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Understanding Financial Ratios for Small Business

Ray O'Keefe Cruitt, Business Librarian
Enoch Pratt Free Library/State Library Resource Center
Baltimore, MD 21210

rcruitt@prattlibrary.org

A business plan writer will often hear about having to include her “financials” in her business plan. And this is where a lot of people get anxious, especially if they don't know exactly what financials are or where to find them. And when they do find them: how in the world does the business plan writer read and interpret them? What are financial ratios, benchmark ratios, or business ratios, anyway? This article will address these questions and help reference librarians instruct business plan writers in how to use financial ratios in their business plans.

There are hundreds of financial ratios. The relevant answer is that there are a number of ratios designed to measure the performance and productivity of a company compared to how similar businesses around the nation or region are doing. These three major categories are: 1) Efficiency Ratios, 2) Solvency/Liquidity Ratios, and 3) Profitability Ratios. All of these ratios may be of use to the business plan writer faced with making strategic decisions about the direction he wants his business to go in. It would benefit the librarian to learn these ratios and how to use them, and, why they are designed to help run a business more effectively.

But, for now, there are only two ratios that need to be addressed for writing a business plan; they are the “Current Ratio” and “Quick Ratio.” The former measures the business's short term liquidity or solvency; in other words, how much of the business's assets can be converted to cash quickly. This is an important ratio to lenders because a good ratio quartile position demonstrates how well the owner can meet their short term obligations, for instance paying a monthly loan bill on time. And remember, a banker is primarily interested in this factor.

The Quick Ratio measures essentially what the current ratio measures without including inventory holdings. The Quick Ratio is also known as the “acid test” because it is a quick way to determine how much cash the owner can raise in as short a time as possible. Since inventory is not always easily made liquid in a short period of time due to market factors, such as how fast it can be turned over, this ratio allows the lender to get a clearer idea of just how fast cash can be produced.

There are several print and in some cases online resources that allow the business owner to find the appropriate ratios and compare them to an aggregate of like corporations. The Risk Management Association (RMA) is probably the most used in the banking industry and if you don't use any of the other ratings resources, the RMA should be the one you do use.

RMA Financial Benchmarks:

RMA gathers its information from over 2,500 RMA member institutions. The primary mission of the RMA is risk management, as its name clearly states. This means that business professionals most concerned with this resource are lenders and borrowers, which is why this is critically relevant to the small business owner who is trying to secure funding; every banker will use this resource as part of the decision-making process where a business plan is part of the stipulation for a loan. Some lending instances do not require a business plan, but that doesn't mean the banker will not require a financial statement.

The RMA calculates its own Current and Quick Ratios among a number of other financial benchmarks. The average methodology they use is based on the quartile average method. This allows a range of averages to be used to make comparisons with the three ratios provided by the publishing companies discussed in this article. Compare your ratio by calculating $[x = \text{all assets/all liabilities}]$ and compare them to the RMA figures. The RMA is arranged by the federally produced, North American Industrial Classification or (NAICS) code as an aid to find the appropriate ratios. It will be very important that the business owner identify her NAICS code(s) ahead of time. Also, keep in mind, the RMA does not always have every extant NAICS Code. If this is the case, look at one of the other resources discussed below.

The RMA Math:

Acme Mining Business (NAICS 211111; Crude Petroleum and Natural Gas Extraction) has \$1M in total Assets and \$500,000 in total Liability. In order to get a Current Ratio calculation figure divide: $1,000,000/500,000 = 2$. This can be read as a Current Ratio of **[2:1] assets to liabilities**. Notice that the median quartile figure for this industry is 1.4. According to the RMA, a company with a 2:1 or 2.0 ratio has a better than average liquidity rating and would thus be a candidate for funding.

The RMA Chart:

The RMA Chart:

| Asset Range | 500M-2MM | 2-10MM | 10-50MM | 50-100MM | Assets | | ALL | ALL |
|---|----------|--------|---------|----------|---------------------|--|-----|-----|
| | 13 | 49 | 30 | 13 | # of Establishments | | 115 | 128 |
| # of establishments used to measure figures | % | % | % | % | | | % | % |

| % of Net Sales or, 100 | 100.0 | 100.0 | 100.0 | 100.0 | INCOME DATA | |
|------------------------|-------|-------|-------|-------|---------------------|-------------|
| | 23.0 | 18.6 | 13.5 | 16.5 | Net Sales | 100.0 100.0 |
| | 23.0 | 13.3 | 9.9 | 10.6 | Gross Profit | 17.3 16.5 |
| | .1 | 53 | 3-6 | 4.9 | Operating Expenses | 14.9 12.5 |
| | .2 | 2.3 | .3 | .3 | Operating Profit | 2.4 33 |
| | .2 | 3.0 | 3.3 | 4.7 | All Other Expenses | .8 1.1 |
| | | | | | Profit Before Taxes | 1.7 2.8 |

| | 4.9 | 1.9 | 2.0 | 2.0 | RATIOS | |
|--|-----|-----|-----|-----|----------------|-------------|
| | 2.8 | 1.3 | 1.6 | 1.2 | Quartile Range | 2.3 1.9 |
| | 1.4 | 1.1 | 1.1 | 1.0 | Current | 1.3 1.3 |
| | | | | | | 1.1 1.1 |
| | 2.5 | 1.5 | 1.1 | 1.2 | Quartile Range | 1.1 1.1 |
| | 1.2 | 1.0 | .8 | .5 | Quick | (114) .6 .8 |
| | .3 | .5 | .5 | .3 | | .4 .5 |

D&B Industry Norms and Key Business Ratios:

Like the RMA, Dun & Bradstreet calculates its own key industry ratios by calculating the many financial statements from both public and private companies contained in its databases. It figures these ratios according to the quartile scale with a median, upper, and lower figure. Unlike the RMA, D&B uses the SIC Code instead of the NAICS Code to arrange its information. The Current and Quick ratios are the most relevant ones to consider for reasons already mentioned. Please note that D&B clearly states that these ratios are meant to be used as relative guidelines *more than absolute indicators*. This does not take away from the veracity of these figures. To get the best results when doing an analysis, use this along with the other two rating agencies that produce financial ratios: RMA, Standard & Poor's, and Almanac of Business and Industrial Financial Ratios (also commonly referred to as "Leo Troy," the original author).

| | SIC 2835 DGNOSTIC SUBSTANCES (NO BREAKDOWN) 2011 (20 Establishments) | | | SIC 2836 BIOL PRD.EXC DGNSTC (NO BREAKDOWN) 2011 (32 Establishments) | | | SIC 2841 SOAP & OTH DETERGENTS (NO BREAKDOWN) 2011 (10 Establishments) | | | SIC 2842 POLISHES,SANT GOODS (NO BREAKDOWN) 2011 (21 Establishments) | | |
|-----------------------------------|---|--------------|--|---|--------------|--|---|--------------|--|---|--------------|--|
| | \$ | % | | \$ | % | | \$ | % | | \$ | % | |
| Cash | 12,536,622 | 24.5 | | 18,971,668 | 43.6 | | 324,163 | 10.3 | | 463,074 | 9.0 | |
| Accounts Receivable | 6,907,935 | 13.5 | | 3,089,423 | 7.1 | | 947,311 | 30.1 | | 1,070,215 | 20.8 | |
| Notes Receivable | 51,170 | 0.1 | | 0 | 0.0 | | 0 | 0.0 | | 0 | 0.0 | |
| Inventory | 6,549,745 | 12.8 | | 1,305,390 | 3.0 | | 761,626 | 24.2 | | 1,342,914 | 26.1 | |
| Other Current | 6,191,556 | 12.1 | | 7,875,853 | 18.1 | | 72,386 | 2.3 | | 560,835 | 10.9 | |
| Total Current | 32,237,028 | 63.0 | | 31,242,334 | 71.8 | | 2,105,486 | 66.9 | | 3,437,038 | 66.8 | |
| Fixed Assets | 5,628,687 | 11.0 | | 5,656,690 | 13.0 | | 472,082 | 15.0 | | 1,322,333 | 25.7 | |
| Other Non-current | 13,304,171 | 26.0 | | 6,613,976 | 15.2 | | 569,646 | 18.1 | | 385,895 | 7.5 | |
| Total Assets | 51,169,886 | 100.0 | | 43,513,000 | 100.0 | | 3,147,214 | 100.0 | | 5,145,266 | 100.0 | |
| Accounts Payable | 7,726,653 | 15.1 | | 188,411,290 | 433.0 | | 575,940 | 18.3 | | 2,624,086 | 51.0 | |
| Bank Loans | 409,359 | 0.8 | | 0 | 0.0 | | 0 | 0.0 | | 205,811 | 4.0 | |
| Notes Payable | 153,510 | 0.3 | | 9,398,808 | 21.6 | | 0 | 0.0 | | 41,162 | 0.8 | |
| Other Current | 8,391,861 | 16.4 | | 49,213,203 | 113.1 | | 399,696 | 12.7 | | 3,215,791 | 62.5 | |
| Total Current | 16,681,383 | 32.6 | | 247,023,301 | 567.7 | | 975,636 | 31.0 | | 6,086,850 | 118.3 | |
| Other Long Term | 16,988,402 | 33.2 | | 6,265,872 | 14.4 | | 390,255 | 12.4 | | 735,773 | 14.3 | |
| Deferred Credits | 511,699 | 1.0 | | 739,721 | 1.7 | | 0 | 0.0 | | 0 | 0.0 | |
| Net Worth | 16,988,402 | 33.2 | | (210,515,894) | (483.8) | | 1,781,323 | 56.6 | | (1,677,357) | (32.6) | |
| Total Liab & Net Worth | 51,169,886 | 100.0 | | 43,513,000 | 100.0 | | 3,147,214 | 100.0 | | 5,145,266 | 100.0 | |
| Net Sales | 36,576,044 | 100.0 | | 13,372,157 | 100.0 | | 5,610,007 | 100.0 | | 11,640,873 | 100.0 | |
| Gross Profit | 20,189,976 | 55.2 | | 8,304,109 | 62.1 | | 2,311,323 | 41.2 | | 4,528,300 | 38.9 | |
| Net Profit After Tax | 512,065 | 1.4 | | (802,329) | (6.0) | | 123,420 | 2.2 | | 442,353 | 3.8 | |
| Working Capital | 15,555,645 | — | | (215,780,967) | — | | 1,129,850 | — | | (2,649,812) | — | |

| RATIOS | SIC 2835 | | | SIC 2836 | | | SIC 2841 | | | SIC 2842 | | |
|------------------------|----------|-------|--------|----------|--------|---------|----------|-------|-------|----------|-------|-------|
| | UQ | MED | LQ | UQ | MED | LQ | UQ | MED | LQ | UQ | MED | LQ |
| SOLVENCY | | | | | | | | | | | | |
| Quick Ratio (times) | 3.5 | 2.0 | 1.0 | 3.3 | 1.8 | 1.0 | 2.1 | 1.3 | 1.1 | 1.5 | 1.1 | 0.6 |
| Current Ratio (times) | 6.1 | 3.2 | 1.9 | 6.3 | 3.5 | 1.6 | 4.1 | 2.0 | 1.6 | 3.8 | 2.5 | 1.5 |
| Curr Liab To Nw (%) | 13.1 | 21.9 | 39.8 | 10.7 | 14.7 | 45.8 | 18.8 | 42.9 | 82.7 | 26.7 | 36.1 | 96.9 |
| Curr Liab To Inv (%) | 76.7 | 159.6 | 329.7 | 136.2 | 231.6 | 763.8 | 65.5 | 146.1 | 192.1 | 64.2 | 108.0 | 151.3 |
| Total Liab To Nw (%) | 16.2 | 48.0 | 118.6 | 14.6 | 41.4 | 94.3 | 24.1 | 68.7 | 171.6 | 42.8 | 60.3 | 118.5 |
| Fixed Assets To Nw (%) | 11.8 | 16.3 | 19.8 | 2.0 | 10.8 | 27.9 | 12.3 | 24.8 | 40.2 | 21.2 | 37.1 | 80.7 |
| EFFICIENCY | | | | | | | | | | | | |
| Coll Period (days) | 34.3 | 56.2 | 63.2 | 24.5 | 48.6 | 97.1 | 39.4 | 43.7 | 54.0 | 29.2 | 34.5 | 43.1 |
| Sales To Inv (times) | 10.8 | 7.4 | 4.9 | 11.1 | 7.3 | 3.6 | 10.6 | 7.9 | 6.4 | 13.1 | 8.9 | 7.0 |
| Assets To Sales (%) | 83.8 | 139.9 | 238.4 | 205.7 | 325.4 | 999.9 | 37.5 | 56.1 | 67.7 | 29.0 | 44.2 | 62.3 |
| Sales To Nwc (times) | 3.2 | 2.2 | 1.3 | 1.5 | 0.6 | 0.2 | 10.0 | 6.4 | 3.5 | 11.9 | 6.4 | 5.1 |
| Acct Pay To Sales (%) | 3.9 | 5.8 | 13.0 | 5.9 | 18.0 | 63.9 | 7.7 | 8.8 | 12.0 | 3.9 | 5.8 | 7.3 |
| PROFITABILITY | | | | | | | | | | | | |
| Return On Sales (%) | 10.1 | (3.1) | (35.5) | (0.1) | (38.9) | (878.0) | 5.4 | 2.3 | 0.6 | 7.1 | 3.4 | 0.7 |
| Return On Assets (%) | 9.1 | (1.7) | (29.7) | (2.1) | (28.6) | (92.9) | 4.3 | 3.0 | 1.9 | 13.2 | 6.7 | 0.6 |
| Return On Nw (%) | 16.3 | 4.1 | (9.4) | (0.1) | (24.2) | (59.5) | 11.7 | 6.5 | 3.6 | 21.1 | 9.5 | 6.0 |

Quick Ratio and Current Ratio used to measure liquidity or "solvency."

Calculations of Quick and Current Ratios should be with the range between the Upper Quartile and Lower Quartile

Almanac of Business and Industrial Financial Ratios:

This resource is published by Capital Changes (CCH) and compiled by the economist Leo Troy. All of the information is garnered directly from the Department of the Treasury, Internal Revenue Service's statistical sampling of the tax returns of all corporations; these statistics are thus compiled from approximately 5.8 million corporate tax returns.

Use this resource for gathering another set of Current and Quick ratios. The publisher clearly delineates what factors it uses in determining what counts as an asset and what counts as a liability. The important thing to keep in mind is that this resource samples from a much larger pool of companies than do the other three mentioned. In this sense, the Almanac offers a more universal scope.

Another great component of this resource is the Net Sales and Operating Costs/Income figures. The Net Sales provides dollar amounts of net revenues culled from the sampled corporations. This information can be used for a couple of things: 1) you can use these figures to determine growth potential for an industry over a span of time. Some libraries hold a historical collection of this resource in its collection so you could feasibly do five or ten years of industry analysis; 2) the operating costs are calculated to be read as a percentage of outlay that goes into whatever classification of expense you are looking at; in this case, operating costs are those that allow the producer to bring the product to fruition or the service to the customer; and, 3) there are a number of other figures in this resource that could be very useful for the business owner as a way to determine expenses, such as wages, taxes, depreciation, etc..

Standard and Poor's Net Advantage:

In the Industry Surveys section of Net Advantage, the business owner will find Key Industry Ratios. Industry surveys offer a comprehensive overview of over 50 of the largest North American and global industries. Each survey is authored by the Standard & Poor's equity research analyst who specializes in analyzing companies within that industry.

After accessing the Industry Surveys area and then clicking on Balance Sheet Ratios you will find the Current Ratio, but not the Quick Ratio. This ratio along with others that measure Profitability and Equity is only offered on the 50 major industries they cover. However, there are many brief economic/industry analyses offered on smaller industries, called sub-industries, one hundred and fifty to be exact. There may be some financial information contained in these analyses, but its hit and miss.

Conclusion:

Learning what a financial ratio is, why it is an important piece of information in a business plan—or in any document or agreement where a lender is considering providing funds for a business—and how to interpret a ratio, is a nice added value that a librarian can offer a business plan writer who is using the library as a resource center for their research. Many business plan writers are not experts in writing business plans. If a librarian can offer this level of assistance or even simply use this how-to guide as a handout, the business plan writer will have gotten just a little further in writing that daunting business plan.