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Financial Health and Growth Valuation under the GARP Framework: Evidence from TMUS, AT&T, and Verizon

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Abstract. As the world's financial system matures, investors are finding it increasingly difficult to find among the wide range of stocks that offer lasting growth at a significant price. To solve this problem, an in-depth analysis of T-mobile (TMUS), AT&T (T) and Verizon (VZ) is conducted in this article. Based on fundamental analysis and data from the Altman Z-score model, the investment value of these three companies is evaluated using the Growth at a Reasonable Price (GARP) investment strategy model. This analysis conducts a comprehensive assessment of the company's financial status through three key aspects: growth, valuation, and stability. Further analysis of the Z-score results and five-year return forecasts provides multi-level comparisons for investment performance. The research results show that the three companies have certain differences in terms of financial structure and growth consistency. TMUS has demonstrated a good balance between profitability and leverage ratio. This effectively reflects its market value with long-term profit potential. In contrast, T demonstrated stronger profit performance, but its reinvestment flexibility was limited. However, VZ's revenue expansion was relatively slow and it was under greater financial pressure, performing the worst. Overall, this study provides the practical application value of GARP for investors who pursue data-driven decision-making. In addition, this study further extends the empirical application of the GARP strategy to the wireless communication industry, providing reference ideas for identifying companies that combine growth potential with financial stability in the market based on industry characteristics.

Keywords: GARP, TMUS, Financial Health, Growth Valuation

1. Introduction

In the ever-evolving world of global finance, investors are perpetually on the hunt for stocks that will provide growth at a reasonable price. The usual investment approaches tend to fail when the market is choppy, or when the companies are enjoying strong earnings momentum but their valuation levels are uncertain. The Growth at a Reasonable Price (GARP) framework is one way to skirt around the valuation discipline of value investing along with the forward-looking orientation of growth investing. This paper takes T-mobile (TMUS), AT&T (T), and Verizon (VZ) as research objects, and uses the GARP framework to study the telecommunications industry in the United States. These companies are major players in capital-intensive and innovation-driven markets.

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Therefore, the study aims to explore how GARP-based investment strategy analysis should effectively identify stocks with both sustainable growth prospects and sound financial health. Over the past few years, studies and research have stressed on the practicality of GARP investing in real life circumstances. Priyanto's research on Indonesia Stock Exchange showed that GARP based portfolios produces a more stable return than pure value or pure growth portfolios [1]. As a result, the GARP approach has proven effective in identifying stocks that maintain consistent performance rather than pursuing short-term or speculative growth. Yet, most existing studies concentrate on emerging markets or short-term portfolio outcomes. Evidence from mature sectors, such as telecommunications—characterized by high leverage and steady cash flows—remains relatively limited. Because the GARP methodology relies on detailed and reliable financial data to assess both valuation and growth dimensions, fundamental analysis naturally serves as its analytical foundation. It supplies the key quantitative indicators—earnings, cash flow, leverage, and profitability—that allow investors to determine whether a firm's growth aligns with its intrinsic value [2]. James and Agung note that fundamental analysis is a crucial method for evaluating a company's financial soundness and long-term stability through its financial statements and performance ratios [3]. Empirical research also highlights its direct influence on stock price behavior. Puspa Dewi Yulianty et al. found that the debt-to-equity ratio (DER), price-to-earnings ratio (P/E), and return on equity (ROE) significantly affect stock valuation in the banking industry [4]. Collectively, these findings underscore the importance of fundamental indicators in explaining market performance and shaping investor behavior. Nevertheless, most of the past literature examines these variables in a specific industry, and only a few studies have examined these variables in a joint framework such as GARP. When evaluating these capital structures, the Altman Z-score model has a place as a complementary tool that enhances GARP based analysis by also considering a company's financial health and likelihood of bankruptcy. Recent applications of the model have expanded beyond bankruptcy prediction to include areas such as credit risk assessment, bond valuation, and equity portfolio construction [5]. Integrating GARP analysis with Z-score results therefore enables investors to identify firms that are not only undervalued but also financially resilient and capable of sustaining long-term performance. It is important to note, however, that despite the model's wide adoption, research on its incorporation into multidimensional investment strategies remains limited.

Building upon these studies, this research integrates the GARP investment framework, fundamental analysis, and the Altman Z-score model to evaluate the financial condition and valuation of TMUS, T, and VZ. It analyzes financial indicators and five-year return projections to determine which firm exhibits the most balanced relationship between growth and financial stability. The results are expected to contribute theoretically by advancing empirical understanding of GARP's relevance to capital-intensive industries. On a practical level, the study provides investors with a data-driven framework to refine stock selection within the U.S. telecommunications market.

2. Method

2.1. GARP investment strategy and fundamental

GARP is a balanced investment approach that incorporates aspects of growth and value investing, and is utilized for investing in stocks which have good growth potential but are not too expensive. The strategy tries to find companies that grow on a regular basis and are not grossly overvalued by the market, so that it does not end up paying too much for growth [6]. Based on the foregoing arguments, this study employs a fundamental-based GARP strategy for the analysis of stock picking. Fundamental analysis is the analysis of a company's financial statements and other financial aspects

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of the company to recognize its intrinsic value and to forecast its prospective long-term performance [7]. This research is divided into three types of ratios to evaluate TMUS, T, and VZ for growth, which includes Earnings Per Share (EPS) growth rate and Revenue Growth Rate, for valuation, namely Price-to-Earnings (P/E) ratio, Price/Earnings-to-Growth (PEG) ratio, and Free Cash Flow Yield (FCC Yield), and for stability, Debt-to-Equity ratio and Dividend Payout Ratio. These classifications cover in depth the prospects for earnings, whether the stock price is right and whether the company is financially sound for each company [8].

2.2. Altman Z-score model

In order to enhance the evaluation of financial status of TMUS, T and VZ, this research presents the Altman Z-score model by Edward Altman which was formulated in 1968. The model is based on a number of financial ratios that serve to determine the probability of a company experiencing financial difficulties [9]. Since TMUS, T, and VZ are part of the telecommunications industry, the study applies the Z-score model modified for non-manufacturing companies. The Z-score formula for non-manufacturing companies is as follows:

Table 1. Altman Z-score model for non-manufacturing companies

Variables	Formula
Z-score	$6.56\ X_1 + 3.26\ X_2 + 6.72\ X_3 + 1.05\ X_4$
X_1	Working capital/Total assets
X_2	Retained Earnings/Total assets
X_3	Earnings before interest and taxes/Total assets
X_4	Market value (MV) of equity/ Total Liability

As shown in Table 1, each ratio plays a distinct role in assessing the company's financial health. X_1 indicates the liquidity position of a company and also represents its short term financial strength. X_2 represents the portion of a company's earnings that have been reinvested in the business. X_3 assesses how effectively the company is using its assets to generate profit. X_4 shows how effectively the company is using its assets to generate profit. Overall, the Z-score synthesizes these complementary dimensions into a single metric to holistically evaluate a firm's financial health and risk of distress. The resulting Z-score can be interpreted based on the following thresholds:

Table 2. Results of the Z-score and interpretations

Z-score	Indicator
$Z < 1.1$	Distress Zone
$1.1 \leq Z \leq 2.6$	Gray Zone
$Z > 2.6$	Safe Zone

As can be seen in Table 2, the z-score in the distress zone indicates that the company is experiencing financial problems, which requires immediate action from management. And when the company is in moderate financial health with a controlled risk of financial distress, the z-score is in the gray area. Finally, a score within the safe zone indicates a good financial position.

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2.3. 5-year investment return prediction

This study makes assumptions about the EPS growth rates of the three companies over the next two to five years and their P/E ratios in year five. Based on these assumptions, the five-year investment return for each company is then calculated. Using the estimated EPS and P/E ratio for year five, the stock price in year five is determined by the following formula:

$$Stock\ Price\ (Year\ 5) = P/E\ Ratio\ (Year\ 5)\ \times EPS\ (Year\ 5) \tag{1}$$

In this case, 0 year means that the investment is done at the current time, while year 5 is the end of the 5 years projection period. The 5-year return on investment is then derived as the change in the stock price from year 0 (initial investment) to the predicted price in year 5.

2.4. Data

Financial information needed to calculate the Altman Z-score and the three sets of fundamental analysis metrics is obtained from Nasdaq. For the Altman Z-score, the annual financial statement as of 31 December 2024 is used. This eliminates seasonal industry revenue fluctuations, and the temporary impact of market conditions on the company's financial performance. The metrics for each of the three categories are calculated using the latest mid-year 2025 reports. This ensures that the financials depict the current state of operations and finances of the company.

Further, the assumptions on the EPS growth rates for years 2-5, used in the return estimation, are obtained from Zacks, a reputable financial information provider. Since there is no direct forecast for the P/E ratio for Year 5, this paper obtains its assumption based on historical P/Es for the trailing five years gathered from Macrotrends. In order to make the estimate more robust, outliers and data from the pandemic time period are not considered. Based on this adjustment, the average historical P/E is used as the predicted value for Year 5.

3. Results and discussion

3.1. Empirical results

3.1.1. Financial indicator results

To support a clear comparison of profitability and risk among the three companies, Table 3 summarizes the growth, valuation, and stability financial ratios.

Table 3. Financial indicators

	T-Mobile	AT&T	Verizon
EPS growth rate (%)	20.67	27.08	7.34
Revenue growth rate (%)	6.74	2.75	3.36
P/E	22.15	16.37	10.08
PEG	1.34	0.68	1.40
FCF Yield	0.02	0.05	0.06
Debt-to-Equity Ratio (%)	71.26	69.57	72.77
Dividend Payout Ratio (%)	32.37	46.72	57.80

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As shown on Table 3 for growth rates, TMUS has a 20.67% EPS growth rate, supported by a 6.74% revenue growth rate. These results show their ability to expand and provide a balanced path between sales and earnings. T has the largest EPS growth rate of 27.08% however its 2.75% revenue growth indicates a substantial part of its earnings growth could be coming from internal efficiency or financial engineering as opposed to top line growth. On the other side, the EPS growth rate is 7.34% and the revenue growth is 3.36% for VZ, portraying a somewhat slower rate of growth and with little momentum relative to the other companies. In summary, T is stronger in earnings acceleration while TMUS is more evenly matched in growth. VZ is the underperformer on both counts. In terms of valuation ratios, P/E ratio of the TMUS stands at 22.15, this is a premium to its peers. This is partially justified by the PEG ratio of 1.34 which means that valuation is still not overextending from growth expectations. However, its FCF yield of 0.02 indicates a poor free cash flow generation compared to market cap. T has a P/E of 16.37 and a lower PEG of 0.68, implying that the stock is undervalued relative to its expected earnings growth. Its FCF yield of 0.05 also reflects more robust cash flow generation relative to T-Mobile. Verizon has the lowest p/e of 10.08 combined with the highest PEG of 1.40 which signifies that even though the valuation is low, the growth potential does not support even this conservative pricing. Its FCF yield of 0.06 indicates relatively higher cash returns. On a relative basis, T has the best valuation, VZ is undervalued with weak growth support and TMUS trades at a premium on growth. When it comes to stability ratios, TMUS now has a debt to equity ratio of 71.26%, which is a moderate level of debt. Its ratio of dividend payout of 32.37% reveals a balance between returning to shareholders and keeping enough earnings for reinvesting. With a debt to equity ratio of 69.57%, T holds a slightly smaller amount of leverage but its payout ratio of 46.72% shows that it has a bit more focus on giving out dividends, which could impede on its capacity to reinvest. Debt-To-Equity and Dividend Payout Ratios VZ has the greatest debt-to-equity ratio at 72.77%, indicating a higher reliance on debt financing, and also has the largest dividend payout ratio at 57.80%, pointing to minimal retention for growth. To conclude, TMUS has a more balanced combination of leverage and reinvestment, T has a moderate focus on dividends, and VZ is the most stretched for grace period, and debt and payout burden.

3.1.2. Z-score results

To further assess the financial condition of the three firms, the Altman Z-score results are provided in Table 4.

Table 4. Altman Z-score results

	TMUS	AT&T	Verizon
X_1	-0.01	-0.04	-0.06
X_2	-0.10	-0.04	-0.01
X_3	0.09	0.06	0.08
X_4	1.71	0.55	0.56
Z	2.00	0.59	0.66

As shown in Table 4, TMUS achieved a Z-score of 2 and falls under the Gray Zone. There are some cash flow deficits but there is an absence of solvency issues. T shows a Z-score of 0.59, which is in the Distress Zone. This indicates a lot of financial vulnerability, and it is at high risk of bankruptcy if corrective action is not taken. VZ, which has a Z-score of 0.66, is also in the Distress Zone, being a bit stronger than T, which is still weak. T-Mobile appears to have a stronger balance

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sheet relative to T and VZ which are both at risk of financial distress. When considering growth, valuation, stability and Z-score, T-Mobile is the relatively stronger one. It maintains earnings growth in line with revenue, moderate leverage, and a more robust financial stability profile than its peers. T's projected EPS growth is strong and the stock is attractively priced. However, things like higher payout commitments and weak financial health constraints the price's potential upside. Despite an attractive free cash flow yield and low valuation, Verizon suffers from weak growth and an ultimately weak financial position. In summation, currently, T-Mobile looks like best option offering the most desirable mix of growth and financial strength.

3.2. Forecasted returns

In order to take into account the consequences of performance in the future, the 5-year return prediction is reported in Table 5.

Table 5. 5-year return forecast

	T-Mobile	AT&T	Verizon
Current stock price	240.38	29.2	43.49
NTM EPS	11.59	2.22	4.86
Year 2-5 EPS g	17.20%	4%	2.80%
Year 2 EPS	13.58	2.31	5.00
Year 3 EPS	15.92	2.40	5.14
Year 4 EPS	18.66	2.50	5.28
Year 5 EPS	21.87	2.60	5.43
Year 5 P/E	20	13.5	9
Year 5 stock price	437.34	35.06	48.85
5-year return	82%	20%	12%

According to Table 5, the annual growth rate of EPS for TMUS is 17.20%, and this raises the EPS from 11.59 to 21.87 by year 5 [10]. Assuming a year-5 P/E of 20, the stock price of 437.34 suggests an 82% return. This outlook is supported by strong earnings momentum and helpful valuation. On the other hand, T's EPS grows from 2.22 to 2.60 under modest 4% growth [10]. Its five-year P/E ratio is 13.5, which reflects a mid-range valuation for a mature operator. The share price is valued at 35.06, bringing in a 20% return. This indicates that although the P/E ratios are comparable, T's potential is limited due to the slowdown in growth. VZ has the weakest profile, where annual growth rate of EPS rises from 4.86 to 5.43 at a rate of 2.80% [10]. The stock price drops to 48.85 with a return of 12%, as the assumed year-5 P/E of 9 [10]. This shows how limited growth coupled with limited P/E reduces investor returns. Ultimately, taking into account both the historical evidence – where TMUS has achieved balanced growth, a sounder capital structure, and similarly relatively stronger financial stability – and the forward-looking return, TMUS is the most attractive investment today. T showcase a decent growth potential but will be constrained. However, Verizon is seen as under-performing on the current fundamentals and future return potential.

3.3. Discussion

Following the findings, it is essential to analyze the key challenges of each firm and the overall prospects of the industry. TMUS faces issues of growth, liquidity and profitability. As a result,

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retained earnings are negative, and free cash flow yield is low. Although T has attractive earnings per share growth and is cheap, it has a distress-zone Z-score to contend with. Its high dividend payout reduces its capacity to reinvest. VZ has the weakest growth momentum, which combined with its high leverage and high payout ratios suggests it is fragile. Considering the above challenges, this study provides pertinent recommendations from the company as well as the industry perspective. TMUS should bolster its cash generation and capital reserves to strengthen resilience, T should prioritize deleveraging and allocate a higher proportion of the company's earnings to capitalize on balance sheet reinforcement and network investment, and VZ should enhance operational efficiency and curb dividends to stabilize the company. The wireless communications industry in the United States is fast reaching the saturation point, with subscriber growth slowing, but demand for speedy access and integration with the digital lifestyle growing. To gradually move to 5G and later 6G requires significant capital investment and financial resilience, among other things. The competitive advantage will get shaped with the merger of infrastructure, spectrum trading, and partnerships. Businesses that spend on earnings wise and on innovation are most likely to grow.

In summary, T-Mobile presently has the strongest position and the dynamics of the sector require that all three companies strengthen their balance sheets and adapt their business models for long-term opportunities.

4. Conclusion

The research conducted an analysis of TMUS, T and VZ via the GARP framework followed by a fundamental analysis and Altman Z-score model to check their value and growth potential. Using growth, valuation, stability indicators, and five-year return forecasts, it presents a thorough contrast of their investments. Among the three subjects studied, the results of TMUS show that it has the most balanced and robust finances. It is achieved with healthy eps and revenue growth, moderate leverage, gray-zone Z-score, and sound financial stability. TMUS is the best GARP investment option with a five-year projected return of 82% as it has the best match of growth with resilience. Although the T's earnings have grown significantly over the past five years and its valuation is reasonable, its increasing financial risk is indeed an investment hazard. These two trends limit the company's ability to recoup through its own business operations. VZ has the poorest overall showing due to slow growth, high leverage, and a meager predicted return of 12%. Applying fundamental and Z-score results to GARP principles can be an effective way to distinguish those with sustainable growth and financial stability from those with weak financial structures. In practical terms, this study points to the need for multi-faceted financial measures for equity assessment. Utilizing fundamental analysis and Z-score jointly under the GARP strategy, will consider not only the growth opportunities a company has but also it's in a structural sense, healthiness.

Nevertheless, this method of predicting has its limitations. The analysis is predicated on past trends and stable P/Es continuing through time. However, this assumption may not hold in the face of changing market conditions or unpredictable external shocks. In the future, studies might incorporate dynamic valuation models or scenario-based stress testing to enhance the robustness and predictive power of long return forecasts.

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