

### **Earnings Calculations for GDF, P/E=G and GDF...P/E=G**

F.A.S.T. Graphs™ uses essentially three formulas to determine the intrinsic value of a business. These consist of two widely-accepted formulas, and the third formula is an extrapolation between the two.

**GDF - Formula #1:** This is Ben Graham's famous formula for valuing a business and is used for companies with earnings growth of 5% or less. This is the basic formula:  $V^* = \text{EPS} \times (8.5 + 2g)$ . When this formula is utilized we designate it as such to the right of the graph in orange letters GDF, which stands for Graham Dodd Formula. This formula will compute a minimum P/E of 8.5 and maximum P/E of 18.5 depending on the growth rate of the prospective company (0% to 5%). However, for consistency, FAST Graphs caps the P/E ratio to 15 when utilizing this formula.

**P/E=G - Formula #2:** Our second formula is the classic P/E=G (P/E equals earnings growth rate) and when this formula is used it is designated in the orange box P/E=G. This formula is used for faster growing companies showing earnings growth of 15% or better.

**GDF...P/E=G - Formula #3:** Our third formula is designated GDF...P/E=G which stands for Graham Dodd Formula-P/E equals growth, to distinguish it from the other two. This is an extrapolation between the pure GDF and P/E=G. This formula is used for companies growing earnings of 5% to 15% (5.01% to 14.99%). This represents a range that the average company falls in. Therefore, when this formula is used, a straight 15 multiple (P/E = 15) representing average will compute.

To summarize, the GDF formula is used for companies growing at 5% or less, the P/E=G formula is used for earnings growth of 15% or better, and the GDF...P/E=G extrapolated formula is used for growth rates between 5% to 15%.

First and foremost, your goal should be to try to draw a chart that makes the most sense. In some cases this may mean removing an anomalous number that skews the results. For example, if a company you are drawing using a 10- year graph and it has 9 years of similar growth like say 8% to 12%, but one year where earnings grew at 400%; this last number distorts the true average. Therefore, you would want to draw a chart for a time frame that eliminated the bad number.

Also, we find it useful to start out drawing a 20-year chart, and then reducing the number of years in increments of 5. In other words, draw a 20-year, then a 15-year, followed by a 10-year, followed by a 5-year. This exercise allows you to determine if the earnings growth rate is accelerating or decelerating. This is obviously important information to have. However, keep in

mind that the F.A.S.T. Graphs™ tool is dynamic and automatically calculates and applies the appropriate earnings multiples to various levels of growth (GDF, P/E=G, and GDF...P/E=G).

Let us add that in theory at least, shorter time frames can be more meaningful than longer time frames. In other words, growth for the last 3 or 4 or 5 years may be more indicative of future growth than the past 20 years. On the other hand, the long-term record provides considerable insight into how well a company has historically been managed. This can be especially meaningful when evaluating dividend growth stocks. If you're counting on dividends, then a review of the company's long-term record on payout ratios, dividend growth rates, etc., will add that depth of insight.

One final comment: Although it is important to understand the formulas behind the calculations, we believe it's more important that they work. In other words, after extensive research and trial and error, we have found that the formulas that FAST Graphs™ makes use of draw meaningful earnings and price correlated graphics that can be utilized as proxies for true worth valuation. Therefore, the subscriber should always remember that Fast Graphs™ is a "Tool to Think With."