istitutomarangoni
enhancing talent since 1935

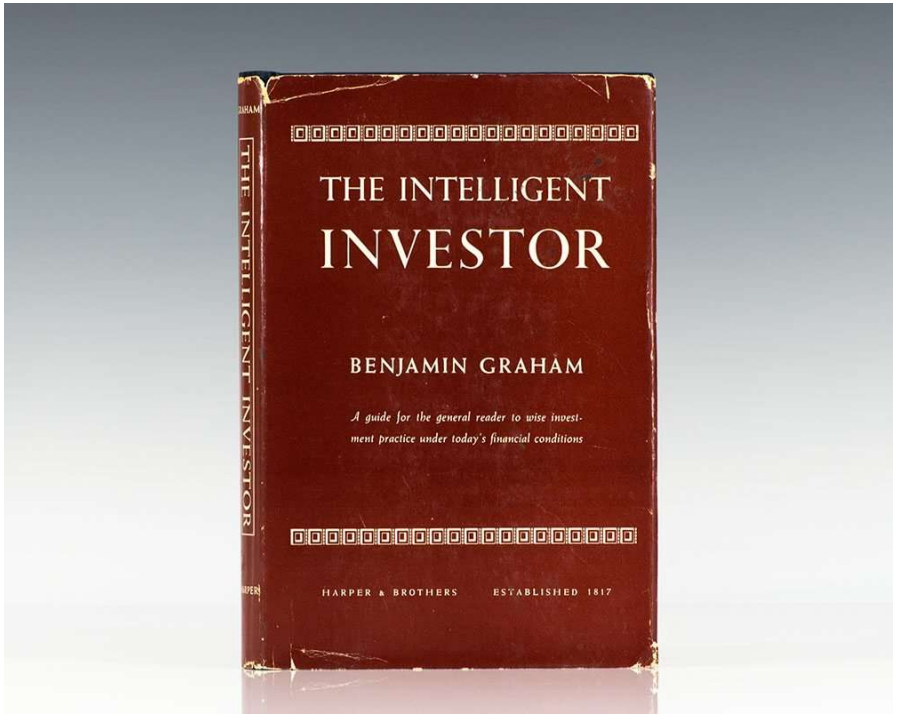
Finance & Wealth Management

Course n°2

Horizontal and vertical analysis
Understanding income statement in detail
Financial ratio analysis

History

- Benjamin Graham and David Dodd first published their influential book "Security Analysis" in 1934. A central premise of their book is that the market's pricing mechanism for financial securities such as stocks and bonds is based upon faulty and irrational analytical processes performed by many market participants. This results in the market price of a security only occasionally coinciding with the intrinsic value around which the price tends to fluctuate. Investor Warren Buffett is a well-known supporter of Graham and Dodd's philosophy.
- The Graham and Dodd approach is referred to as Fundamental analysis and includes: 1) Economic analysis; 2) Industry analysis; and 3) Company analysis. The latter is the primary realm of financial statement analysis. On the basis of these three analyses the intrinsic value of the security is determined.



History

- Published in 1949

Horizontal and vertical analysis

Horizontal Financial Statement Analysis

	Period 1 (Base)	Period 2	Change	% Change
Line item 1	4,800	7,500	2,700	56%
Line item 2	2,400	1,900	-500	-21%

Horizontal comparison to base

Each period line item is compared to the same line item in the base period

For example
1,900 – 2,400 = -500
-500 / 2,400 = -21%

Horizontal analysis compares financial information **over time**, typically from past quarters or years. Horizontal analysis is performed by comparing financial data from a past statement, such as the income statement. When comparing this past information one will want to look for variations such as higher or lower earnings.

Horizontal and vertical analysis

ABC Company Vertical Analysis

	Year 1	Year 2	Year 3
Sales	100%	100%	100%
Cost of Goods Sold	30%	29%	40%
Gross Profit	**70%**	**71%**	**60%**
Salaries	24%	23%	30%
Rent	6%	6%	5%
Marketing	5%	5%	10%
Utilities	1%	1%	1%
Other expenses	2%	2%	2%
Total Expenses	**38%**	**37%**	**48%**
Net Income	**32%**	**34%**	**12%**

Vertical analysis is a percentage analysis of financial statements. Each line item listed in the financial statement is listed as the percentage of another line item. For example, on an income statement each line item will be listed as a percentage of gross sales. This technique is also referred to as normalization or common-sizing.

Horizontal and vertical analysis

Example of L ‘Oréal : https://www.boursorama.com/bourse/actualites/bourse-l-oreal-grimpe-de-plus-de-6-grace-a-un-3e-trimestre-robuste-3e943a21e277c9f47c0c7c02c2e4d326?symbol=1rPOR

https://www.loreal-finance.com/fr/communique/chiffre-daffaires-au-30-septembre-2019

Financial ratio analysis

6 Basic Financial Ratios And What They Reveal, Glenn Wilkins

Practical work comparing L'Oréal and LVMH

Working Capital Ratio

Assessing the health of a company in which you want to invest involves understanding its liquidity—how easily that company can turn assets into cash to pay short-term obligations. The working capital ratio is calculated by **dividing current assets by current liabilities**.

So, if XYZ Corp. has current assets of $8 million, and current liabilities of $4 million, that's a 2:1 ratio—pretty sound. But if two similar companies each had 2:1 ratios, but one had more cash among its current assets, that firm would be better able to pay off its debts quicker than the other.

Quick Ratio

Also called the acid test, this ratio **subtracts inventories from current assets**, before dividing that figure into liabilities. The idea is to show how well current liabilities are covered by cash and by items with a ready cash value.

Inventory, on the other hand, takes time to sell and convert into liquid assets. If XYZ has $8 million in current assets minus $2 million in inventories over $4 million in current liabilities, that's a 1.5:1 ratio. Companies like to have at least a 1:1 ratio here, but firms with less than that may be okay because it means they turn their inventories over quickly.

Earnings per Share

When buying a stock, you participate in the future earnings (or risk of loss) of the company. Earnings per share (EPS) measures net income earned on each share of a company's common stock. The company's analysts divide its net income by the weighted average number of common shares outstanding during the year.

Price-Earnings Ratio

Called P/E for short, this ratio reflects investors' assessments of those future earnings.

You determine the share price of the company's stock and divide it by EPS (Earning Per Share) to obtain the P/E ratio.

If, for example, a company closed trading at $46.51 a share and EPS for the past 12 months averaged $4.90, then the P/E ratio would be 9.49. Investors would have to spend $9.49 for every generated dollar of annual earnings.

Even so, investors have been willing to pay more than 20 times the EPS for certain stocks if hunch that future growth in earnings will give them an adequate return on their investment.

Debt-Equity Ratio

What if your prospective investment target is borrowing too much? This can reduce the safety margins behind what it owes, jack up its fixed charges, reduce earnings available for dividends for folks like you and even cause a financial crisis.

The debt-to-equity is calculated by adding outstanding long and short-term debt, and dividing it by the book value of shareholders' equity. Let's say XYZ has about $3.1 million worth of loans and had shareholders' equity of $13.3 million. That works out to to a modest ratio of 0.23, which is acceptable under most circumstances. However, like all other ratios, the metric has to be analyzed in terms of industry norms and company specific requirements.

Return on Equity

Common shareholders want to know how profitable their capital is in the businesses they invest it in. Return on equity is calculated by taking the firm's net earnings (after taxes), subtracting preferred dividends, and dividing the result by common equity dollars in the company.

Let's say net earnings are $1.3 million and preferred dividends are $300,000. Take that and divide it by the $8 million in common equity. That gives a ROE of 12.5%. The higher the ROE, the better the company is at generating profits.