>	<b>282,036</b>	<b>309,686</b>	<b>323,168</b>
<b>6. Operating Expenses</b>	<b>104,044</b>	<b>108,586</b>	<b>114,388</b>
a. Property Management Fee	22,208	24,295	25,249
b. Salaries & Benefits	45,000	46,350	50,058
c. Office Expenses	12,000	12,360	12,730
d. Professional Fees	6,500	6,695	6,896
e. Utilities	18,336	18,886	19,455
<b>7. Maintenance Expenses</b>	<b>27,600</b>	<b>33,338</b>	<b>35,198</b>
a. Salary & Benefits	18,000	18,540	19,096
b. Repairs	3,000	6,500	6,500
c. Grounds maintenance	2,400	2,472	2,546
d. Materials	0	1,500	2,600
e. Pest Control	2,400	2,472	2,546
f. Waste Collection	1,800	1,854	1,910
<b>8. Insurance</b>	<b>8,100</b>	<b>8,748</b>	<b>9,010</b>
<b>9. Real Estate Taxes</b>	<b>1,500</b>	<b>1,545</b>	<b>3,190</b>
<b>10. Total Expenses (Lines 6 + 7+ 8 + 9)</b>	<b>141,244</b>	<b>152,217</b>	<b>161,786</b>
<b>11. Net Operating Income (Line 5 – Line 10)</b>	<b>140,792</b>	<b>157,469</b>	<b>161,382</b>
<b>12. Mortgage Payment</b>	<b>119,461</b>	<b>119,461</b>	<b>119,461</b>
<b>13. Replacement Reserves</b>	<b>8,000</b>	<b>9,500</b>	<b>9,500</b>
<b>14. Net Cash Flow (Line 11 – Line 12 – Line 13)</b>	<b>13,331</b>	<b>28,508</b>	<b>32,421</b>
<b>Assumptions</b>			
1. 22,000 square foot incubator building.			
2. 18,000 sq. ft. rentable space (6 units), 2,000 sq. ft. office space, 2,000 sq. ft. common space.			
3. Rents \$18 /sq. ft. includes insurance on the building, taxes and maintenance (with annual escalation at the CPI).			
4. 50% tax abatement in Years 1 & 2; full taxes in Year 3.			
5. Property management fee is 8% of Effective Gross Rents.			
6. Full-time Office Manager onsite along with ½ time maintenance person.			
7. Insurance quoted by Ajax Insurance company – see binder included with application.			
8. Tenant pays utilities for rented space – building is responsible for common space.			
9. Revenues projected to increase by 3% per year.			
Etc.			

## How to Complete Worksheet 1: Pro-forma for Proposed Business

Worksheet 1: Pro-forma for Proposed Business standardizes the operating numbers as they relate to total sales for the period. This series of calculations allows the reviewer to more reliably compare one period of the company's performance against another period of performance or against an industry standard.

To do this, reviewers must input data from the application into Worksheet 1: Pro-forma for Proposed Business. For Worksheet 1, reviewers should enter data from the application into the **Applicant Projection** column. The **% of Total Revenues** column will be automatically calculated. Do not enter information in that column.

The following is a completed Worksheet 1: Pro-forma for Proposed Business for the year 2010 using data from the sample financial documents presented earlier in the Appendix.

<b>Worksheet 1: Pro-forma for Proposed Business</b>			
<b>Name of Project:</b>		<b>Reviewer:</b>	
<b>Industry Standard Used</b>			
<b>Item</b>	<b>Year 1 Applicant Projection</b>	<b>% of Total Revenues</b>	<b>Industry Standard</b>
<b>1. Sales/Revenues</b>	\$493,900	100.00%	
<b>2. Cost of Goods Sold</b>	\$266,200	53.90%	
a. Purchase	\$145,068	29.37%	
b. Production Labor - beneficiaries	\$36,252	7.34%	
c. Production Labor - other	\$70,373	14.25%	
d. Production Overhead	\$14,507	2.94%	
<b>3. Gross Profit (Line 1 minus Line 2)</b>	\$227,700	46.10%	
<b>4. Operating Expenses</b>			
a. Selling Expenses	\$82,600	16.72%	
b. General Expenses	\$15,000	3.04%	
c. Administrative	\$12,800	2.59%	
d. Rent	\$0	0.00%	
e. Depreciation	\$36,000	7.29%	
f. Owner's Salary	\$40,000	8.10%	
<b>5. Total Operating Expenses</b>	\$186,400	37.74%	
<b>6. Operating Profit (Line 3 Minus Line 5)</b>	\$41,300	8.36%	
<b>7. Interest</b>	\$30,800	6.24%	
<b>8. Earnings before Taxes (Line 6 Minus Line 7)</b>	\$10,500	2.13%	
<b>9. Taxes</b>	\$4,000	.81%	
<b>10. Profit after Taxes (Line 8 Minus Line 9)</b>	\$6,500	1.32%	

## *Instructions*

1. To complete Line 1 (Sales/Revenue), reviewers should refer to the Pro-Forma for Proposed Business and enter the Sales/Revenue number for 2010, which in this case is projected to be \$493,900
2. To complete Line 2 (Cost of Goods Sold), reviewers should refer to the Pro-Forma for Proposed Business and enter the value of the Cost of Goods Sold for 2010, which in this case is projected to be \$266,200. Under Cost of Goods Sold are four subcategories: Purchase, Production Labor – direct to beneficiaries, Production Labor – other, and Production Overhead. Each of the subcategories has an amount listed in the Pro-Forma: \$145,068, \$36,252, \$70,373, and \$14,507, respectively, which should also be entered into the **Applicant Projection** column.
3. Line 3 (Gross Profit) is automatically calculated and is the amount of the Sales/Revenues less the Cost of Goods Sold, which in this case results in a Gross Profit of \$227,700.
4. Line 4 (Operating Expenses) represents the company's operating expenses. Reviewers should refer to the Pro-Forma for Proposed Business and enter the values for the following items:
  - a. Selling Expense, which is projected to be \$82,600 for 2010.
  - b. General Expenses, which is projected to be \$15,000 for 2010.
  - c. Administrative, which is projected to be \$12,800 for 2010.
  - d. Rent, which is projected to be \$0 for 2010.
  - e. Depreciation, which is projected to be \$36,000 for 2010.
  - f. Plant Manager's Salary, which is projected to be \$40,000 for 2010.
5. Line 5 (Total Operating Expenses) is automatically calculated. In this case Total Operating Expenses for 2010 is projected to be \$186,400.
6. Line 6 (Operating Profit) is automatically calculated. In this case, the Operating Profit for 2010 is projected to be \$41,300.
7. To complete Line 7 (Interest), reviewers should refer to the Pro-Forma for Proposed Business and identify the Interest expense. In this case, Interest expense for 2010 is projected to be \$30,800.
8. Line 8 (Earnings Before Taxes) is automatically calculated by subtracting the Interest expense from the Operating Profit. In this case, Earnings Before Taxes is projected to be \$10,500.
9. To complete Line 9 (Taxes), reviewers should refer to the Pro-Forma for Proposed Business and identify the tax expense. In this case, since the company is projecting a profit, taxes will be an expense. In this case, 2010 taxes are projected to be \$4,000.
10. Line 10 (Profit After Taxes) is automatically calculated by subtracting Taxes from Earnings Before Taxes. In this case, the Profit After Taxes for 2010 is projected to be \$6,500.

## **How to Complete Worksheet 2: Ratio Analysis**

Worksheet 2: Ratio Analysis will automatically generate financial ratios using the financial data entered by reviewers. To do this, reviewers will need to identify and enter financial data from the application and enter this data into either **Input A** or **Input B** columns. The **Applicant Value** column will be automatically calculated. Do not enter information in that column.

The following is a completed Worksheet 2: Ratio Analysis using data from the sample financial documents presented earlier in the Appendix.

## Worksheet 2: Ratio Analysis

Name of Project:

Reviewer:

Industry Standard Used:

Item	Ratio Equation	Input A - First Number of Equation	Input B - Second Number of Equation	Applicant Value	Industry Standard
Working Capital	Current Assets-Current Liabilities	\$117,800	\$78,000	\$39,800	
Current Ratio	Current Assets/Current Liabilities	\$117,800	\$78,000	2.28	
Quick Ratio	(Cash+ Investments+ Accounts Receivable)/Current Liabilities	\$55,300	\$45,400	1.22	
% of Sales	Current Liabilities/Total Sales	\$45,400	\$493,900	9.19%	
Days operation in cash	(Cash + Investments)/(Operating Expenses/365)	\$1,200	\$511	2.35	
Days sales in cash	(Cash + Investments)/(Total Sales/365)	\$1,200	\$1,353	.89	
Total Debt Coverage Ratio	(Net Change in Cash + Interest Expense)/Current Maturities Long Term Debt	\$39,900	\$5,300	7.53	
Debt to Net Worth	Total Liabilities/Total Net Worth	\$522,800	\$408,000	1.28	
Current Liabilities to Net Worth	Total Current Liabilities/Total Net Worth	\$78,000	\$408,000	0.19	
Net Fixed Assets to Net Worth	Net Fixed Assets/Total Net Worth	\$778,000	\$408,000	1.91	
Collection Period in Days	Accounts Receivable/ Sales per Day (Sales per day = Annual sales/365)	\$48,100	\$1,353	35.55	
Payables Period in Days	Accounts Payable/(Cost of Goods Sold/365)	\$28,700	\$729	39.37	
Inventory Turnover	Cost of Goods Sold/Inventory at the end of the year	\$266,200	\$56,500	4.71	
Fixed Asset Turnover	Total Sales/Net Fixed Assets	\$493,900	778,000	.63	
Profit Margin	Profit after Taxes/Total Sales	\$6,500	\$493,900	1.32%	
Return on Assets	Profit after Taxes/ Total Assets	\$6,500	\$930,800	.7%	
Return on Net Worth	Profit after Taxes/Total Net Worth	\$6,500	\$408,000	1.59%	

### *Instructions*

1. To calculate Working Capital, reviewers should refer to the Balance Sheet to obtain the values for Current Assets and Current Liabilities and enter these values into the **Input A** and **Input B** columns, respectively, of Worksheet 2. In this case:

$$\text{Working Capital} = \text{Current Assets } (\$117,800) - \text{Current Liabilities } (\$78,000) = \mathbf{\$39,800}$$

2. To calculate the Current Ratio, reviewers should refer to the Balance Sheet to obtain the values for Current Assets and Current Liabilities and enter these values into the **Input A** and **Input B** columns, respectively, of Worksheet 2. In this case:

$$\text{Current Ratio} = \frac{\text{Current Assets } (\$117,800)}{\text{Current Liabilities } (\$78,000)} = \mathbf{2.28}$$

3. To determine this ratio, reviewers should refer to the Balance Sheet to obtain the values for Cash, Investments, and Accounts Receivable. The sum of these values should be entered into the **Input A** column for Worksheet 2.

Reviewers should also refer to the Balance Sheet to obtain the value for Current Liabilities and enter this number into the **Input B** column for Worksheet 2. In this case:

$$\text{Quick Ratio} = \frac{\text{Cash } (\$1,200) + \text{Investments } (\$0) + \text{Accounts Receivable } (\$54,100)}{\text{Current Liabilities } (\$45,400)} = \mathbf{1.22}$$

4. To determine the Percentage of Sales, reviewers should refer to the Balance Sheet to obtain the value for Current Liabilities and the Pro-Forma to obtain the value for Sales/Revenues, and enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\% \text{ of Sales} = \frac{\text{Current Liabilities } (\$45,400)}{\text{Sales/Revenues } (\$493,900)} = \mathbf{9.19\%}$$

5. To determine this number, reviewers should refer to the Balance Sheet to obtain the values for Cash and Investments. The sum of these values should be entered into the **Input A** column for Worksheet 2. Reviewers should then refer to the Pro-Forma to obtain the value for Operating Expenses, divide it by 365 (the number of days in a year) and enter this value into the **Input B** column of Worksheet 2. In this case:

$$\text{Days operation in cash} = \frac{\text{Cash } (\$1,200) + \text{Investments } (\$0)}{\text{Operating Expenses}/365 \text{ } (\$186,400/365)} = \mathbf{2.35 \text{ days}}$$

6. To determine this number, reviewers should refer to the Balance Sheet to obtain the values for Cash and Investments. The sum of these values should be entered into the **Input A** column for Worksheet 2. Reviewers should then refer to the Pro-Forma to obtain the value for Operating Expenses, divide it by 365 (the number of days in a year) and enter this value into the **Input B** column of Worksheet 2. In this case:

$$\text{Days sales in cash} = \frac{\text{Cash } (\$1,200) + \text{Investments } (\$0)}{\text{Sales}/365 (\$493,900/365)} = \mathbf{.89 \text{ days}}$$

7. To determine the Debt Coverage Ratio, reviewers will need to obtain information from three statements: Cash Flow Statement, Balance Sheet, and Pro-Forma. Reviewers should refer to the Cash Flow Statement to identify the amount of Net Change in Cash, and to the Pro-Forma to identify the Interest expense. The sum of these two numbers should be entered into the **Input A** column of Worksheet 2.

Reviewers should refer to the Balance Sheet to obtain the value for Total Current Maturities of Long Term Debt and enter this value into the **Input B** column of Worksheet 2. In this case:

$$\text{Debt Coverage Ratio} = \frac{\text{Net Change in Cash } (\$9,100) + \text{Interest Expense } (\$30,800)}{\text{Total Current Maturities of Long Term Debt } (\$5,300)} = \mathbf{7.53}$$

8. To determine the Debt to Net Worth Ratio, reviewers should refer to the Balance Sheet to obtain the values for Total Liabilities and Total Net Worth and enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\text{Debt to Net Worth} = \frac{\text{Total Liabilities } (\$522,800)}{\text{Total Net Worth } (\$408,000)} = \mathbf{1.28}$$

9. To determine this ratio, reviewers should refer to the Balance Sheet to obtain the values for Total Current Liabilities and Total Net Worth, and enter these values into the **Input A** and **Input B** columns of Worksheet 2, respectively. In this case:

$$\text{Current Liabilities to Net Worth} = \frac{\text{Total Current Liabilities } (\$78,000)}{\text{Total Net Worth } (\$408,000)} = \mathbf{.19}$$

10. To determine this ratio, reviewers should refer to the Balance Sheet to obtain the values for Fixed Assets and Total Net Worth, and enter these values into the **Input A** and **Input B** columns of Worksheet 2, respectively. In this case:

$$\text{Fixed Assets to Net Worth} = \frac{\text{Fixed Assets } (\$778,000)}{\text{Total Net Worth } (\$408,000)} = \mathbf{1.91}$$

11. To determine the Collection Period in Days, reviewers should refer to the Balance Sheet to obtain the value for Accounts Receivable. This value should be entered into the **Input A** column of Worksheet 2.

Reviewers must then calculate the Sales per Day. To calculate Sales per Day, reviewers must identify the annual Sales/Revenues value on the Pro-Forma, and divide it by 365 (the number of days in a year). This number should be entered into the **Input B** column of Worksheet 2. In this case:

$$\text{Collection Period in Days} = \frac{\text{Accounts Receivable } (\$48,100)}{\text{Sales}/365 (\$493,900/365)} = 35.55$$

12. To determine Payables Period in Days, reviewers should refer to the Balance Sheet to obtain the value for Accounts Payable. This value should be entered into the **Input A** column of Worksheet 2.

Reviewers must then calculate the Cost of Goods Sold per day. Reviewers must identify the Cost of Goods Sold value on the Pro-Forma, and divide it by 365 (the number of days in the year). This number should be entered into the **Input B** column of Worksheet 2. In this case:

$$\text{Payables Period in Days} = \frac{\text{Accounts Payable } (\$28,700)}{\text{Cost of Goods Sold}/365 (\$266,200/365)} = 39.37$$

13. To determine the Inventory Turnover, reviewers should refer to the Pro-Forma to obtain the value for the Cost of Goods Sold, and refer to the Asset section of the Balance Sheet to obtain the Inventory number at the end of the year. Enter these values into the **Input A** and **Input B** columns of Worksheet 2, respectively. In this case:

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold } (\$266,200)}{\text{Inventory at the end of the year } (\$56,500)} = 4.71$$

14. To determine Fixed Asset Turnover, reviewers obtain the Sales/Revenues value from the Pro-Forma and the Net Fixed Assets value from the Balance Sheet. Enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\text{Fixed Asset Turnover} = \frac{\text{Sales/Revenues } (\$493,900)}{\text{Net Fixed Assets } (\$778,000)} = .63$$

15. To determine the Profit Margin, reviewers should refer to the Pro-Forma to obtain the values for Profit after Taxes and Total Sales/Revenues and enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\textit{Profit Margin} = \frac{\text{Profit After Taxes } (\$6,500)}{\text{Total Sales } (\$93,900)} = \mathbf{1.32\%}$$

16. To determine Return on Assets, reviewers should refer to the Pro-Forma to obtain the value for Profit after Taxes, and to the Balance Sheet to obtain the value for Total Assets. Enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\textit{Return on Assets} = \frac{\text{Profit After Taxes } (\$6,500)}{\text{Total Assets } (\$930,800)} = \mathbf{.7\%}$$

17. To determine Return on Net Worth, reviewers should refer to the Pro-Forma to obtain the value for Profit After Taxes, and to the Balance Sheet to obtain the value for Total Net Worth, and enter these values into the **Input A** and **Input B** columns for Worksheet 2, respectively. In this case:

$$\textit{Return on Net Worth} = \frac{\text{Profit After Taxes } (\$6,500)}{\text{Total Net Worth } (\$408,000)} = \mathbf{1.59}$$

### How to Complete Worksheet 3: Real Estate Analysis

Worksheet 3: Real Estate Analysis will automatically generate financial ratios using the financial data entered by reviewers. To do this, reviewers will need to identify and enter financial data from the application and enter the data into either the **Input A** or the **Input B** column. The **Applicant Value** column will be automatically calculated. Do not enter information in that column.

The following is a completed Worksheet 3: Real Estate Analysis using data from the sample financial documents presented earlier in the Appendix.

Worksheet 3: Real Estate Analysis					
Project:			Reviewer:		
Lender Standards:					
Item	Ratio Equation	Input - A First Number of Equation	Input B - Second Number of Equation	Applicant Value	Industry Standard
Debt Coverage Ratio (DCR)	(Change in Cash + Interest Expense)/Mortgage Payment (Current Maturities of Mortgage Debt + Interest Expense on Mortgage)	\$39,100	\$35,300	1.11	
Loan to Value	Total Mortgage Loan (Current Maturities on Mortgage Loan + Long Term Balance on Mortgage Loan)/Appraised Value or Cost	\$400,000	\$600,000	67%	
Return on Real Estate	Profit after Taxes/Real Estate	\$6,500	\$564,000	1.15%	

#### Instructions

1. To determine the Debt Coverage Ratio (DCR), reviewers will need to obtain information from three statements: the Cash Flow Statement, the Pro-Forma and the Balance Sheet. The reviewer should refer to the Cash Flow Statement to identify the amount of the Net Change in Cash, and to the Pro-Forma to identify the Interest Expense on the mortgage loan. The sum of these two numbers should be entered into the **Input A** column of Worksheet 3.

Reviewers should refer to the Balance Sheet to obtain the value for the Total Current Maturities of the mortgage loan, and to the Pro-Forma to obtain the Interest expense on the mortgage loan. Enter the sum of these two numbers into the **Input B** columns of Worksheet 3.

$$\begin{aligned}
 & \frac{\text{Net Change in Cash } (\$9,100) + \text{Mortgage Interest Expense } (\$30,000)}{\text{DCR} = \text{Current Maturities Mortgage Loan } (\$5,300) + \text{Mortgage Interest Expense } (\$30,000)} \\
 & = \mathbf{1.11}
 \end{aligned}$$

2. To determine the Loan to Value ratio, reviewers should refer to the Sources and Uses to obtain the value of the Mortgage loan and the original value of the real estate and enter these values into the **Input A** and **Input B** columns of Worksheet
3. If the reviewer is unable to determine these values from the Sources and Uses, the supporting documentation provided by the applicant will be needed. The mortgage loan may be provided by a bank, by CED or a combination of the two. The value of the real estate is included in the appraisal or the cost of the real estate could be used supported by a purchase agreement or a sales option.

$$\begin{aligned}
 & \frac{\text{Total Mortgage Loan } (\$400,000)}{\text{Loan to Value} = \text{Value or Cost of Real Estate } (\$600,000)} = \mathbf{67\%}
 \end{aligned}$$

4. To determine Return on Real Estate, reviewers should refer to the Pro-Forma to obtain the value for Profit after Taxes, and to the Balance Sheet to determine the asset value of the Real Estate (original value less depreciation) and enter these values into the **Input A** and **Input B** columns for Worksheet 3, respectively.

$$\begin{aligned}
 & \frac{\text{Profit after Taxes } (\$6,500)}{\text{Return on Real Estate} = \text{Net Asset Value of Real Estate } (\$600,000 - 36,000)} = \mathbf{1.15\%}
 \end{aligned}$$

## How to Complete Worksheet 4: Income Producing Real Estate Analysis

Worksheet 4: Income Producing Real Estate Analysis will automatically generate financial ratios using the financial data entered by reviewers. To do this, reviewers will need to identify and enter financial data from the application and enter the data into either the **Input A** or the **Input B** column. The **Applicant Value** column will be automatically calculated. Do not enter information in that column.

The following is a completed Worksheet 4: Income Producing Real Estate Analysis using data from the sample financial documents presented earlier in the Appendix.

Worksheet 4: Income Producing Real Estate Analysis					
Project:			Reviewer:		
Lender Standards:					
Item	Ratio Equation	Input - A First Number of Equation	Input B - Second Number of Equation	Applicant Value	Industry Standard
Debt Coverage Ratio (DCR)	Net Operating Income / Mortgage Payment	\$157,469	\$119,461	1.32	
Loan to Value	Total Mortgage Loan / Appraised Value or Cost	\$1,560,000	\$2,400,000	65%	
Cash on Cash Return on Investment	Net Cash Flow Year 2 / Owner's Investment	\$28,508	\$75,000	38.0%	

### Instructions

- To determine the DCR, reviewers will need to obtain information from two statements: the Sources and Uses Statement and the Operating Pro-Forma. The reviewer should refer to the Pro-Forma to identify the Net Operating Income. This number should be entered into the **Input A** column of Worksheet 4.

Reviewers should refer to the Sources and Uses Statement to obtain the value for the payment on the mortgage loan and enter it into the **Input B** column of Worksheet 4.

$$DCR = \frac{\text{Net Operating Income } (\$157,469)}{\text{Mortgage Payment } (\$119,461)} = 1.32$$

2. To determine this ratio, reviewers should refer to the Sources and Uses statement to obtain the value of the Mortgage loan and the original value of the real estate. Enter these values into the **Input A** and **Input B** columns of Worksheet 4. If the reviewer is unable to determine these values from the Sources and Uses statement, the supporting documentation provided by the applicant will be needed. The mortgage loan may be provided by a bank, a public or non-profit lender, or a combination of the two. The value of the real estate is included in the appraisal; if the appraised value is not available, the cost of the real estate could be used if supported by a purchase agreement or a sales option.

$$\text{Loan to Value} = \frac{\text{Total Mortgage Loan } (\$1,560,000)}{\text{Value or Cost of Real Estate } (\$2,400,000)} = \mathbf{65\%}$$

3. To determine Return on Investment, reviewers should refer to the Pro-Forma to obtain the value for Net Cash Flow Year 2, and to the Sources and Uses Statement to determine the Owner's Investment. Enter these values into the Input A and Input B columns for Worksheet 4, respectively.

$$\text{Cash on Cash Return (Year 2)} = \frac{\text{Net Cash Flow Year 2 } (\$28,508)}{\text{Owner's Investment } (\$75,000)} = \mathbf{38.0\%}$$