

SILVER OAK FUND L.P.

| TECHNICAL MANUAL FOR THE SILVER OAK TREE RING
| STRICTLY COMPANY CONFIDENTIAL

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FORWARD:

For confidential purposes, some items have been omitted from this document to protect the Neil A. Wilson Family Office and Silver Oak Fund's proprietary processes.

The assessment criteria and the individual checks performed during our discovery and research are explained in the document below and incorporated into our proprietary software for historical and future forecasting. Our research leverages live API technology from the S&P global market research and reports the most current relatable data available during our discovery and development modeling process. This information is updated every six hours then fed into the Silver Oak Funds proprietary software, analyzing and scoring five main areas of our assessment criteria to enhance our hypothesis with our long-term buy and hold philosophy.

Lastly, S&P API Market Intelligence is not the only deciding factor in a particular equity selection process. Moreover, only the basis for continued research in the areas listed below. Once final research has concluded, we then admit the individual selection to become part of the Silver Oak Fund under active management.

What other information is used and considered during research?

10-Q information focused on management assessments of risks, forward-looking statements, blending volatility index amongst security holdings against the market, backtesting models over 1, 3, and 5 years using trailing twelve and trailing eighteen-month data of company's earnings and not comparing them to the market index. Monitoring quarterly investor conference calls, microeconomic concerns, patent research intelligence and protection levels, qualitative screens, Internal financial modeling using DCF and DCF levered, liquidity measurement ratios, profitability indicator ratios, debt ratios, operating performance ratios, cash flow ratios and free cash flow trends, investment valuation ratios, discounted cash flow trends, price per share history, accrual ratios, cap-x expenditures, legal liabilities or pending lawsuits, one-time extraordinary adjustments, goodwill concerns and daily monitoring of court notices, related intercompany debts, periodicals, trade magazine research, extensive network of contacts, insider public information with regards to recent manager sell-offs, buy levels and price per share the management paid, other holders of the company's stock, company's investor relations information and general daily stock news and other SEC reports, board members and longevity and compensation, CEO and senior managements work history.

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Our 5 -Major Assessment Criteria:

- The fair value of the company's shares and how that value compares with the current share price, other companies and the stock market.
- Future performance and the anticipated future financial performance based on analyst forecasts using S&P market intelligence.
- Past performance based on the historical financial performance of the company
- Overall health and the financial strength of the company's balance sheet and use of equity.
- Dividends being paid, and the sustainability of the dividend at current rates.

What is The Silver Oak Tree Ring and How is it Used?

The Silver Oak Tree Ring has been designed to present the results for our portfolio as a visually intuitive summary. The results of the checks in each of the 5 assessment criteria are presented visually on page 2 in our most current Pitch Deck and based on the overall performance and scores of our current fund holdings.

*Individual equities held within the portfolio are shared upon request and for transparency purposes. Individual equities are always subject to change due to the active nature of our fund.

Example of the Silver Oak Tree:

Methodology behind generating in our Silver Oak Tree Ring:

1. For each assessment criteria, there are 6 individual checks performed (giving a total of 30 checks for each stock).
2. If a check is successful, it is assigned a score of "1".
3. The total successful checks are added to give an overall score for each assessment criteria - for example a stock may receive 4 successful check scores for "Health", giving a total Health score of 4 (from a possible 6).
4. The total score for each of the assessment criteria is shown on the relevant axis of the Silver Oak Tree Ring.

The total scores for each assessment criteria are then used to generate the shape of the Silver Oak Tree Ring. The greater the total number of successful checks the larger the Silver Oak Tree Ring Becomes.

In addition, the Silver Oak Tree Ring is color coded - the greater the number of successful checks the “greener” the Silver Oak Tree - the fewer the “redder” the Silver Oak Tree will appear on an individual holding, but only silver will be used in the overall portfolio Tree Ring.

Notes on shape and size:

While the size and shape of the Silver Oak Tree Ring broadly indicates the "quality" of the company, a low score in a particular assessment criterion should not necessarily exclude a stock from our investment consideration.

Changes in shape and size of The Silver Oak Tree Ring:

The size of the Silver Oak Tree Ring will change over time as data is updated - in particular for updated earnings results and changes in share price.

The Silver Oak Tree Ring is specifically designed to support our CIO allowing him/them to become less emotional by ignoring minor share price fluctuations and focusing on strong fundamentals. Four out of five axis only change when new data is available from API reporting.

The sensitivity of The Silver Oak Ring Axis:

Values are sensitive to changes based on share price however the change must be significant to breach the various thresholds detailed in this document. These areas include future performance, expected growth rates of earnings per share, revenue, cash flow, net income, past performance, historical earnings per share, health of balance sheet and the ability to service debt and dividends while remaining sustainable with cash flow projections.

Summary of the Silver Oak Tree Ring:

While the stock market sets a "price" for a company, this price will often be affected by a wide range of factors, some of which may not impact the true worth, or fair value, of the company. By comparing the market price to the fair value of a company, or a set of companies or indices, we can determine whether a company's shares are potentially over- or undervalued. There are many methods which can be used to determine the fair value of a company. It is also important to note we will take positions in an equity even if the data is showing the company may be overvalued. The goal of our portfolio is to have the blended value of uncorrelated equities to be in overall alignment. Many equities can be considered overvalued from time to time when they are in exponential growth transitions.

The Silver Oak Fund uses four variations of DCF in our proprietary software model depending on the characteristics of a particular stock, such as industry and data availability from most recent market intelligence.

DCF is the most widely accepted method to calculate the fair value of a company during its selection process. It is based on the premise that the fair value of a company is the total value of its incoming cash flow less its expenses, technically called free cash flows (FCF), discounted to today's value.

- 2-Stage discounted cash flow model is suitable for companies that do not necessarily grow at a constant rate over time. They tend to be high growth initially and become stable after a couple of years.
- Dividend discount model (DDM) is accurate for companies that consistently pays out a meaningful portion of their earnings as dividends.
- Excess returns models are used for financial companies such as banks and insurance, generally do not have a significant proportion of physical assets and face different regulatory requirements for cash holdings.
- Adjusted-funds-from-operations (AFFO) 2-stage discounted cash flow model used for real estate investment trusts (REITs), as they incur capital gains and other real estate-specific factors which impacts their free cash flows.

Silver Oak Fund 2-Stage free cash flow model:

When using two stage free cash flow models our software calculations are performed using high-growth stage and stable-growth stage. In high growth, estimates over the next ten years of levered free cash flow to equity are used, which is sourced from market analyst consensus estimates. If no estimates are available, then the last estimate or reported value is extrapolated using the historical average annual growth rate. The following years are then forecast to grow, but with the growth rate reducing each year, until it reaches the long-run stable growth rate.

In stable-growth environment our application uses terminal value using the Gordon Growth formula, with an assumption that the company will continue to grow its earnings at the 10-year government bond rate, forever. The sum of the cash flow arising from the forecasts are then discounted to today's value using a discount rate, then divided by shares on issue, giving a value per share.

Silver Oak Fund Dividend discount model:

Since dividends are a form of cash flows which are directly returned to shareholders, it can be used to determine how much a share value is worth to our funds shareholder who ultimately will reap the benefit of these future dividend payments.

When relying on the Gordon Growth model to discount a company's dividend payments over time, our assumption will be that dividends will continue to grow at a certain rate forever. Using the expected dividend per share, we find the value of a stock by:

$$\text{Value} = \text{Expected dividends per share} / (\text{Discount Rate} - \text{Perpetual growth rate})$$

Silver Oak Fund Excess returns model:

We weigh a portion of our review on modeling excess returns and believe it is better suited to calculate the intrinsic value of financial companies than the traditional discounted cash flows model. The key assumption for us when using our proprietary software model is that the equity value is based in how much the company can earn, over and above its cost of equity, given the level of equity it has in the company at the moment. The returns above the cost of equity are the excess returns:

$$\text{Excess Return} = (\text{Return on Equity} - \text{Cost of Equity}) (\text{Book Value of Equity})$$

We use this value to calculate the terminal value of the company, which is how much we expect the company to continue to earn every year, forever. This is a common component of discounted cash flow models:

$$\text{Terminal Value} = \text{Excess Return} / (\text{Cost of Equity} - \text{Expected Growth Rate})$$

Putting this all together, we get the value of the company:

$$\text{Company Valuation} = \text{Book Value of Equity} + \text{Present Value of Terminal Value}$$

$$\text{Value Per Share} = (\text{Book Value of Equity} + \text{Present Value of Terminal Value}) / \text{Shares Outstanding}$$

Our Book Value of Equity model (BVE) will represent the equity capital that has been invested in the company plus retained earnings. For each year going forward, our BVE is estimated in order to reflect the growing nature of the company.

Silver Oak Funds, Adjusted Funds from Operations Discounted Cash Flows Model:

This model used in our proprietary software is the same as the 2-Stage Discounted Cash Flows Model, except for one key difference – instead of discounting the company's free cash flows, we use its Adjusted Funds from Operations (AFFO) instead. AFFO to better reflect the operational cash flows of REITs as opposed to the commonly used free cash flows.

By using Funds From Operations (FFO) we are calculating the company's earnings, with depreciation and amortization added back on, and the removal of capital gains from any property sales. AFFO has other adjustments to the FFO number to

substantiate more accuracy, by subtracting off capital expenditure and maintenance costs of the property and adding rental increases. These factors are very specific to property and REITs, making it a far superior measurement of value for these types of stocks in our fund's portfolio.

If AFFO estimates is unavailable, we fall back to using FFO. However, if both are unavailable, we use another REIT-specific measure called Net Asset Value (NAV). NAV is basically the total market value of the REIT's investments and other assets, less its short-term and long-term liabilities – essentially, it's equity value!

Discount Rate for All DCF modeling:

Discount rate = Cost of Equity = Risk Free Rate + (Levered Beta * Equity Risk Premium)

The risk-free rate is the 10-year government bond rate and the equity risk premium sourced from [Aswath Damodaran](#). Beta is a measure of volatility, or risk, in comparison to the market as a whole.

We feel confident using this bottom-up beta and calculate it for each company in our portfolio by using its industry unlevered beta (removes the effect of debt and varying capital structure) and leveraging it up using the company's own debt level to take into account its own capital structure. For companies outside Canada and The United States, we use the North American industry average unlevered beta. However, the bottom-up beta cannot be lower than 0.8 (this is the lowest practical beta for a stable firm, according to Damodaran) or greater than 2. If models are unstable, we typically take a pass on the company.

The Silver Oak Funds proprietary software algorithms will use levered beta in reviewing financial firms and will not re-adjusted to account for varying capital structure. Therefore, the average levered beta of comparable companies is used as the bottom-up beta for financial firms.

The Advantages and Disadvantages of The DCF Model in our approach:

The advantages of DCF are:

- DCF value is not affected by emotional or unquantifiable factors (which often affect stock market prices).
- DCF uses objective, measurable data and inputs to calculate a fair value.
- DCF allows our CIO, GP to determine whether the share price of a company is potentially over- or undervalued.

The disadvantages of DCF are:

- DCF calculation is sensitive to its key inputs - the growth rate and the discount rate. Relatively small changes in these inputs affect the final value significantly; and a patient approach to holding a position to learn if

managements growth rates are constant year over year in continuum realizing adverse effects can happen to companies.

- DCF is a highly quantitative technique which may not fully reflect changes in non-financial information such as pending legal liability concerns or management changes.
- DCF is not applicable to companies which does not generate positive free cash flow (for example high-growth technology companies which are not yet profitable) and still remain the most complex risk to an individual holding.
- Estimating free cash flow for financial institutions can be difficult.

What Does A Typical DCF Calculation Look Like for an equity in our fund?

*Below is an example calculation for AMZN from 14/02/2019.

10-year cash flow forecast

Year Levered FCF (USD, Millions) Source Present Value Discounted (@ 11.99%)

2019 27,209 Analyst x12 24,296

2020 37,268 Analyst x9 29,716

2021 46,213 Analyst x4 32,903

2022 58,129 Analyst x3 36,956

2023 70,986 Analyst x3 40,298

2024 81,470 Est @ 14.77% 41,299

2025 90,560 Est @ 11.16% 40,992

2026 98,374 Est @ 8.63% 39,762

2027 105,122 Est @ 6.86% 37,940

2028 111,030 Est @ 5.62% 35,783

Present value of next 10 years cash flows: \$359,949

Terminal Value:

Terminal Value = $FCF_{2028} \times (1 + g) \div (\text{Discount Rate} - g)$

Terminal Value = $\$111,030 \times (1 + 2.73\%) \div (11.99\% - 2.73\%)$

Terminal value based on the Perpetuity Method where growth (g) = 2.73%:
1,231,872

Present value of terminal value: \$397,010

Equity Value:

Equity Value (Total value) = Present value of next 10 years cash flows + terminal value (\$359,949 + \$397,010)

Value per share = Total value / Shares Outstanding (\$756,960.14 / 488.96)

∴ Value per share: \$1,548

Discount

Discount = (share price of \$1,670.43): -7.9%

Estimate of Discount Rate The discount rate, or required rate of return, is estimated by calculating the Cost of Equity. Discount rate = Cost of Equity = Risk Free Rate + (Levered Beta * Equity Risk Premium) Discount rate = 11.99% = 2.73% + (1.55 * 5.96%)

Estimate of Bottom-Up Beta the Levered Beta is the Unlevered Beta adjusted for financial leverage. It is limited to 0.8 (lowest range for a stable firm). Levered Beta = Unlevered beta (1 + (1- tax rate) (Debt/Equity)) 1.55 = 1.49 (1 + (1- 30%) (5.6%))
Levered Beta used in calculation = 1.55

Data points used in 2-Stage Free Cash Flow Model:

Levered Free Cash Flow estimates +1 to +5 years Annual
Levered Free Cash Flow actual last reported Annual
Revenue (LTM to -5 years) Annual
Debt to equity ratio Annual, last reported
Dividend per share Annual, last reported
Return on equity (ROE) Last reported
Data points used in Excess Returns Model

Data point Notes:

Estimates of Return on Equity Annual
Estimates of Book Value of Equity Annual
Book Value of Equity Last reported
Return on equity (ROE) Last reported
Data points used in Adjusted Funds from Operations 2-Stage Model

Data point Notes:

Estimates of Adjusted Funds from Operations Annual
Estimates of Funds from Operations Annual
Adjusted Funds from Operations Annual, last reported
Funds from Operations Last reported
Data points used in Dividend Discount Model

Data point Notes:

Estimates of Dividends per Share Annual
Dividends per Share Last reported

Where Can I Go to Learn More About DCF?

- <http://www.streetofwalls.com/finance-training-courses/investment-banking-technical-training/discounted-cash-flow-analysis/>

- <http://people.stern.nyu.edu/adamodar/pdfiles/ovhds/dam2ed/dcfveg.pdf>
- <http://pages.stern.nyu.edu/~adamodar/pdfiles/valn2ed/ch13.pdf>

Silver Oak Funds Relative Valuation:

Relative valuation is another method we use to calculate a company's fair value. The key difference between this method and discounted cash flows, is that we use the value of the company's industry peers as a benchmark for whether the company is over- or undervalued, rather than directly assessing the company's cash flows.

The Silver Oak calculates three types of relative valuation.

- Price-to-Earnings (PE) ratio: useful for profitable companies generating consistent net income over time.
- Price-to-Earnings Growth (PEG) ratio: suitable for profitable companies with projected growth in the bottom-line in the future.
- Price-to-Book (PB) ratio: appropriate for companies with high levels of physical assets, or loss-making.

PE Ratio:

We use the PE ratio like most others to give us an indication of the value of the share price as a function of the company's net income per share. As a market-based ratio, it provides us with a shorthand indication of the relative valuation of a company and allows a comparison of the valuation between companies, against an industry sector or the stock market as a whole adding us in the selection process.

The standard applies to our models like others in our industry the higher the PE ratio, the more "expensive" the stock is considered to be. For example, a company with a PE ratio of 25 times would be considered more "expensive" than a company with a PE ratio of 15 times, or the whole market average PE of 18.

The PE ratio is calculated as:

PE ratio = Current share price / Earnings per share

Data point Notes:

GAAP Earnings per Share (Annual, last reported) converted to the currency of the listing if different.

Share price End of day in the currency of the listing

PEG Ratio

How do we use it in our modeling? The PEG ratio will be used to give an indication of the value of the share price as a function of the growth in a company's net income per share. Similar to PE, as a market-based method, it allows us to compare a company's growth and earnings level to its industry sector or the wider stock market.

The higher the PEG ratio, the more "expensive" the stock is considered to be taking account the company's rate of earnings growth. For example, a company with a PEG ratio of 1.2 would be considered more "expensive" than a company with a PEG ratio of 1.0. Stocks are considered to have a "fair" PEG ratio of between 0.8 and 1.0.

The PEG ratio is not usually compared to a market average due to the diversity and differing nature of companies across the market. The PEG ratio depends highly on the PE ratio and growth rate used.

*All calculations are subject to API input changes and may quote different PEG ratios based on which time period the EPS growth is calculated.

We calculate the PEG ratio in our software as:

$$\text{PEG ratio} = \text{PE ratio} / \text{Annual net income growth rate (\%)}$$

Data point Notes:

PE Ratio shown above

Annual net income growth rate uses the same annual net income growth rate calculated in the Future Performance analysis.

PB Ratio:

The PB ratio is used to give an indication to us of the value of the share price as a function of the "book value" of a company. The book value is calculated as assets less intangible assets less liabilities per share - in the other words the net tangible assets held by the company.

The PB ratio allows us to compare the valuation between companies, against an industry sector or the stock market as a whole.

The higher the PB ratio, the more "expensive" the stock is considered based on the company's net tangible assets. For example, a company with a PB ratio of 4.0 would be considered more "expensive" than a company with a PB ratio of 3.0.

The PB ratio is most commonly compared to the relevant industry average as companies within an industry average will usually have common asset characteristics - for example airlines are capital-intensive businesses, usually with high asset holdings.

The PB ratio is calculated as:

$$\text{PB ratio} = \text{Stock Price} / \text{Book Value per Share}$$

Data point Notes:

Book value per share Annual, last reported

Share price End of day in the currency of the listing

The Silver Oak Tree Ring performs 6 checks regarding "value".

CHECK #1: Is the discounted cash flow value less than 20% of the share price?

The Silver Oak compares the fair value (i.e., the calculated DCF value) to the current share price.

If the share price is \Rightarrow 20% below the fair value, it is considered to be moderately undervalued and is scored one point.

CHECK #2: Is the discounted cash flow value less than 40% of the share price?

The fair value of a stock, calculated using DCF model, is compared to its current market share price.

If the share price is below the fair value by 40% or more, then it is considered substantially undervalued and is scored one point.

CHECK #3: Is the PE ratio less than the market average but still greater than 0?

The PE ratio is compared to the whole market PE ratio for the country of listing.

If the PE ratio is less than the market average PE ratio, then the stock is scored one point.

CHECK #4: Is the PE ratio less than the industry average but still greater than 0?

The PE ratio is compared to the industry average PE ratio for its industry classification.

If the PE ratio is less than the industry average PE ratio, then the stock is scored one point.

CHECK #5: Is the PEG ratio within a reasonable range (0 to 1)?

The PEG ratio is compared to the range of 0 to 1.

If the PEG ratio falls within this range, then the stock is scored one point.

CHECK #6: Is the PB ratio within a reasonable range (0 to 1)?

The PB ratio is compared to the relevant industry average.

If the PB ratio is greater than zero, but below the industry average, then the stock is scored one point.

Future Performance:

The Silver Oak examines professional analyst estimates of company future expectations for revenue, cash flow, net income and return on equity, which in turn are used to calculate growth for the respective line items. Historically, it has been demonstrated that analyst estimates, on average, are relatively accurate over the short term.

How does The Silver Oak Fund calculate growth rates?

Annual growth rates for each line item are calculated using weighted linear regression which plots a line of best fit through the time series data point. The year with more analyst coverage has higher weighting, which means we place more importance on estimates with twenty analysts' forecasts compared to ones with only a few. The first data point is taken from the most recent earnings release and given a weight of one.

The slope, or gradient, of this line is then divided by the average of the absolute values to compute the annual growth rate. Using absolute values allow us to calculate a growth rate even when a line item, such as earnings, is negative, or is expected to become positive.

Estimating Growth Rates in the Silver Oak Funds Portfolio:

There are three main ways we estimate growth rates:

1. Based on historical rates: A strong indicator of long-term trend is the past performance. Although, the past isn't always indicative of the future, it is a good starting point for growth estimation.
2. Based on analysts' estimates: Analysts generally have a good understanding of the companies they follow, and their estimates tend to be reflective of upcoming events impacting companies' cash flows.
3. Based on fundamentals: Ultimately, all earnings growth can be traced back to how much the firm is reinvesting (i.e., retention ratio) and what return it yields (i.e., ROE).

Growth Based on Historical Rates:

If a company has no analyst estimates, but it has a sufficient track record, we use its historical growth to project future figures. Past line items, such as earnings, are plotted as below with a line of best-fit running through each equally weighted point, with a minimum of 3 years. The slope, or gradient, of this line is divided by the average of the absolute values to compute the annual growth rate for earnings. Absolute values allow us to calculate a growth rate even when earnings are negative or are expected to become positive.

For example, Using Apple's past earnings annual growth rate is 6.3% year-on-year, which is calculated by:

Annual past earnings growth rate = Line of Best Fit Slope * / Average of Absolute Earnings (2012-2018)

$$= 2.74B / 43.43B$$

$$= 6.3\%$$

* Line of best fit slope is also equal to the average increase in earnings per year.

Growth Based on Analyst Estimates:

If a company has analyst coverage, we use the consensus of their estimates to calculate its future growth rate. Similar to the calculation above, we plot the line of best fit through each earnings estimate to determine the slope, and therefore the growth rate. However, instead of using equal weighting for each data point, the years with more analyst coverage have higher weighting, which means we place more importance on estimates with 20 analysts' forecasts compared to ones with only a few. The first data point is taken from the most recent earnings release and given a weight of one.

For example, Using Facebooks estimated future annual earnings growth rate is 19.3% year-on-year, which is calculated by:

Annual future earnings growth rate = Weighted Line of Best Fit Slope * / Average of Absolute Earnings (2018-2023)

$$= 5.99B / 31.05B$$

$$= 19.3\%$$

* Line of best fit slope is also equal to the average increase in earnings per year.

Year	Mar-18	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
Earnings (US\$, B)	17.85	22.32	26.93	33.1	39.62	46.52
Analysts	Actual	39	36	27	12	12

Note on negative earnings: when the first period of earnings is negative, the growth rate cannot be estimated. To overcome this, we use the absolute value of earnings to

calculate the growth rate. For annualized growth rates (i.e., on average, how much will Apple growth year-on-year over the next few years?) we will still show this rate, but the subject company will not be able to pass some of the growth checks if earnings are negative. For single point-in-time growth rates (i.e., how much will Apple grow in the upcoming year?), we will not compute the growth rate at all is earnings start off as negative.

Growth Based on Fundamentals:

For companies with no analyst forecast and insufficient historical track record, we use the fundamental Return on Equity (ROE) method to calculate future earnings growth rates. Damodaran states that all earnings growth can be traced back to how much the firm is reinvesting (i.e., retention ratio) and what returns it yield (i.e., ROE).

We linearly interpolated the subject company's current ROE towards its industry median ROE over a 5-year period, with the underlying assumption that companies' returns will, on average, converge to the industry level over time. High-returning companies should attract competition, which will reduce their returns. Low-returning companies should become more efficient in order to survive.

We apply this method to currently profitable companies as we do not want to impose the assumption that all loss-makers will become profitable over the next 5 years. We also focus on companies that reinvest (i.e., $0\% \leq \text{payout ratio} < 90\%$) and have positive shareholders' equity. We determine the growth rate exactly the same way as the method above. For example, Hema Care has a current ROE of 30.2% but its industry median ROE is 13.8%, so its ROE will incrementally fall towards the industry median. With a retention ratio of 100%, Hema Care retains all of its earnings which adds to its Equity position over time. Each year, earnings is calculated by rearranging the Return on Equity formula:

$$\text{Return on Equity} = \text{Earnings} / \text{Equity}$$

$$\therefore \text{Earnings} = \text{Return on Equity} * \text{Equity}$$

$$\text{Retained Earnings} = \text{Earnings} * \text{Retention Ratio}$$

$$\text{Equity} = \text{Equity in previous period} + \text{Retained Earnings}$$

Year	2017	2018	2019	2020	2021	2022
Return on Equity	30.2%	26.9%	23.6%	20.3%	17.1%	13.8%

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Year	2017	2018	2019	2020	2021	2022
Equity (start of year)	10.27	14.70	18.65	23.05	27.74	32.47
Earnings	4.43	3.95	4.40	4.69	4.73	4.48
Retained Earnings (Retention Ratio 100%)	4.43	3.95	4.40	4.69	4.73	4.48
Equity (end of year)	14.70	18.65	23.05	27.74	32.47	36.95

A line of best fit plotted through above earnings results in a slope of 0.0821, which divided by the average of earnings (US\$4.45m) leads to an earnings growth rate of 1.85%.

Data point	Notes
Current Return on Equity	Median ROE from the previous 3 years (Stable ROE)
Industry Median Return on Equity	Median ROE of the industry within the listing country
Payout Ratio	Median payout of previous 3 years (Stable Payout Ratio)
Total Equity	Last reported value

Data points used to perform these checks

Data point Notes

Annual Earnings Growth Rate Annual growth rate of GAAP net income excluding extraordinary items over the next 3-5 years based on analyst's estimates

Annual Revenue Growth Rate Annual growth rate of revenue over the next 3-5 years based on analyst's estimates

Low risk savings rate Readily available consumer savings account interest rate of the listing country

Inflation (CPI) CPI of the region of the listing country

Market Average Annual Net Income Growth Rate Weighted average annual net income growth rate of the listing country. See industry averages methodology for how this is calculated.

Market Average Annual Revenue Growth Rate Weighted average annual revenue growth rate of the listing country. See industry averages methodology for how this is calculated.

Return on Equity (ROE)

Return on Equity (or Return on Shareholders' Funds) measures profitability in terms of a company's shareholders funds, so provides an indication of the profitability and efficiency of the usage of the company's own funds to generate profits.

Return on Equity is calculated as:

Return on Equity = Net Income / Average Equity (Shareholders Funds)

Data point Notes

Current Return on Equity Last reported

Estimated Return on Equity in 3 years Based on consensus analyst estimates

The main advantage of ROE is that it takes into account movements in equity issued by the company which may distort other measures of profitability. The main disadvantage is that ROE is not affected by the level of debt (or additional debt) held by a company.

The higher the ROE, the higher the return generated by the company, and vice versa.

An ROE of 20% or greater is considered to be indicative of a company which is highly profitable / efficient.

The Silver Oak Tree checks regarding Future Performance:

CHECK #1: Is the annual growth rate in earnings expected to exceed the low-risk savings rate, plus a premium to keep pace with inflation?

This check measures whether the expected net income/ earnings growth of a stock at least matches the low-risk savings rate plus a premium to keep pace with inflation. If not, it may be more rational to invest in a low-risk savings product rather than the stock being reviewed, which carries a higher level of risk.

If the average annual growth rate of earnings is greater than the low-risk savings rate plus inflation, then the stock is scored one point.

If the company is expected to become profitable in the next 5 years, then the stock is also scored one point.

CHECK #2: Is the annual growth rate in earnings expected to exceed the market average in the country of listing?

This check measures whether the company is expected to grow net income/ earnings by more than the average stock in market in which it is listed.

If the average annual growth rate of net income is greater than the weighted average earnings growth for stocks listed in the same country, then the stock is scored one point.

CHECK #3: Is the annual growth rate in revenue expected to exceed the market average in the country of listing?

This check measures whether the company is expected to grow revenue by more than the average stock in market in which it is listed.

If the average annual growth rate of revenue is greater than the weighted average revenue growth for stocks listed in the same country, then the stock is scored one point.

CHECK #4: Is the annual growth rate in earnings above 20%?

This check is used to identify high-growth companies by looking at the annual growth rate of its earnings. Earnings growth indicates whether the company is able to grow its profitability, which fundamentally impacts the valuation of the company. If the average annual growth rate of net income/ earnings is greater than 20%, then the stock is scored one point.

CHECK #5: Is the annual growth rate in revenue above 20%?

This check is used to identify high-growth companies by looking at the annual growth rate of its revenues. Revenue growth is a pure measure of growth, as the number is more difficult to manipulate. It usually sheds light on how the company's operations are doing and how they are growing, whether it is increasing prices, expanding market share or introducing new products.

If the average annual growth rate revenue is greater than 20%, then the stock is scored one point.

CHECK #6: Is the Return on Equity (ROE) in 3 years expected to be over 20%?

The Return on Equity (ROE) in 3 years' time is calculated based on the average analyst estimates of earnings.

If the ROE in 3 years' time is estimated to be > 20% the stock is scored one point.

Past Performance

The Past Performance section of the Silver Oak provides an analysis of a company's historical performance over the past 5 financial years.

The Silver Oak Tree checks regarding Past Performance

Historical Earnings per Share (EPS) growth

Earnings per Share (EPS) measures company earnings expressed on a per share basis.

EPS is calculated as:

$$\text{EPS} = \text{Net Profit} / \text{Average number of shares on issue during the year}$$

The EPS figure is widely used to measure the absolute profit that a company earns on a per share basis. As it uses a common base, EPS can be used to compare different companies and industries. For that reason, it is used in the calculation of the Price to Earnings (PE) Ratio, which gives an indication of the relative price of different companies' stock prices.

An important advantage of EPS is that distortions which may arise from changes in the number of company shares issued (e.g., arising from an equity capital raising) are accounted for. An important disadvantage of EPS is that it does not consider the shareholder's funds employed or the level of debt held by a company.

Data points used in the Earnings per Share checks:

Data point Notes:

Historical GAAP Earnings per Share (LTM to -5 years) Annual, last reported quarterly results

How is the 5-year annual average calculated?

To calculate the 5-year annual average growth a linear regression trend line is fitted to the historical quarterly LTM EPS data and the gradient (M coefficient) divided by the average earnings over the same period. This not only produces the best overall growth trend but also handles some negative earnings.

There are three main ways of estimating growth rates:

1. Based on historical rates: A strong indicator of long-term trend is the past performance. Although, the past isn't always indicative of the future, it is a good starting point for growth estimation.
2. Based on analysts' estimates: Analysts generally have a good understanding of the companies they follow, and their estimates tend to be reflective of upcoming events impacting companies' cash flows.
3. Based on fundamentals: Ultimately, all earnings growth can be traced back to how much the firm is reinvesting (i.e., retention ratio) and what return it yields (i.e., ROE).

Growth Based on Historical Rates

If a company has no analyst estimates, but it has a sufficient track record, we use its historical growth to project future figures. Past line items, such as earnings, are

plotted as below with a line of best-fit running through each equally weighted point, with a minimum of 3 years. The slope, or gradient, of this line is divided by the average of the absolute values to compute the annual growth rate for earnings. Absolute values allow us to calculate a growth rate even when earnings are negative or are expected to become positive.

For example, Apple's past earnings annual growth rate is 6.3% year-on-year, which is calculated by:

$$\begin{aligned}\text{Annual past earnings growth rate} &= \text{Line of Best Fit Slope} * / \text{Average of Absolute Earnings (2012-2018)} \\ &= 2.74\text{B} / 43.43\text{B} \\ &= 6.3\%\end{aligned}$$

* Line of best fit slope is also equal to the average increase in earnings per year.

Growth Based on Analyst Estimates

If a company has analyst coverage, we use the consensus of their estimates to calculate its future growth rate. Similar to the calculation above, we plot the line of best fit through each earnings estimate to determine the slope, and therefore the growth rate. However, instead of using equal weighting for each data point, the years with more analyst coverage have higher weighting, which means we place more importance on estimates with 20 analysts' forecasts compared to ones with only a few. The first data point is taken from the most recent earnings release and given a weight of one.

For example, Facebooks estimated future annual earnings growth rate is 19.3% year-on-year, which is calculated by:

$$\begin{aligned}\text{Annual future earnings growth rate} &= \text{Weighted Line of Best Fit Slope} * / \text{Average of Absolute Earnings (2018-2023)} \\ &= 5.99\text{B} / 31.05\text{B} \\ &= 19.3\%\end{aligned}$$

* Line of best fit slope is also equal to the average increase in earnings per year.

Year	Mar-18	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
Earnings (US\$, B)	17.85	22.32	26.93	33.1	39.62	46.52
Analysts	Actual	39	36	27	12	12

Note on negative earnings: when the first period of earnings is negative, the growth rate cannot be estimated. To overcome this, we use the absolute value of earnings to calculate the growth rate. For annualized growth rates (i.e., on average, how much will Apple growth year-on-year over the next few years?) we will still show this rate, but the subject company will not be able to pass some of the growth checks if earnings are negative. For single point-in-time growth rates (i.e., how much will Apple grow in the upcoming year?), we will not compute the growth rate at all if earnings start off as negative.

Growth Based on Fundamentals

For companies with no analyst forecast and insufficient historical track record, we use the fundamental Return on Equity (ROE) method to calculate future earnings growth rates. Damodaran states that all earnings growth can be traced back to how much the firm is reinvesting (i.e., retention ratio) and what returns it yield (i.e., ROE).



Year	2017	2018	2019	2020	2021	2022
Return on Equity	30.2%	26.9%	23.6%	20.3%	17.1%	13.8%
Equity (start of year)	10.27	14.70	18.65	23.05	27.74	32.47

Year	2017	2018	2019	2020	2021	2022
Earnings	4.43	3.95	4.40	4.69	4.73	4.48
Retained Earnings (Retention Ratio 100%)	4.43	3.95	4.40	4.69	4.73	4.48
Equity (end of year)	14.70	18.65	23.05	27.74	32.47	36.95

We linearly interpolated the subject company's current ROE towards its industry median ROE over a 5-year period, with the underlying assumption that companies' returns will, on average, converge to the industry level over time. High-returning companies should attract competition, which will reduce their returns. Low-returning companies should become more efficient in order to survive.

We apply this method to currently profitable companies as we do not want to impose the assumption that all loss-makers will become profitable over the next 5 years. We also focus on companies that reinvest (i.e., $0\% \leq \text{payout ratio} < 90\%$) and have positive shareholders' equity. We determine the growth rate exactly the same way as the method above. For example, Hema Care has a current ROE of 30.2% but its industry median ROE is 13.8%, so its ROE will incrementally fall towards the industry median. With a retention ratio of 100%, Hema Care retains all of its earnings which adds to its Equity position over time. Each year, earnings is calculated by rearranging the Return on Equity formula:

$$\begin{aligned} \text{Return on Equity} &= \text{Earnings} / \text{Equity} \\ \therefore \text{Earnings} &= \text{Return on Equity} * \text{Equity} \end{aligned}$$

$$\text{Retained Earnings} = \text{Earnings} * \text{Retention Ratio}$$

$$\text{Equity} = \text{Equity in previous period} + \text{Retained Earnings}$$

A line of best fit plotted through above earnings results in a slope of 0.0821, which divided by the average of earnings (US\$4.45m) leads to an earnings growth rate of 1.85%.

Data point	Notes
Current Return on Equity	Median ROE from the previous 3 years (Stable ROE)
Industry Median Return on Equity	Median ROE of the industry within the listing country
Payout Ratio	Median payout of previous 3 years (Stable Payout Ratio)
Total Equity	Last reported value

How is growth from negative earnings handled?

Calculating a growth rate when the earnings in the starting period are negative is difficult and sometimes meaningless, for this reason no 'growth' ratio is used rather SWS informs the user this is the case and awards scores accordingly.

CHECK #1: Is Has Earnings Per Share (EPS) growth exceeded that of the company's industry average over the past year?

If the EPS growth of the company is > the EPS growth of its relevant industry average the stock is scored one point.

This check measures the performance of the company against its peer group average.

CHECK #2: Is Have Earnings Per Share (EPS) increased in past 5 years?

If the EPS for the current year is > the EPS from 5 years ago the stock is scored one point.

CHECK #3: Is the current EPS growth higher than the average annual growth over the past 5 years?

If current year growth in EPS is > the average annual growth in EPS over the past 5 years, the stock is scored one point.

Return on Equity (ROE)

See earlier section for full detail on Return on Equity.

Data point Notes

Current Return on Equity Last reported

CHECK #4: Is the Return on Equity (ROE) higher than 20%?

If the ROE for the company for the current year is > 20% the stock is scored one point.

Return on Capital Employed (ROCE)

Return on Capital Employed (ROCE) measures the profitability of a company in terms of the total capital employed by the company, both equity (or shareholders' funds) and long-term liabilities (which are often primarily made up of debt).

ROCE is calculated as:

Return on Capital Employed (ROCE) = $EBIT / (Total\ Assets - Current\ Liabilities)$

ROCE measures the efficiency of the usage of the company's total available capital and is often used in conjunction with ROE to provide a more comprehensive measure of profitability. In particular ROCE takes into account debt (and increased debt) utilized by a company to generate returns.

The higher the ROCE, the higher the profitability of the company, and vice versa.

Data point Notes:

Earnings Before Interest and Taxes (EBIT) Annual

Total Assets Annual

Current Liabilities Annual

CHECK #5: Has the Return on Capital Employed (ROCE) increased from 3 years ago?

If the current year ROCE is > the ROCE from 3 years ago the stock is scored one point.

Return on Assets (ROA)

Return on Assets (ROA) calculates the profitability of a company in terms of the total Assets held by the company. It is a broad measure of the efficiency of asset usage by the company and is often used to compare the returns of companies in capital intensive industries such as manufacturing or raw materials production.

ROA is calculated as.

Return on Assets (ROA) = $Net\ Income / Total\ Assets$

Data point Notes:

Current Return on Assets Last reported

CHECK #6: Is the Return on Assets (ROA) above industry average?

If the current year ROA is > the relevant industry averages the stock is scored one point.

Silver Oak Funds Overall Health Score:

The Health section of the Silver Oak provides an analysis of a company's financial position, primarily in terms of the company's Balance Sheet, and in particular the amount of debt held by the company.

Point to note regarding Health metrics

Financial Institutions (Banks, Financial Service companies, REIT's and Insurance firms) by their nature borrow the majority of their funding (or liabilities), and as a result conventional measures of debt levels are not generally applicable. For that reason, the Silver Oak uses a separate series of Health checks specifically applicable to Financial Institutions.

Non-financial institutions analysis

The analysis performed for non-financial institutions uses the following data points as input:

Data point Notes:

Short term Assets Last reported

Long term Assets Last reported

Short term liabilities Last reported

Long term liabilities Last reported

Total debt (LTM to -5 years) Last reported

Total shareholders' equity (LTM to -5 years) Last reported

Operating cash flow Annual, last reported

Net interest expense Annual, last reported

Net income Annual, last reported

Full balance sheet data is visualized in the infographic.

Balance sheet checks

CHECK #1: Are short term assets greater than short term liabilities?

This check measures whether, on a short-term basis (< 12 months), the company has a net positive financial position. In the event of financial stress, this check indicates whether the company could liquidate short term assets to meet its short-term liabilities.

If the company's short-term assets are > short term liabilities the stock is scored one point.

CHECK #2: Are short term assets greater than long term liabilities?

This check measures whether the company holds short term assets which are greater than its long term (>12 months) liabilities. In the event of financial stress, this check indicates whether the company could realize short term assets to meet its long-term liabilities.

If the company's short-term assets are > long term liabilities the stock is scored one point.

Debt to Equity Ratio

The Debt-to-Equity ratio measures a company's total debt relative to its total book value of shareholders' equity (i.e., net worth or shareholders' funds). This ratio illustrates the level of leverage a company has. If the ratio is high, this indicates that the company is holding a high level of debt compared to its net worth, and in the event of financial stress, may experience difficulty meeting debt or interest obligations.

A ratio of 40% or less is considered acceptable.

The Debt-to-Equity ratio is calculated as.

Debt to Equity ratio = Total Debt / Total Book Value of Shareholders Equity

CHECK #3: Has the debt-to-equity ratio increased in the past 5 years?

The Debt-to-Equity ratio for the current year is compared to the debt-to-equity ratio 5 years ago. If the ratio has not increased, or has fallen, the stock is scored one point.

CHECK #4: Is the debt-to-equity ratio over 40%?

If Debt to Equity ratio is < 40% the stock is scored one point.

CHECK #5: Is debt covered by operating cash flows?

This check indicates whether, in the event of financial stress, the company is able to meet its debt obligations using purely its cash flow for the year from its operational activities.

Debt held the company is compared to Operating Cash Flows. If Operating Cash Flows are > 20% of Total Debt the stock is scored one point.

CHECK #6: Are earnings greater than 5x the interest on debt (if company pays interest at all)?

This check indicates whether the company's interest obligations are met through earnings before interest and tax (EBIT). A ratio of 5 times earnings indicates a strong level of coverage.

If EBIT is > 5 x interest on debt the stock is scored one point.

Silver Oak Funds Cash Runway Analysis:

This analysis is used in the case of companies that are currently loss-making and loss-making on average. An important factor to consider when analyzing a loss-making company is the sustainability of its operations, at its current level of cash, given that its revenues may not cover its costs.

The last two checks from the balance sheet checks above (CHECK #5 and CHECK #6) is replaced with more stringent and relevant criteria for loss-making companies. The following data points are used in addition to the previous for this analysis:

Data point Notes:

Levered Free Cash Flow (1-year) Last reported/ LTM

Levered Free Cash Flow annual growth rate Linear regression over the past 3 years

Cash & short-term investments Last reported

CHECK #5: Does cash and short-term investments cover stable cash burn (negative free cash flow) for more than 1 year?

This check indicates whether the company's cash and other liquid asset levels are high enough to cover its negative free cash flow over the next year, should the rate remain stable. If coverage is sufficient, the stock is scored one point.

CHECK #6: Does cash and short-term investments cover growing cash burn (negative free cash flow) for more than 1 year?

This check indicates whether the company's cash and other liquid asset levels are high enough to cover its negative free cash flow over the next year, should rate grow or shrink at the same rate annually as it had in the past three years. If coverage is sufficient, the stock is scored one point.

Silver Oak Funds Financial Institutions:

This analysis is used in the case of Banks, Financial Service companies, REIT's and Insurance firms.

The following data points are used in addition to the previous for this analysis:

Data point Notes:

Total deposits Last reported

Total loans Last reported

Total non-performing loans Last reported

Allowance for non-performing loans Last reported

General/ Specific allowance Last reported (Represents reserves created for problem loans)

Net charge offs Last reported

CHECK #1: Is Leverage (Assets to Equity) > 20x?

Leverage (or gearing) refers to the amount of assets held in a business when compared to the company's own resources (shareholders' funds or equity).

While Financial Institutions will always have an elevated level of leverage, if the level becomes too high the institution may come under stress in the event of adverse circumstances. A leverage ratio of 20 times or less is considered acceptable.

Total Assets are compared to Shareholders Equity. If Total Assets are < 20 times Shareholders Equity the stock is scored one point.

CHECK #2: Coverage of bad loans (Bad Loan Coverage) > 100%?

Bad loans are loans made by Financial Institutions which are considered to be unrecoverable. Bad loan coverage refers to provisions set aside against potential bad loans. A provision of this nature is offset against profits.

Bad loan provisions held are compared to the level of Bad loans actually written off. If the Bad Loan provisions are > actual Bad Debts written off the stock is scored one point.

CHECK #3: Proportion of lower risk deposits compared to total funding (Deposits to Liabilities) < 50%?

Financial Institutions borrow money (to lend) in many different forms. Deposits from customers generally bear the lowest risk as they are less volatile than other forms of borrowing in terms of both the amount available (which does not usually change quickly) and interest rate paid (the rates paid are set by the Financial Institution itself).

Broadly the higher the level of Deposits held the less risky the Financial Institution is considered to be.

Total Deposits held are compared to Total Liabilities. If Total Deposits are > 50% of Total Liabilities, the stock is scored one point.

CHECK #4: Proportion of higher risk assets compared to total assets (Loans to Assets > 110%)?

The Loans to Assets ratio measures the net loans outstanding as a percentage of total assets. The higher this ratio indicates a bank has a high level of loans and therefore its liquidity is low. The higher the ratio, the riskier a bank may be to higher defaults.

Financial firms such as Banks with high Loans to Assets ratios rely on interest income from loans and other securities for a high portion of their total revenue. Those with lower ratios have more diversified sources of revenue, for example from investment banking and asset management.

If Net Loans are < 110% of Total Assets the stock is scored one point.

CHECK #5: Total loans compared to deposit funding (Loans to Deposits > 125%)?

The Loans to Deposits (LTD) ratio measures the liquidity of a Financial Institution. Liquidity refers to the funds available to a Financial Institution to repay liabilities, in particular Deposits (recognizing that Deposits must generally be repaid on demand, or at short notice). Loan assets on the other hand generally have a fixed term, and often cannot be readily realized.

If the LTD ratio is too high, the Financial Institution may experience difficulty repaying Deposits if unusual circumstances arise. The observed LTD range is 50% (very liquid) to 175% (illiquid).

Total Loans held are compared to Deposits held. If Total Loans are < 125% of Deposits held the stock is scored one point.

CHECK #6: Level of bad loans (Net Charge Off Ratio > 3%)?

The level of Bad Loans incurred by a Financial Institution is a key indicator of the quality of loans made. A high level of Bad Loans may indicate that the Financial Institution is engaged in overly risky lending practices.

If Bad Loans written off is < 3% of Total Loans held the stock is scored one point.

Income (Dividends)

The Income section of the Silver Oak provides an analysis of a company's dividend (income) payments to its shareholders.

The app analyses the dividend payment in terms of its dividend yield against other dividend payers. In addition, the app analyses the volatility and sustainability of the dividend.

Note that if a company is in the bottom 10th percentile in terms of dividend yield within its market, volatility and sustainability checks are not undertaken.

Dividend Yield %

The Dividend Yield % is the annualized dividend paid expressed as a function of the company's share price:

$$\text{Dividend Yield} = \text{Annualized Dividend paid (\$)} / \text{Share Price}$$

Note that the Dividend Yield % will change as the share price changes.

Data points used to in the Income analysis:

Data point Notes:

Dividend yield (End of day to -10 years) Annual

Dividend per share (LTM to -10 years) Annual, last reported

Payout ratio Last reported

Estimate of Dividend per Share (+3 years) Annual, from analyst consensus estimates

Estimate of GAAP Earnings per Share (+3 years) Annual, from analyst consensus estimates

Note: For an [American Depositary Receipt \(ADR\)](#) or equivalent the dividend yield is derived from the primary listing of the stock, not the ADR.

CHECK #1: Is the current dividend yield higher than the 25th percentile of the market?

If the Dividend Yield is > the 25th percentile of the company's market the stock is scored one point.

CHECK #2: Is the current dividend yield higher than the 75th percentile of the market?

If the Dividend Yield is > the 75th percentile of the company's market the stock is scored one point.

CHECK #3: Has the dividend been volatile in the past 10 years?

To check for volatility SWS looks at the historical dividend per share payments, if at any point in the last 10 years a drop of greater than 10% has occurred the dividend is considered volatile. Note this check is based on the per share dividend amounts paid, not the yield.

One point is scored if there have been no annual drops in DPS of more than 10% in the past 10 years. This check also fails by default if the stock has been paying a dividend for less than 10 years.

CHECK #4: Has the dividend increased in the past 10 years?

The current annualized dividend amount paid is compared to the annualized dividend amount paid 10 years ago. This check also fails by default if the stock has been paying a dividend for less than 10 years.

If the current annualized dividend amount is > the annual dividend amount 10 years ago the stock is scored one point.

CHECK #5: Are dividends paid well covered by Net Profit (or Net Income)?

The payout ratio (as defined below) is used to check if the dividend is affordable by the company.

$$\text{Payout ratio} = \text{Dividends per share} / \text{Earnings per share}$$

If the payout ratio is greater than 0% and less than 90% the stock is scored one point, in the case of REITs this threshold is 100%.

CHECK #6: Are future expected dividends paid well covered by Net Profit (or Net Income)?

To check for future dividend coverage the payout ratio in 3 years' time is estimated. This is done using consensus analyst estimates for Dividend per share payments and Earnings per share.

If the estimated payout ratio in 3 years is greater than 0% and less than 90% the stock is scored one point, in the case of REITs this threshold is 100%.

Silver Oak Funds Management Review Process:

Metrics related to company management are not incorporated in the Silver Oak Tree, however, are included as additional information to assist with investment decision making.

The Management checks are designed to highlight whether CEO compensation is reasonable and consistent with company performance. If CEO compensation is out

of step with company performance or the marketplace, this may indicate that management's interests are not well aligned with the company or shareholders. In addition, we provide an analysis of management tenure as an indicator of stability and alignment with the company and shareholders. If management or Board tenure is relatively short, this may indicate instability or uncertainty within the company.

We finally analyze recent (up to 12 months) "insider" (i.e., The Board and Management) share purchases and sales in the company. If company insiders are net sellers of shares this may indicate a lack of confidence in the future prospects for the company.

The following data is used in The Silver Oak Funds management analysis:

Data point Notes:

Historical CEO total compensation (LTM to -5 years) Annual, last reported

GAAP Earnings per Share (LTM to -5 years) Annual, last reported

Management team average tenure Calculated by averaging the tenure of the top 10 ranked 'Professionals'

Board of directors' average tenure Calculated by averaging the tenure of the top 10 ranked Board of directors

Number of shares sold by insiders Last reported, includes options exercised

Number of shares bought by insiders Last reported, includes options exercised

CHECK #1: How does the CEO compensation compare to a set of similar sized companies?

We compare each company with a group of companies of similar size, and then test how the CEO is paid compared to the median of that group. If the CEO is paid 30% or more less than the median, then we consider pay to be below average. If the CEO is paid within 30% of the median pay, then we consider the pay to be around average. If the CEO is paid 30% or more above the median pay, then we consider the pay to be above average.

You can see the cohort that a certain company compensation has been compared to, in the table below.

Comparison Band Market Cap of Company

\$0 - \$200 million Less than \$150 million

\$100m - \$400m \$150m - \$300m

\$200m - \$800m \$300m - \$600m

\$400m - \$1.6 billion \$600b - \$1.2 billion

\$1b - \$3.2b \$1.2b - \$2.4b

\$2b - \$6.4b \$2.4b - \$4.8b

\$4b - \$12.8b \$4.8b - \$9.6b
\$8b and above \$9.6b and above

CHECK #2: Has the CEO's compensation increased more than 20% whilst the EPS is down more than 20%?

The increase in CEO compensation over the most recent financial period is compared to the movement in company earnings per share (EPS) over the most recent financial period.

If CEO compensation has increased more than 20%, and the company's EPS has fallen more than 20%, this check is flagged.

CHECK #3: Is the average tenure of the management team less than 2 years?

If the average tenure of the management team on average is < 2 years this check is flagged.

CHECK #4: Is the average tenure of the Board of Directors team less than 3 years?

If the average tenure of the Board of Directors is < 3 years this check is flagged.

CHECK #5: Are company "insiders" net buyers or sellers of the company's shares?

If company "insider" share sales are greater than the number of shares purchases this check is flagged. Insider trading activity is defined as a transaction from an internal stakeholder with an interest in the companies' stock performance. Insiders can be individuals or corporates.

What transactions are included in this check?

The following transactions are included in the Insider Trading check:

- Open Market Acquisition (Buy)
- Open Market Disposition (Sell)
- Off Market Acquisition (Buy)
- Off Market Disposition (Sell)

Equivalent to transaction type P/S on an SEC [Form 4](#) filing.

Silver Oak Fund comparing Industry Averages in modeling.

Industry averages are calculated by region on a weekly basis. The calculation for each data point is weighted by using market cap data.

Silver Oak Funds Currency Considerations

Any currency conversions are undertaken using end of day conversion rates.

We update our Proprietary software every 6 hours; in every country and region we are modeling. Depending on the metric we use different calculation types, which are detailed below. In some cases, we might use multiple calculations on the same metric depending on where it is being used.

In the case of industry groups with less than five companies, we use the regional average for that industry instead. If there are less than five companies in that region then we use the global average. This method allows us to provide more meaningful averages ensuring the data is rich and precise, as well as providing alternatives for small industries of companies with lack of analyst coverage or general macroeconomic variables available for analysis.

We also calculate the averages across the entire market in each country we cover, this allows us to find the median PE Ratio for example.

We include all primary listed companies in each market/ region in our averages, this means for companies with listings in many countries (e.g., Royal Dutch Shell) the country of their primary listing (usually their headquarters) is used. This is to give a better comparison to the rest of the market for investors in each country. Funds and depositary receipts are excluded.

For PE Ratio we only look at profitable companies and we use the median instead of a weighted average. We use median instead of a weighted average as we believe this method provides a better comparable threshold.

Calculation Methods

Depending on the metric being averaged we use one of the following calculation methods. Some metrics we also define a set of thresholds that restrict meaningless values and anomalies.

- Count (count of the eligible companies)
- Count Positive (count of the eligible companies where the relevant metric is positive)
- Average Weighted Market Cap (where Market Cap is in converted to USD to handle cross listing)
- Average
- Median
- Median Profitable (Median only including profitable companies)
- Median Profitable Analyst Coverage (Median only including profitable companies and those with analyst coverage)
- Xth Percentile

Market Cap Groupings

We use the following thresholds to define our market cap groups based on the distribution of companies globally. Remember all market caps are converted to USD for consistency:

- Small cap: \$0 - \$500M (total count from S&P Global Market intelligence 21,000 companies)
- Mid cap: \$500M - \$5B (total count from S&P Global Market intelligence 5000 companies)
- Large cap: >\$5B (total count from S&P Global Market intelligence 2000 companies)

For consistency these are used regardless of country, meaning in some countries many of the companies would be considered small cap on a global scale.

Metrics List

Metric	Calculation Type	Limits	Market Cap Group
Eps Growth Annual	Average Weighted Market Cap		
Net Income Growth Annual	Average Weighted Market Cap		
Cash Ops Growth Annual	Average Weighted Market Cap		
Revenue Growth Annual	Average Weighted Market Cap		
Total Base Count	Count		
Profitable Count	Count Positive		
Analyst Coverage Count	Count Positive		
Market Cap	Average		

Metric	Calculation Type	Limits	Market Cap Group
Dividend Count	Count Positive		
Beta Count	Count	Min:0.2 Max:4	
Value Score	Average Weighted Market Cap		
Future Score	Average Weighted Market Cap		
Past Score	Average Weighted Market Cap		
Health Score	Average Weighted Market Cap		
Dividend Score	Average Weighted Market Cap		
Total Score	Average Weighted Market Cap		
Share Price	Average Weighted Market Cap		
Analyst Count	Average Weighted Market Cap		
Debt Equity	Average Weighted Market Cap		
Insider Buying	Average Weighted Market Cap		

Metric	Calculation Type	Limits	Market Cap Group
Levered Beta	Average Weighted Market Cap	Min:0.2 Max:4	
Eps	Average Weighted Market Cap	Min:0	
Intrinsic Discount	Average Weighted Market Cap		
Unlevered Beta	Average Weighted Market Cap	Min:0.2 Max:4	
Dividend Yield	Average Weighted Market Cap	Min:0 Max:12	
Future Dividend Yield	Average Weighted Market Cap	Min:0 Max:12	
Levered Beta Median	Median	Min:0.2 Max:4	
Pe	Median Profitable		
Peg	Median Profitable		
Pb	Median		
Roe	Median Profitable		
Roa	Median Profitable		
Growth Past 1Y	Median Profitable		
Growth Past 5Y	Median Profitable		

Metric	Calculation Type	Limits	Market Cap Group
Growth Future 1Y	Median Profitable Analyst Coverage		
Growth Future 3Y	Median Profitable Analyst Coverage		
Price to Sales	Median		
Ev To Ebitda	Median	Min:0	
Ev To Sales	Median		
Return 7D	Average Weighted Market Cap		
Return 30D	Average Weighted Market Cap		
Return 90D	Average Weighted Market Cap		
Ebitda 1Y	Median	Min:0	
Ebitda Growth 1Y	Average Weighted Market Cap		
Forward Pe 1Y	Median Profitable Analyst Coverage		
Forward Price to Sales 1Y	Median		
Forward Ev To Ebitda 1Y	Median Profitable Analyst Coverage		

Metric	Calculation Type	Limits	Market Cap Group
Forward Ev To Sales 1Y	Median		
Gross Profit Margin 1Y	Median Profitable		
Net Income Margin 1Y	Median Profitable		
Ebit Margin	Median	Min:0	
Ebitda Margin	Median	Min:0	
Gross Profit Margin	Median Profitable		
Capex	Median		
Capex Growth 1Y	Average Weighted Market Cap		
Capex Growth Annual	Average Weighted Market Cap		
Net Debt	Median		
Management Rate Return	Average Weighted Market Cap		
Dividend Yield Growth Annual	Average Weighted Market Cap		
Dividend Yield Future	Average Weighted Market Cap		
CEO Compensation Total	Median		

Metric	Calculation Type	Limits	Market Cap Group
CEO Compensation Salary	Median		
CEO Salary Growth 1Y	Median		
Management Tenure	Median		
Board Tenure	Median		
Management Age	Median		
Board Age	Median		
Total Base Count Small	Count		Small
Total Base Count Medium	Count		Medium
Total Base Count Large	Count		Large
CEO Compensation Total Small	Median		Small
CEO Compensation Total Medium	Median		Medium
CEO Compensation Total Large	Median		Large
CEO Compensation Salary Small	Median		Small
CEO Compensation Salary Medium	Median		Medium

Metric	Calculation Type	Limits	Market Cap Group
CEO Compensation Salary Large	Median		Large
CEO Salary Growth 1Y Small	Median		Small
CEO Salary Growth 1Y Medium	Median		Medium
CEO Salary Growth 1Y Large	Median		Large
Return 30D Small	Median		Small
Return 30D Medium	Median		Medium
Return 30D Large	Median		Large
Capex Small	Median		Small
Capex Medium	Median		Medium
Capex Large	Median		Large
Net Income	Median		
Net Income Small	Median		Small
Net Income Medium	Median		Medium
Net Income Large	Median		Large
Revenue	Median		

Metric	Calculation Type	Limits	Market Cap Group
Revenue Small	Median		
Revenue Medium	Median		
Revenue Large	Median		





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