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Dear IMC

Ektecom Associates is a financial services company that manages the assets of clients all over the world. We currently have over 20 billion dollars under management. We this amount of assets, it is often difficult to find a broad selection of securities for our clients.

To help us find possible investment, we are interested in modeling the price to earnings (PE) ratio of companies to help us locate possible investments. Investopedia (www.investopedia.com) defines the PE ratio as

> A valuation ratio of a company's current share price compared to its per-share earnings.
>
> Calculated as:
>
> Market Value per Share / Earnings per Share (EPS)
>
> In general, a high P/E suggests that investors are expecting higher earnings growth in the future compared to companies with a lower P/E. However, the P/E ratio doesn't tell us the whole story by itself. It's usually more useful to compare the P/E ratios of one company to other companies in the same industry, to the market in general or against the company's own historical P/E. It would not be useful for investors using the P/E ratio as a basis for their investment to compare the P/E of a technology company (high P/E) to a utility company (low P/E) as each industry has much different growth prospects.
>
> The P/E is sometimes referred to as the "multiple", because it shows how much investors are willing to pay per dollar of earnings. If a company were currently trading at a multiple (P/E) of 20, the interpretation is that an investor is willing to pay $20 for $1 of current earnings.

We are interested in having you and your team model the PE ratio as a ratio of linear functions. To help you demonstrate this technique, we would like you and your team to apply it to a security of your choosing. We look for investments that are fairly "safe" so choose from securities with the following characteristics.

- Market capitalization greater than or equal to 1 billion dollars.
- PE ratio between 5 and 25.
- Dividend yield from 1 to 5 percent

The model you develop should pass through two of the PE ratios from the past four quarters. Once you have developed an appropriate model for your security, you should calculate the long term future value of the PE ratio according to the model.

Your instructor has designed several technology assignments to help you come up with a strategy for solving this problem.

- Technology Assignment 1 Find a Company and its Financial Data – In this assignment you and your team will find several potential securities to use in your analysis.
- Technology Assignment 2 Calculate Linear Models for Price and Earnings – In this assignment each team member will find models that pass through two of the data points from the previous assignment.
- Technology Assignment 3 Find and Graph the PE Ratio Model – Each team member will use the linear models from the previous assignment to form a rational model.

Once these assignments are completed, you will need to determine the long term future value of the model. Using the best model for your security, document your solution in a technical memo. Your instructor will provide sample documentation for your team to use.

Sincerely

Alex Hamilton

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Director of Research
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