# General Electric Financial Analysis

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**Abstract-** **General Electric** (**GE**) is an American multinational conglomerate corporation incorporated in New York and headquartered in Fairfield, Connecticut. GE was founded in Schenectady, New York (1892). In 1896, General Electric was one of the original 12 companies listed on the newly formed Dow Jones Industrial Average. After 118 years, it is the only one of the original companies still listed on the Dow index, although it has not been on the index continuously. The company operates through the following segments: Energy, Technology Infrastructure, Capital Finance as well as Consumer and Industrial. In 2011, GE ranked among the Fortune 500 companies as the 26th-largest firm in the U.S. by gross revenue, as well as the 14th most profitable. General Electric CEO is Jeffrey R. Immelt. General Electric went public in 1892 on the New York Stock Exchange. GE is a Dow Jones and S&P 500 component.

## Introduction

General Electric (GE) is an American multinational conglomerate corporation incorporated in New York and headquartered in Fairfield, Connecticut. GE was founded in Schenectady, New York (1892). In 1896, General Electric was one of the original 12 companies listed on the newly formed Dow Jones Industrial Average. After 118 years, it is the only one of the original companies still listed on the Dow index, although it has not been on the index continuously. The company operates through the following segments: Energy, Technology Infrastructure, Capital Finance as well as Consumer and Industrial. In 2011, GE ranked among the Fortune 500 companies as the 26th-largest firm in the U.S. by gross revenue, as well as the 14th most profitable. General Electric CEO is Jeffrey R. Immelt. General Electric went public in 1892 on the New York Stock Exchange. GE is a Dow Jones and S&P 500 component.

The company's commitment to technology solutions that save money and reduce environmental impact for its customers and GE's own operations – has generated more than US$160 billion in revenue. GE's own operations have seen a 32 percent reduction in GHG emissions since 2004 and a 45 percent reduction in freshwater use since 2006, realizing $300 million in savings. In this paper, we are going to apply some theories such as rate of return, risk of our stock (Beta), CAPM, KWACC, and dividend effect.

## Theory:

### I. Rate of Return:

#### a. Rate of Return of the Firm (Actual)(Rs):

The rate of return is a profit on an investment. The return comes in two forms. The first form is a Dividend, which is a distribution paid out and decided by a corporation board of directors to its shareholders, usually as a distribution of profits when a corporation earns a profit. The other form of return is Capital Gain, which is reinvested by purchasing additional shares. Therefore, the sum of your dividend income plus your capital gain or loss is the total return that an investment produces over a period of time:

$$Rs = DY + CG \quad (1)$$

Where $R_s$ is actual rate of Return of the firm, **DY** is dividend yield, and **CG** is capital gain.

Dividend Yield measurement tells you what percentage return a company pays out to shareholders in the form of dividends, it is calculated by taking the annual dividend per share and divide by the stocks price

$$DY = D1 / P0 \quad (2)$$

$$CG = (P1-P0)/P0 \quad (3)$$

Where $D_1$ is dividend yield in period 1, $P_o$ refers to initial period investment, and $P_1$ refers to investment in Period 1.

#### b. Rate of return of the Market (Historical)(Rm):

$$Rm = (DJIAt – DJIAt-1) / DJIAt-1 \quad (4)$$

Where **Rm** is a historical rate of return of the firm that is measured based on the Dow Jones Industrial Average (**DJIA**).

### II. Risk- Beta Coefficient (ßs):

Beta measures a stock's volatility in relation to the market. In other words, it gives a sense of the stock's market risk compared to the greater market. The key word here is "compared". Beta is used also to compare a stock's market risk to that of other stocks. Analysts use the Greek letter **'ß'** to represent beta. A beta of 1 means that the stock's price tends to move with the broader market. A beta greater than 1 indicates that the security's price tends to be more volatile than the market (more risky), and a beta less than 1 means it tends

to be less volatile than the market (less risky). Therefore, the high beta of a stock is considered to have higher rate of return. To calculate the risk of our stocks (Beta), use this formula**:**

$$Rs,t = \alpha + ßs \cdot Rm,t + \epsilon t \quad (5)$$

Where **Rsr** refers to return of the stock at period t, **α** is a constant that measure excess return for given level of risk, **ßs** measures the market risk**, Rmt** shows the rate of return based on the market value at a given time period, and **ϵt** is an epsilon error term. The return of the stock depends on **ßs, Rmt** Variable**.**

### III. Capital Assets of Pricing Model (CAPM):

It is a model that describes the relationship between risk and expected return and that is used in the pricing of risky securities. It is used to determine a theoretically appropriate required rate of return of an asset.

$$E(R_s) = R_{RF} + \beta_s[E(R_m) - R_{RF}] \quad (6)$$

Where **E(Rs)** is the required rate of return or expected return on the stock, **RRF** is the risk free rate, **ßs** refers to Beta, **Rm** refers to the return of the market as a whole, and **Rm-RRF** shows the market risk premium, or the return above the risk-free to accommodate additional unsystematic risk.

### IV. KWACC:

It refers to the way a corporation finances its assets through some combination of equity (**Ks**), debt (**Kd**), or preferred stocks (**Kp**).

$$KWACC = Wd \cdot Kd\,(1 - T) + Wp \cdot Kp + Ws \cdot Ks \quad (7)$$

Where KWACC is average cost of capital, **Wd** is the weight of debt, **Kd** is cost of debt financing, T is tax rate, **Wp** shows weight of preferred stocks, **Kp** refers to cost of preferred stocks, **Ws** is weight of equity, and **Ks** refers to cost of equity.

### V. Dividend Effects:

It refers to the dividend effect on a certain stock while measuring it with 3-month T-Bill, and return on the market (RDJIA)

$$Rs,t = RRF,t + ßs\,(Rm,t - RRF,t + \lambda s\,(DYs,t - Dym,t) + \epsilon t \quad (8)$$

This equation is measured at certain period of time where **Rs** refers to the rate of return on a stock, **RRF** shows the risk free rate, **ßs** refers to beta of the stock, **Rm** refers to the return of the market as a whole**, Rm – RRF** shows the market risk premium, **DYs** refers to dividend yield of stock, and **DYm** is dividend yield of market.

λ = 0 (Dividend does not matter based on MM theory)

λ< 0 (higher dividend with low risk based on Gordon & Linter Theory)

λ> 0 (Higher dividend means higher cost)

### Empirical Results:

When applying equations 1,2, and 3, dividend yield, capital gain, and rate of return on General Electric Corporation, we found which is also shown in (appendix 6), 3.64, -5527, and -5163, dividend yield, capital gain, and rate of return are shown respectively. As shown, General Electric had a capital loss in past year. Also, GE had rate of return loss based on the information provided. Comparing to the market growth, GE growth was very small. Beta coefficient was measured using equation 5, and it comes to 1.225 as it is shown in appendix1. However, a stock with a beta of 1.225 indicates that the security's price will be more volatile than the market and it is more risky, theoretically 22% more volatile than the market.

Expected rate of return or CAPM is measured below where market risk free rate is taken from 3 month T-bill, and other numbers are provided in appendix1, appendix3, and appendix5:

$$E(Rs) = 0.03 + 1.225(8.529 - 0.03) = 10.44$$

As mentioned in Value-Line, General Electric Corporation had long-term debt of $243.4 billion, long-term interest of $13.4 billion, total debt of $313.3 billion, weight of debt (**Wd**) of 64%, and because there was no preferred stock (**Wp**) issued, the weight of equity (**Ws**) was 36%. The market cap of GE was $242 billion as of September 30, 2014, and the Income Tax Rate of 25%. Since we have this information:

$$Kd = \$13.4/\$243.4 = 0.055,\ Ks = E(Rs) = 10.44$$

By using all these of information and equation 7, the weighted average cost of capital (KWACC) can be calculated:

$$KWACC = 0.64*0.055\,(1 - .25) + 0.36*10.44 = 3.785 \text{ or } 378.5\%$$

Dividend effect can be calculated by using equation 8, and also as shown in appendix4. The

dividend effect of General Electric Corporation is -1.4025. Therefore, the dividend effect is insignificant based on Gordon & Linter theory. As beta is positive, it will increase the return on the stock. However, because the probability of 0.4875 (higher than 10%), which is very large in dividend effect, the beta coefficient is almost zero. So, dividend does not matter and does not affect the rate of return on General Electric Corporation.

**Conclusion:**

According to the data provided and the analysis, there was not much dividend yield. Even though, the rate of return on the stock is negative, and the company had a negative growth last year, it is considered one of the top corporations to invest in based on past revenues. Also, General Electric Corporation had a high beta coefficient, but had low rate of return comparing to the market rate of return. GE expected rate of return is 10.44%, so investors are encouraged to buy GE stock because the expect rate of return is good based on the Capital Assets Pricing Model. Also, GE has increased its revenue over the past five years, and it is estimated to keep increasing for the coming year. In addition, the EPS has increased as well. It was 1.52, 1.64, and 1.65 for the years 2012, 2013, and 2014 respectively. As a conclusion, "Recent troubles in the oil and gas arena are not what management wants to be dealing with at this juncture. Lower oil prices may well bring GE's industrial sales down by as much as 25% if low prices continue through all of 2015. As a result, industrial organic revenue growth would peak at around 5% versus original expectations of 7% to 9%".

**References:**

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