

Understanding Financial Statements

By Kathleen Kerwin

The fields of finance and accounting are well established, with numerous well-written articles and books available on how to understand financial statements (FS). However, the availability of information is not the real problem: there is too much information for people to absorb. Not only do you need to understand how financial statements are created, but what critical and essential information you can glean from the data itself, using financial ratios for trend, competitive, and comparative analysis.

The most significant issue is the evaluation and interpretation of the data that turns it into actionable intelligence. Financial intelligence (FI) carries with it the expectation that the data and knowledge gained will add that extra insight to raise financial analysis into actionable intelligence. (The term FI is also used to refer to the forensic accounting techniques that search the paper trail for evidence of terrorist and drug related funding and money laundering criminal activity.)

Due to the dotcom bust and front page financial abuses by corporate executives, there has been increased interest in the field by those who had previously left the subject to people who chose finance and accounting as a vocation. Secondary analysis done by financial and investment analysts is coming under greater scrutiny and the inferred *trust me* attitude is being replaced by the active involvement of individual investors worried about their financial futures and investment decisions, corporate employees concerned about their 401K plans, and marketing and sales staff who are responsible for making decisions to forge alliances and or compete with other companies.

Particularly for a new competitive intelligence professional, the financial intelligence field is extensive and the data overwhelming. You'll want to not only know how to read financial statements, but also how to create a repeatable solution where you can continually build more depth to your

financial knowledge in general and apply it to the specific industries and companies you research.

The first step is to learn the purpose of financial statements, then how the information was compiled, and finally to interpret the data. Data sources have to be credible and validated. To place the financial statements into perspective, it's helpful to know the accounting background and what legal and authoritative organizations regulate them. One way to approach financial ratio analysis is to identify which viewpoint you represent and what questions you need to answer.

FRAMEWORK TO BUILD A FINANCIAL ANALYSIS

The US Securities and Exchange Commission (SEC) through the Securities Act of 1933 and Securities Exchange Act of 1934 requires that all public companies:

- disclose meaningful information to allow investors to make intelligent decisions
- impose liabilities on those responsible for making inadequate and erroneous disclosures
- regulate insiders, professional sellers of securities, security exchanges, and other self-regulatory securities organizations [Mailor, 2001]

Although the definition of securities is broad, the general interest is in the publicly traded stocks and bonds that are registered with the SEC. There is a requirement to file an annual report (Form 10-K) and quarterly reports (Form 10-Q). Because the annual report must include audited information about the company, management business conduct, and the status of the company, it is the most reliable document. The 10-Q statement is a summarized non-audited statement. The 10-K's and 10-Q's are historical documents.

INTC	MSFT	CSCO	ORCL	AMR	DELL
18.66	25.50	13.95	12.00	5.00	29

Pro Forma statements (Regulation S-K) document supplementary financial information projecting the *what-if* scenario of future planned actions. Pro Forma statements should be weighted by the reputation of the firm and can provide much insight into its future direction.

ACCOUNTING OVERSIGHT

It is imperative to understand the accounting principals and enforcement organizations that govern financial statements. Generally Accepted Accounting Principles (GAAP) standards are enforced by the rules of conduct of the American Institute of Certified Public Accountants. The SEC has oversight statutory authority to establish financial, accounting, and reporting standards. The SEC recognizes the authority of the AICPA in creating standards for preparing financial reports and delegates responsibility to the Financial Accounting Standards Board (FASB) to govern their form and content.

GAAP is a guiding outline and not a prescribed literal course of action. The accountants creating the company financial statements must explain why they took a certain course to arrive at their figures. These explanations are found in the text content of the 10-K and 10-Q financial statements. Scheduling the time to search the text and identify these explanations is often overlooked.

However, how the figures were arrived at is as important as the hard figures themselves. Required SEC and IRS filings by each company can each reflect different accounting treatments although they are for the same time period. A company's use of accounting treatments may change although they must be consistent and stay within a limited course of deviation that must be documented in the SEC filings submitted.

FINANCIAL STATEMENT DOCUMENTS

The effectiveness of decisions and actions taken by corporate executives and management are measured through financial statements. But financial statements are an approximation. Some issues include differences based on accounting methods used, methods of depreciation and amortization, and selection of reporting events. They are historical and can often be used to project future earnings and cash flow for decision-making purposes.

A key indicator of a public company's success is the value of the free cash flows it produces or is expected to produce. Financial statements (if you can trust the numbers) are a transparent view into the actions taken through corporate decisions. They are the report card and their analysis helps us understand what and how the company is doing.

Primary responsibility of corporate managers is to increase performance and profitability by adding value to stockholders and increasing free cash flows (FCF) and cash

TABLE 1: FINANCIAL STATEMENTS FOUND IN 10-KS AND 10-QS

Balance sheets (BS): report a company's financial position at a given point in time — at the end of the previous reporting period and of the current reporting period.

- used to understand the balance of what the company owns (assets), owes (liabilities), and the company's value to the stockholder
- assets can be liquidated and equal or match claims against them from liabilities and shareholder's equity
- assets = liabilities + shareholders equity
- uses accrual based accounting

Income statements (IS): details operations and the summaries of revenues and expenses over time; also known as the statement of profit and loss.

- measures performance through gains and losses from operating activity
- net income = revenues – expenses
- uses accrual based accounting

Statement of cash flows (CF): records changes in a company's cash position from cash receipts and payments. It explains changes in the balance sheet and income statement. It accounts for the inflow and outflow of cash from:

- operations – cash used to make products and services to run the business
- financing – related to changing the company size or financial structure such as financing through loans, stocks, bonds, warrants etc.
- investments – related to the purchase of assets such as property, plant and equipment
- uses cash based accounting

from operations. FCF is the money available after all obligations have been made (e.g. reinvestment and paying down debt).

The principle financial statements found in 10-K's and 10-Q's are in Table 1. Taken all together they provide a complete financial and operations accounting view. Note that accrual and cash accounting methods differ in the timing of when the transaction is accounted for. Accrual accounting counts the transaction when it occurs (when an expense is incurred) whereas cash accounting counts the transaction when the cash actually changes hands.

FINANCIAL RATIO ANALYSIS

For decision-making we need to extract the data from financial statements and turn it into a usable form that can

provide actionable intelligence. Ratios combine numbers within the financial statements that emphasize critical issues and provide insight into the information within the statements. They help evaluate the risk and return of a company itself or compared to others within its industry.

There are several types of financial ratios:

- **Efficiency analysis** (aka asset management or activity analysis): evaluates the firm's ability to repay debt.
- **Debt management analysis:** identifies the firm's debt structure and its ability to meet claims in case of liquidation. This analysis consists of two parts: liquidity (short-term) and solvency (long-term).
- **Profitability:** ability of firm to generate, sustain and increase profits.
- **Market value:** shareholders return for holding stock in the firm.

There is no standard for categories or ratio calculations. In fact the most difficult issue I had to address in writing this article was the lack of standards, including naming of the financial statements fields, and whether I could locate specific FS field names in company financial statements for ratios I needed. For example, under assets in the balance sheet, marketable securities was not always available. Some ratios use short-term or long-term debt input, however, the FS documents didn't label debt using these terms. (See Table 2: Financial Ratios.)

CASH FLOW ANALYSIS

The primary metric of the success of a company is its ability to generate free cash flow—the cash available to shareholders after taxes. The cash analysis should include not only the ability to generate cash flow, but also cash flow trends and management policies regarding how the firm is leveraged (debt), the dividend policy to distribute earnings to shareholders, and the investment decisions.

There are two models that are useful:

- Discounted Cash Flow Valuation measures the cash that will be used and how much cash flow is expected to return. Manipulating accounting practices does not affect it. [Damadorian]
- Free Cash Flow Valuation (such as cash flow from operations) measures the ability to generate the resources to meet obligations.

Due to the assumptions that are made when financial statements are developed (such as those explained in the text portion of SEC filings), ratio analysis should be just one of several means of evaluation. Interpreting the data and extracting meaningful intelligence takes time.

TREND ANALYSIS

Trend analysis charts financial statement data or financial ratios of the same firm over time as opposed to a comparative analysis of multiple companies at a given point in time. It creates a time series (horizontal analysis) using financial statement data and financial ratio analysis of multiple categories. Using historical performance with at least three years of data, you can analyze negative trends and opportunities for future improvement.

SIDEBAR: CHECKLIST FOR SUCCESS

1. Identify the type of user you are (creditor, investor, corporate manager, or researcher) and what target information you need.
2. Learn the concepts and ratios that support the type of information needed. Determine the questions you need answered, and identify which financial categories and ratios relate to your questions.
3. Pick the best data sources:
 - Primary source data – BS, IS, and CF statements in 10-Ks and 10-Qs from SEC website, Edgar-Online, annual report websites, etc.
 - Secondary source data – industry norms, averages and benchmarks from RMA, Dun & Bradstreet, Standard & Poor's, etc.
 - Third party resources.
 - Numerous financial service companies provide completed analysis ready to use.
4. If using primary and secondary source data as input into your analysis, find spreadsheet ready data, then:
 - Develop a spreadsheet template for ratio analysis.
 - Input the financial statement and industry norm benchmarking data.
5. Interpret what you need to know:
 - For trend, competitive, and comparative analysis: to find the company(s) by SIC code, company size, or life cycle, and identify benchmarks for each segment of your firm.
 - Uses research techniques such as a SWOT analysis to raise the data into intelligence. (Note: Analyze your company first, then broaden the scope to add competitors, partners etc.)
6. Develop a format to keep all the information you've gathered. The format should be reusable and repeatable to build your knowledge base.
7. Identify additional FS information and concepts that provide a deeper understanding of the targeted financial issues.

Your judgment will improve as your experience grows in evaluating and interpreting the results of your research.

TABLE 2—PART 1: FINANCIAL RATIOS

Efficiency (aka asset management or activity analysis): How well is firm performing, both long- and short-term? Is it a good indicator of liquidity and profitability? *Short-term operations. If the business is seasonal, turnover ratios use average of denominator values.*

- **Inventory turnover.** How efficiently is the firm managing inventory? Cost of goods sold over inventory.
- **Average collection period.** What is the length of time that the firm must wait after sale to receive cash? Accounts receivable x 360 over sales.
- **Days sales outstanding** How effective is the firm's collection policies? How much is invested in receivables to maintain the sales level?
- **Receivables turnover.** What is the effectiveness of payment terms? Sales over accounts or trade receivables.
- **Accounts payable turnover.** What is the time between the firm's customer payments and supplier payments? Purchases over accounts payable.
- **Working capital turnover.** What is the working capital (merchandise actually sold) needed to maintain sales. Short-term debt, marketable securities, and excess cash excluded because not needed for operating activities.
- **Long-term investments.** What is the efficiency of the capital investment?
- **Fixed asset turnover.** How effectively is the firm using its fixed assets? Sales over net fixed assets.
- **Total assets turnover.** Is the firm generating enough sales volume given its total assets investment? Aggregates the joint impact of both long-term and short-term ratios. Sales over total assets.

Debt management liquidity: short-term obligations (working capital ratios).

- **Current ratio.** Can the firm meet its short-term debt obligations? Current assets over current liabilities.
- **Quick ratio** (aka acid test ratio). Can the firm pay its short-term obligations without relying on inventory (the least liquid assets and most likely to incur losses in bankruptcy)? Current assets minus inventory over current liabilities.
- **Cash flow from operations** (CFO). Without liquidating assets, what is the actual cash flow worth compared to the claims made against short-term assets (i.e. liabilities)? Cash flow from operations over current liabilities.
- **Cash ratio.** What are the actual resources that can most quickly be turned into cash? Cash plus marketable securities over current liabilities.

Is the value improving or declining? A frame of reference is necessary such as comparison to an industry benchmark. A company will often set the industry benchmark as a future goal while forecasting for projected performance changes. Benchmarking identifies the major competition within an industry then uses the ratios as a comparison point.

Single ratios, such as the P/E ratio, may give little or inaccurate information given the complexity of how the financial statements are written and the fact that the company is an ongoing concern. The overall financial trend requires a series of relative metrics over a period of time.

Simple trends may be misleading. If a company has several years of increasing inventory with no sales that are followed by sales, it may be a normal condition of a startup company. A sign of trouble would exist if there was increasing debt from the acquisition and manufacturing of the inventory with no change in a constantly low sales volume. Using ratios in trend analysis is only a starting point: it identifies where a company is but it doesn't provide a solution.

COMPETITIVE ANALYSIS

Competitive analysis takes companies in the same industry and compares them at a single point in time (vertical analysis). The industry, size, lifecycle (introduction, growth, maturity, declining), and growth rate of the companies should be similar to select industry wide norms to use as benchmarks and compare your firm with others. Choose industry benchmarks from the list of major competitors that are considered good examples to emulate.

Industry norm data sets for specific needs represent different industries and company sizes. The data set you select should represent your research requirements and often comes from third party suppliers. For example:

- Risk Management Associates is the national association of bank officers and the most commonly used source of industry norm data.
- Dun & Bradstreet supports data sets focused on small firms. It has a creditors viewpoint, dealing with current assets and liabilities (not market value) and sells primarily to lending institutions.
- Standard and Poor's industry surveys provide overviews of large industries, and statistics on the industry top companies.

When using secondary sources, ask what data manipulation has been done with the data. Do the numbers reflect averages of company size or the entire industry classification? Also, make sure the statistics come from a validated source.

The evaluation of competitive historical numbers can help a company determine a goal to strive for and develop a

TABLE 2—PART 2: FINANCIAL RATIOS

Debt management solvency. What is the risk undertaken by the firm?

- **Capitalization and debt ratios.** What is the risk undertaken by the firm?
- **Debt to total capital ratio.** What is the percentage of external debt to total capital? Total debt (current + long-term) over total capital (debt + equity).
- **Debt to equity ratio.** How is a firm financed? What is percentage of external debt to total equity? Total debt over total equity.

Interest coverage ratios. Can the firm meet its debt obligations given its capital structure?

- **EBITDA coverage.** What is the ability to service debt? EBITDA + lease payments over interest + principal payments + lease payments. (EBITA is earnings before interest taxes depreciation and amortization.)
- **Times interest earned (TIE).** What is the firm's ability to pay interest (this measured the protection to creditors)? EBIT over interest expense. (EBIT is earnings before interest and taxes.)

Capital expenditure and CFO to debt ratios. Can the firm meet its replacement and expansion needs?

- **Capital expenditure ratio.** What is the relationship between a firm's ability to create cash and capital investment?
- **CFO to debt.** Is the firm generating enough cash to coverage principal payments?

Profitability return on sales ratios.

- **Gross margin.** What is the relationship between sales and costs (i.e. the % of sales available to cover operating costs?) Gross profit over sales.
- **Operating margin ratio.** Comparative measure of operating efficiency. Operating income over sales.
- **Profit margin.** What is the % of net profit earned from sales? Net income over sales.

Profitability return on investment ratios.

- **Return on assets (ROA).** What is the % profits earned on assets (i.e. how well is the firm generating profits?) EBIT over average total assets.
- **Return on equity (ROE).** What is the % profits earned on stockholders' equity? Net income over average stockholders' equity.
- **Return on total capital.** What is the % profits earned on total capital (debt + stockholders' equity)? EBIT over ave (total debt + stockholders equity)

Market value equity valuation ratios.

- **Basic earnings per share.** What return is available to common investors after warrants, stock options and convertible bonds? (A better reflections of value than EPS.) Earning available to common stockholders over weighted average number of common stocks outstanding + warrants, stock options and convertible bonds traded in for stock.
- **Book value per share.** What is the equity value of the firm based on FS numbers? Common equity over shares outstanding.
- **Price/earnings ratio.** How much are investors willing to pay for profits? Price per share over earnings per share.
- **Market/book ratio.** What is the market value of the firm compared to book (FS) numbers? Market price per share over book value per share.
- **Price/cash flow.** How much are investors willing to pay compared to the cash flow produced? Price per share over cash flow per share.
- **Dividend payout.** What is the percent of dividends paid out compared to net income? Dividends over net income.

plan to achieve it. It can also help develop a competitive marketing plan.

COMPARATIVE ANALYSIS

Common size statements compare companies of dissimilar size over time and across industries. The common size standardization of financial statements allows a company's performance to be compared to a single scale. Ratios that are higher or lower can provide good insight.

- Income Statement data fields compared to total sales minimizes differences in sales volumes. (Note: The words sales and revenues are interchangeable.)
- Balance Sheet data fields are compared to total assets minimizes company size differences.

The major issues deal with concerns about accounting or management. Questions about management input raise concerns about reliable, accurate, and timely data. Are there hidden reserves and items that are not on the books such as

contractual obligations that are legally binding and will impact future Financial Statements? Has the financial position been over, inaccurately, or fraudulently stated?

Accounting issues include differences in accounting methods between companies. These are difficult to locate in SEC filings and complex to keep track of even if found. The unknown issues make comparisons questionable. A good example is that depreciation uses historic not market value costs and may not reflect reality.

REFERENCE RESOURCES

An excellent article to use as a reference was written by Mark Johnson in Jan-Feb 2002 for *Competitive Intelligence Magazine* called 'Competitive profiling with financial ratio analysis.' I've also developed webpages at www.trendinsights.com that provide additional links and reference material.

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