Group 6
I010 – Aman Chowhan
I012 – Sanskruti Dani
I024 – Uzair Khan
I027 – Saket Lakhotia
I033 – Sahil Pariani
I035 – Tanish Patwari

Research Paper - 1

A review on the calculation of return on investment, E. Chuke Nwude, International Journal of Advanced and Applied Sciences

This paper discusses the conceptual problems involved in calculating the return on investment (ROI). The data indicate that ROI may be calculated in a variety of methods. The net profit after interest and tax divided by shareholders' money, as well as the total of dividend yield (DY) and capital gains yield (CGY), are the two major metrics of real ROI from an equity viewpoint. The most common error and misunderstanding in these calculations is determining the right denominator in terms of which period numbers to use and whether gross or net fixed asset and current asset should be used. The division of the end-period value of the investment by the beginning-period value of the investment with a benchmark that the ratio must be larger than one is used to calculate ROI based on wealth creation ratio. The average historical ROI can be calculated using either an arithmetic or geometric mean.

The ROI can be determined from equity perspective or from company's perspective. The net profit after interest and tax divided by shareholders' money, and the sum of dividend yield (DY) and capital gains yield (CGY) are the two primary variations of measuring real ROI with respect to equity from an equity perspective (CGY). Earnings yield, dividend yield, and capital gains yield are some of the other metrics that are utilised for various purposes. Six usable models are sufficient from a firm standpoint. When calculating the Return of Capital Employed (ROCE), entire assets or solely permanent capital utilised to fund the assets are taken into account. Values which are considered and calculated are total assets employed ROI viz equals ROTA before and after deduction of depreciation. The return on assets (ROA) measures a company's earning capability. Interest and tax load have no bearing on it because it measures operating performance, ROA is ideal for comparing companies. EAIT/Total equity, commonly known as ROE, is the return on owners' equity. A useful indicator of the proportion of the firm's total net profit in the hands of the remaining owners is ROE, which is calculated as net profit divided by owners' net worth or shareholders' money. When investing in stocks, another version of ROE is the total of dividend yields and capital gains (or losses) divided by the initial value of the investment.

Research Paper - 2

"Expectations of Returns and Expected Returns" by Robin Greenwood (Harvard Business School) and Andrei Shleifer (Harvard University)

Brief Summary

It has been noticed that increasing amounts of data is now available about stock markets and expected returns over the past few years. Investor expectations are recorded and are compared to expected returns computed using data on consumptions and market valuations.

3 findings on expected returns:

1. The expectations of stock market returns are highly positively correlated with each other
2. Investor expectations are positively correlated with past returns
3. These measures of expectations are also highly correlated with investor inflows into mutual funds.

It is noticed that expectations of returns are usually higher than ERs. When investors say that they expect stock market returns to be high, model-based expected returns are low.

As we know, both expectations of returns and ERs predict future stock market returns, but the signs are opposite. When ERs are high, market returns are on average high; when expectations of returns are high, market returns are on average low

At a minimum, the evidence in the mentioned research paper rules out rational expectations models in which changes in **market valuations are driven by the required returns of a representative investor.** Even though the price of the stock may behave in a way that is observationally equivalent to such models, survey expectations are inconsistent with these models' predictions. Several behavioral alternatives to this approach have been proposed.

One approach emphasizes investors' misperceptions of future cash flows or cash flow growth. These models, however, do not naturally predict extrapolative expectations of returns because market prices adjust to whatever expectations about fundamentals investors hold. However, this model does not address the survey evidence discussed here because investor expectations of stock market return only change based on perceived changes in risk.

Another approach to fundamentals extrapolation has been to **assume two or more classes of investors with different beliefs.** If both sophisticates and extrapolators are risk averse, the price rises, but from the perspective of the extrapolators, expectations of future returns are high, consistent with the survey evidence. The problem with models in which investors extrapolate cash flows, however, is that investors' expectations are essentially uncorrelated with changes in fundamentals. Rather, **the surveys suggest that the expectations of the investors are driven by**

past returns. This suggests that models in which one class of investors extrapolates returns directly, and another class of investors accommodates extrapolators' demand, are potentially promising. **Because models of this type of feature two or more types of investors, they are also able to fit 20. There are heterogeneous-agent models with other behavioral biases.** Further development of models in which at least some investors extrapolate returns appears to be a promising area of future research.

Conclusion

- Return on investment (ROI) is a performance measure used to evaluate the efficiency or profitability of an investment or compare the efficiency of several different investments.
- ROI tries to directly measure the amount of return on a particular investment, relative to the investment's cost.
- ROI is expressed as a percentage and is calculated by dividing an investment's net profit (or loss) by its initial cost or outlay.
- ROI can be determined from equity perspective or from company's perspective.
- The net profit after interest and tax divided by shareholders' money, and the sum of dividend yield (DY) and capital gains yield (CGY) are the two primary variations of measuring real ROI with respect to equity from an equity perspective (CGY)
- When calculating the Return of Capital Employed (ROCE), entire assets or solely permanent capital utilized to fund the assets are considered.
- Both measures are similar in theory, however, ROCE looks at how capital is employed within a firm and is useful when comparing companies within an industry, while ROI looks purely at the profit made on an investment.
- It is noticed that expectations of returns are usually higher than ERs. When investors say that they expect stock market returns to be high, model-based expected returns are low.
- Market valuations are not driven by the required returns of a representative investor.
- market prices adjust to whatever expectations about fundamentals investors hold.
- If both sophisticates and extrapolators are risk averse, the price rises, but from the perspective of the extrapolators, expectations of future returns are high, consistent with the survey evidence.
- Further development of models in which at least some investors extrapolate returns appears to be a promising area of future research.