

## OPERATING CASH-FLOW MODEL: METHODOLOGY REPORT

### Introduction

The SEENSCO Operating Cash-Flow Model determines the value of a business as a function of its operating cash flows. There are a number of different cash-flow based valuation models in use today, ranging from pure free cash-flow to the firm and free cash-flow to equity models to approximation based models built around NOPAT or EBITDA. Pure free cash-flow models, typically used in a discounted cash-flow context, suffer from one major drawback when used for stock valuation as free cash-flows have a tendency to fluctuate significantly from year to year due to unpredictable capital expenditures, extraordinary items, and abnormal equity buybacks. It can also tend to be difficult to estimate normalized free cash-flows and normalized free cash-flow multiples. NOPAT and EBITDA models alternatively are highly sensitive to accounting distortions, which can render them completely useless. A reasonable middle ground is to rely on operating cash-flows as the basis for valuation.

### The Investment Philosophy

Many investors believe that cash flow are a more useful gauge of a stock's value than earnings. Why? Because the amount of cash a company generates is in fact a more important measure of a company's health. Investors will almost certainly hear more about company earnings in the media than almost any other metric on valuation, but it doesn't really provide the most accurate picture of a company's ability to generate cash, which is ultimately the bottom line.

Operating cash-flows represent the amount of cash that flows through the business after all cash-based sales have been collected and cash-based operating expenses have been paid and necessary investments in working capital (e.g., inventory) and have been made. Operating cash-flows are not affected by sometimes volatile cash-based capital expenditures nor are they affected by cash payments or cash collections from stockholders, bondholders, and sometimes, preferred stockholders.

The equations used to calculate operating cash-flows are a function of the accounting information SEENSCO has available. Operating cash flows are calculated by adding back to net income from continuing operations depreciation and depletion charges, reconciling for changes in receivables, inventory, payables and other working capital requirements, and then adjusting for changes in deferred taxes, stock based compensation, and other items.

Net Income from Continuing Operations

+	Depreciation/Depletion Charges
+	Changes in Receivables
+	Changes in Inventories
+	Changes in Payables
+	<u>Changes in Other Working Capital Items</u>
+	Changes in Deferred Taxes
+	Stock Based Compensation
+	<u>Cash Flow from Others</u>
=	Operating Cash Flows

The way in which operating cash-flows are related to a company's net income and measures such as EBITDA (earnings before interest, taxes, depreciation, and amortization) is important. The big advantage of using operating cash-flows over other cash-flow proxies such as NOPAT, EBIT, and EBITDA, is that it does not double-count or omit cash flow components in one way or another. For example, EBIT and EBITDA are before-tax measures,

and the cash flows available to investors for valuation should be after tax. EBITDA and similar measures do not account for differing capital structures and related after-tax interest expenses. Moreover, these measures do not account for the reinvestment of cash flows that the company makes in working capital items to maintain or grow the size of the firm.

### Investor Suitability

Investors that prefer to emphasize operating cash flows for their valuations:

- Invest frequently in companies that do not pay dividends.
- Invest in dividend paying companies but the dividends paid do not reflect the company's true capacity to pay dividends.
- Believe that operating cash-flows are more accurately aligned with true economic profitability within an acceptable forecast horizon with which the investor is comfortable.
- Take a "control" perspective. Control reflects management's discretion over the uses of cash. If an investor had control of the company, dividends paid could change materially. That is they might be adjusted to a level that is more appropriately aligned with the company's true capacity to paid dividends.

### Quality Screens

1. **Strong, Stable and Growing Sales:** Investors should always prefer to invest in businesses whose sales growth is strong, stable, upward trending, and generally grows faster than the overall economy and inflation combined. In assessing a company, investors should determine whether the company's historical sales growth rate is given the company's size. Investors should also check whether the sales growth rate exceeds that of the competition. Further, investors should check whether the sales trend has changed direction recently. If sales are up or down investors should want to discover why.
2. **Strong, Stable and Growing Operating Earnings Net Income:** Earnings growth is another critical screen investors should use to identify high quality companies. As with revenues, it is always preferable to invest in companies whose operating earnings and net income are strong, consistent, and trending upwards. Investors should consider each firm's operating and earnings growth performance in the context of how other firms in the industry are performing, how the company's immediate peer group is performing, industry average statistics, and in light of the current GDP and Inflationary environments.
3. **Strong and Stable Margins:** This is a third critical screen investors should use to identify high quality companies. A high percent operating profit and net profit to sales shows that a company is competitively strong and/or operating in an attractive industry. For SEENSCO, it is desirable to invest in companies whose margins are increasing or are at least staying the same. Examining the most recent 3-5 year average should help to determine this.
4. **Strong and Stable Returns:** Strong and stable returns on equity and returns on investment is the fourth quality screen used by SEENSCO in assessing companies. Returns are particularly important because they tell us how effectively company management is using investor capital to make a profit. Of course it is preferable if returns are increasing or at least staying the same. It is advisable to compare the subject company's returns with the industry and immediate peer group.
5. **Limited Financial Leverage:** Firms that exhibit high leverage tend to be more risky than firms with low leverage, all else equal. We assess leverage through the use of the firm's adjusted debt-to-income ratio. Firms that are over 10 on this metric, we

rate as having high leverage and high financial risk. Firms that have less than 5.0, we rate as having low leverage and low financial risk.

Following these screens will help investors to focus on only the best and safest stocks for long-term investment success. Most of these screening criteria are generally accepted and applied by the world's top investing gurus. They are also supported by much of the academic research.

### **Pricing a Company's Stock**

Pricing a company's stock using the SEENSCO operating cash-flow model involves first estimating 10 year forward sales and earnings per share and then applying an operating cash-flow-to-earnings multiple to projected earnings to determine the future cash-flow stream. A valuation for the company is determined by assigning an equilibrium P/OCF ratio to a 10 year average cash flow projection. Adjusting this fair value by the normal trading range of the company's stock gives the stock's fair value range. A compound annual growth rate is then computed, assuming a 5 year holding period. Generally, stocks whose compound annual returns exceed the projected long-term annual rate of return on the market will qualify for investment while stocks whose returns are lower will qualify for sale.

### ***Sales per Share Estimation***

Sales per share estimates for the first 2 to 3 years of the investment horizon are calibrated to consensus market estimates. After the consensus forecast period, SPS are projected forward based on the 10 year average nominal incremental change in SPS, outliers removed, from the preceding 10 year period.

### ***Earnings per Share Estimation***

Earnings per share estimates for the first 2 to 3 years of the investment horizon are calibrated to consensus market estimates. After the consensus forecast period, EPS are projected forward based on the 10 year average nominal incremental change in EPS, outliers removed, from the preceding 10 year period.

### ***Operating Cash-Flows per Share Estimation***

Operating cash-flows are projected by first determining a projected operating cash-flow-to-earnings per share ratio. Historical ratios from the preceding 5 and 10 year periods are calculated and cleaned for outliers. Ratios are applied against historical earnings per share data and back tested for forecasting accuracy. Which ratio produced the greatest forecast accuracy (that is, produced the lowest mean squared error) was then applied against projected earnings to arrive at our estimated operating cash-flows.

### ***Price-to-Operating Cash-Flow per Share Estimation***

The price that a stock is expected to trade at the end of the holding period will have a significant impact on the price of the stock today. Usually companies with significant growth potential, stable cash-flows, and low risk will sell at higher P/OCF multiples compared to lower growth, unstable and/or higher risk companies. For determining an equilibrium P/OCF multiple, we run an optimization procedure that determines which P/OCF multiple yielded the best forecasting accuracy over the evaluation period. If in our judgment this multiple continues to accurately portray the cash-generating power of the company as well as the growth and risk characteristics of the firm, then we will use this multiple as our target multiple. If not, we will adjust the multiple upward or downward accordingly.

### ***Setting a Valuation Range***

Setting an appropriate valuation range is important because it facilitates the comparison of the company's current stock price and return potential and tells investors whether it's a good time to buy or sell. The upper part of the valuation range signals degrees of near term overvaluation while the lower part signals degrees of near term undervaluation,

and this is where investors should look for buy opportunities. To determine the valuation range, SEENSCO bounds the price target by the 10-year average stock price trading range, representing the stock's normal volatility. The span between the upper and lower valuation bounds represent the stock's fair value range and indicates where you can expect the stock to trade fairly.

**Application**

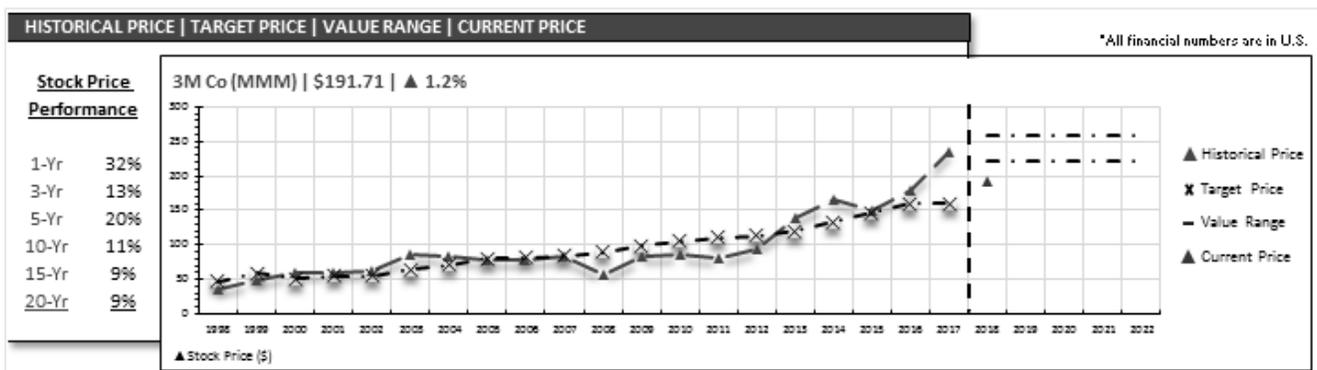
As an example, presented below is a valuation of the 3M Co. 3M Co is a diversified technology company that manufactures various industrial and consumer products for the Industrial, Safety and Graphics, Health Care, Electronics and Energy, and Consumer industries. The company is best known for popular consumer products such as Scotch tape and Post-it Notes. The company's portfolio also offers display films, personal respirators, heavy-duty adhesives, reflective sheeting, sanding wheels, and filters.

Looking at the company's historical record, it is clear that 3M is a high quality company. It has generated strong, stable and growing sales, operating earnings and net income over the last 15 years. The company's operating and net profit margins have trended steadily above 20% and 15% respectively over the last 5 years. Further the company's ROE and ROI have trended north of 20% over the last few years while the company's debt load can be easily repaid with just 3x annual earnings.

At the present time, 3M is trading at about \$191.71. Sales per share are projected to rise by 3.1% per year over the next 10 years. This compares to sales growth of 4.5% over the last 10 years. Earnings per share are projected to rise by 5.2% per year over the same period from the current level of \$7.90 to \$13.20. This earnings growth is projected to translate into operating cash flow growth of 5.4%, which is slightly lower than the 5.8% growth experienced over the last 10 years.

We have derived an optimal Price/OCF ratio of 15.5x. This is slightly higher than the firm's realized 10 year average multiple of 14.4x and slightly lower than a triangular weighted moving average multiple of 16.2x. Applying our optimal multiple against 10 year average projected operating cash-flows produces a fair value estimate of \$240 and a fair value range of \$221 to \$258. This stock is definitely undervalued if its price were to correct within the short-term. Alternatively, assuming a 5 year convergence period translates into an annual compound rate of return of 4.6%. This is lower than our long-term projected rate of return on the market (6.5%), but within a reasonable range (3.25% to 9.75%) and, as such, is given a MARKET NEUTRAL rating.

**Figure: 3M Co's Historical Price, Target Price History, Current Price and Current Fair Value Range**



**MODEL RECOMMENDATIONS**

Model recommendations are guideposts to a broad audience and individuals must consider their own specific investment goals, risk tolerance, tax situation, time horizon, income needs, and complete investment portfolio, among other factors in making investment decisions.

### **LONG-TERM RATINGS**

**Buy:** The stock is expected to compound at an annual rate of return of at least 2.0x the projected long-term rate of return of the market.

**Market Outperform:** The stock is expected to compound at an annual rate of return of between 1.5x and 2.0x the projected long-term rate of return on the market.

**Market Neutral:** The stock is expected to compound at an annual rate of return of between 0.5x and 1.5x the projected long-term rate of return on the market.

**Market Underperform:** The stock is expected to compound at an annual rate of return of between 0.0x and 0.5x the projected long-term rate of return on the market.

**Sell:** The stock is expected to compound at an annual rate of return of less than 0.0x the projected long-term rate of return on the market.

**Incalculable:** A target price, and hence, a fair value range for the company's stock cannot be calculated.

### **SHORT-TERM RATINGS**

**Overvalued:** The current stock price exceeds the upper bound of the stock's fair value range.

**Fairly Valued:** The current stock price trades within the lower and upper price bounds of the stock's fair value range.

**Undervalued:** The current stock price trades below the lower bound of the stock's fair value range.



# Sample Value Sheet

**A Model Recommendation**  
Indicates whether the firm is undervalued, fairly valued, or overvalued in the short term based on the operating cash-flow model methodology. Also indicates how the stock is expected to perform relative to the market based on the stock projected long-term compound annual growth rate.

**B Target Price**  
Shows the company's target price and target price range derived based on the dividend discount methodology as well as the stock compound annual return potential over a 5 year horizon.

**C Historical Stock Price, Historical Price Estimate, Current Price and Target Price Range**  
Displays the historical price action of the company's stock. Also shows the current stock price in relation to the estimated fair value range for the company's stock.

**F Price Action**  
Shows the company's historical stock price performance over different periods of time.

**G Historical Cash-Flow**  
A summary of the operating cash flows and Price/OCF ratios over the previous 10 year period. Includes summary multiplier statistics and SEENSCO's optimized, or target, Price/OCF multiple.

**I Target Price**  
Shows the fair value target calculated by applying our target Price/OCF against our projected 10 year average operating cash-flows per share.

**J Value Range**  
Shows the stock's normal trading range. Applied against our price target, produces the target price range.

**K Valuation and Return Potential**  
Shows the stock's annual compound return potential at the lower, target, and upper price bounds assuming a 5 year investment horizon.

**D Key Financial Ratios**  
Summary of key financial ratios and metrics that should be considered by all investors in assessing the competitive strength of the firm. Company's with higher margins and returns are typically competitively stronger firms.

**E Projections and Implied Growth Rates**  
Summary of SEENSCO's sales per share, earnings per share, and operating cash-flow projections based on the operating cash-flow model methodology. Also presented average values from the last 10 years and projected per share values for the next 10 years. Compound growth rates for both periods are likewise

