FINANCIAL MANAGEMENT

BLOOMBERG CASE STUDIES

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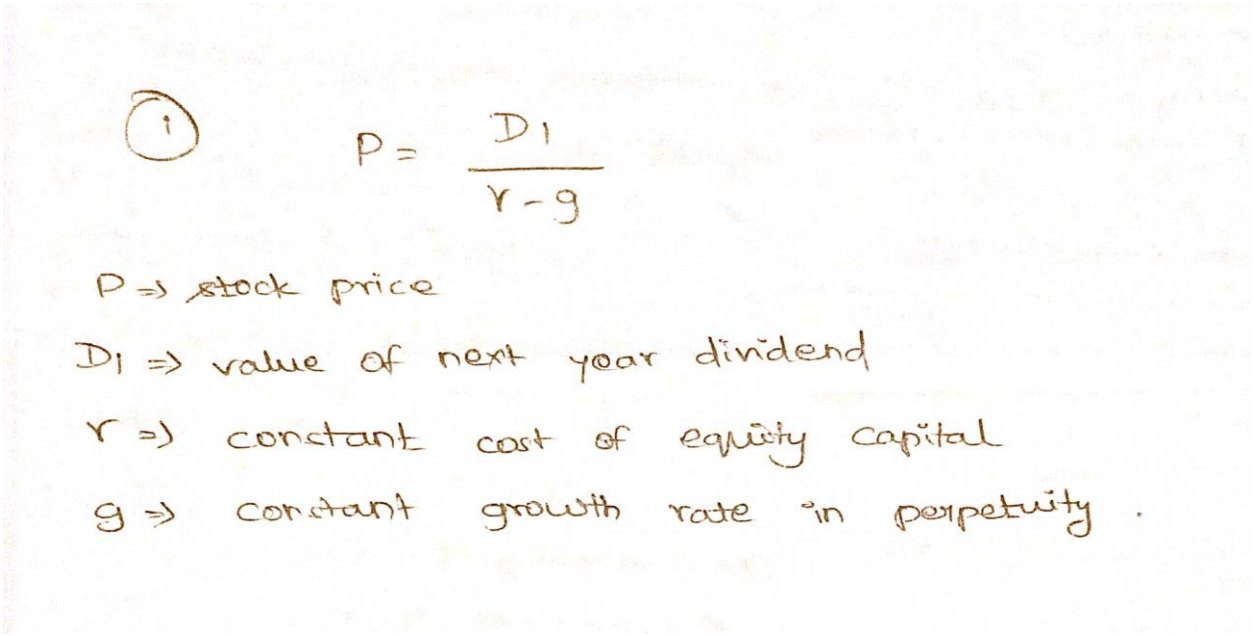
Equity Analysis and Valuation

1. **What is Disney stock's intrinsic value using each of the four models?**

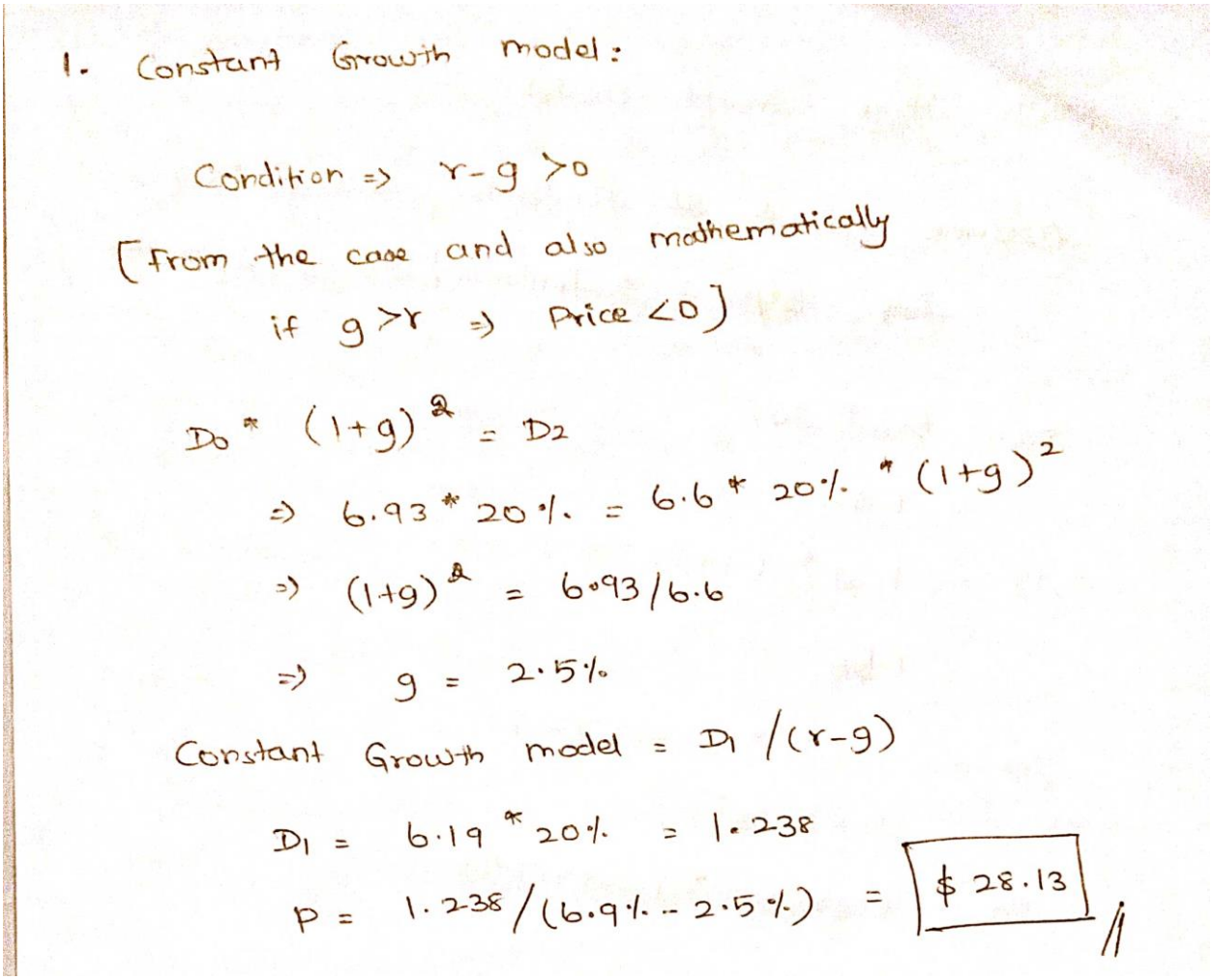
- **Constant Growth Model**

Definition: (as per Bloomberg Case Study)
The constant growth model, also known as the Gordon Growth Model, estimates the intrinsic value of a company's equity by discounting future cash flows, assuming a constant dividend growth rate indefinitely. However, a significant weakness of this model is the assumption of constant dividend growth, which is rarely observed in real-world companies. This condition is unrealistic and unlikely to be met by any company. The dividend growth rates for The Walt Disney Company since 2004, depicted in the graph below, clearly demonstrate the variability and inconsistency in dividend growth over time.

Formula:



Problem Solution:



Conclusion:
Because Disney's dividend growth history is intermittent and variable frequently, the constant growth model is not an ideal basis for calculating DISNEY stock intrinsic value.

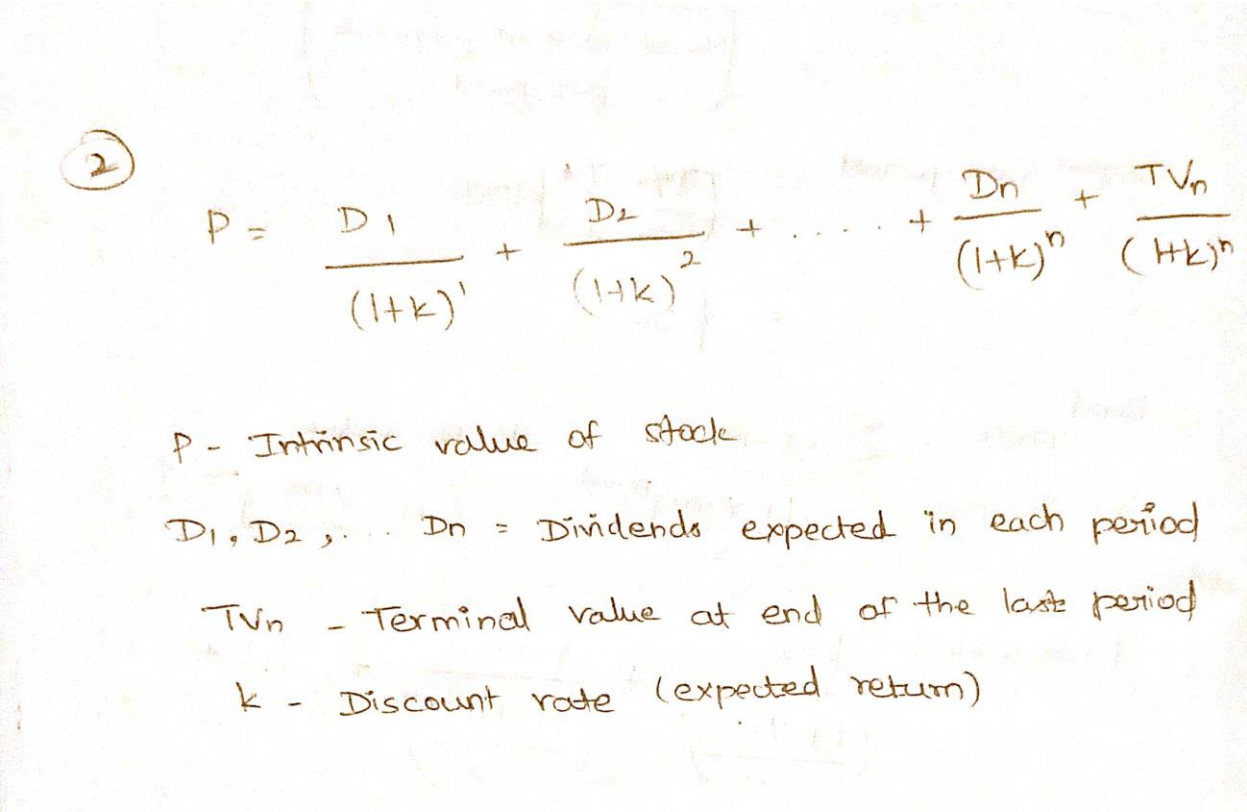
- **Multi-Stage Growth Model**

Definition: (as per Bloomberg Case Study)

The multi-stage growth model addresses the constant growth model's limitation of assuming perpetual constant growth in dividends. It does this by incorporating two distinct growth periods:

1. The first is a period of fast growth that lasts for a determined period.
2. The second is a period characterized by slower growth that lasts forever. Technology companies exhibit fast growth during their early years, followed by slower growth.

Formula:



Problem Solution:

2. Multi Stage Growth model:

Assume growth of dividends continue 17.7% for 3 years => followed by 2.5% growth

$D_0 = 6.6 * 20\%$

$= 1.32$

$D_1 = 1.32 * (1+17.7\%)$

$= 1.55$

$D_2 = 1.55 * (1+17.7\%)$

$= 1.82435$

$D_3 = 1.82435 * (1+17.7\%)$

$= 2.147$

Terminal value at year 3 =>

$= D_3 * (1+2.5\%) / (6.9\% - 2.5\%)$

$= 2.147 * (1+2.5\%) / (6.9\% - 2.5\%)$

$= 50.02$

Value of share $= 1.55/(1+6.9\%)^1 + 1.82435/(1+6.9\%)^2 + 2.147/(1+6.9\%)^3 + 50.02/(1+6.9\%)^4$

$= \$43.10$

Conclusion:

It is more complex and does not use the past data. Additionally, it makes the annual growth rate easier to manipulate and is an accurate model of this case.

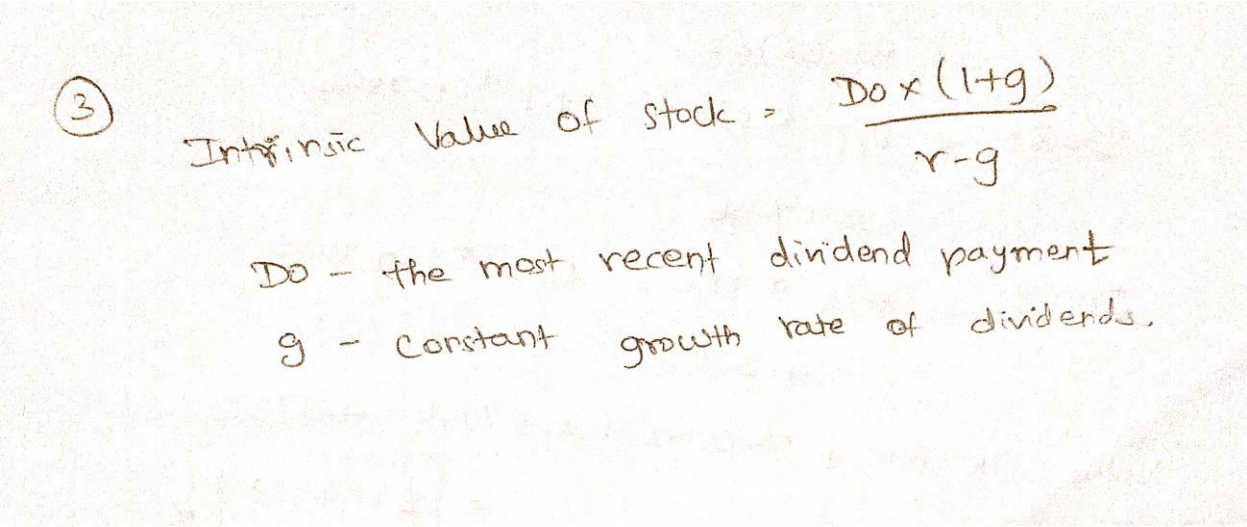
- **Discounted Dividend Model**

Definition: (as per Bloomberg Case Study)

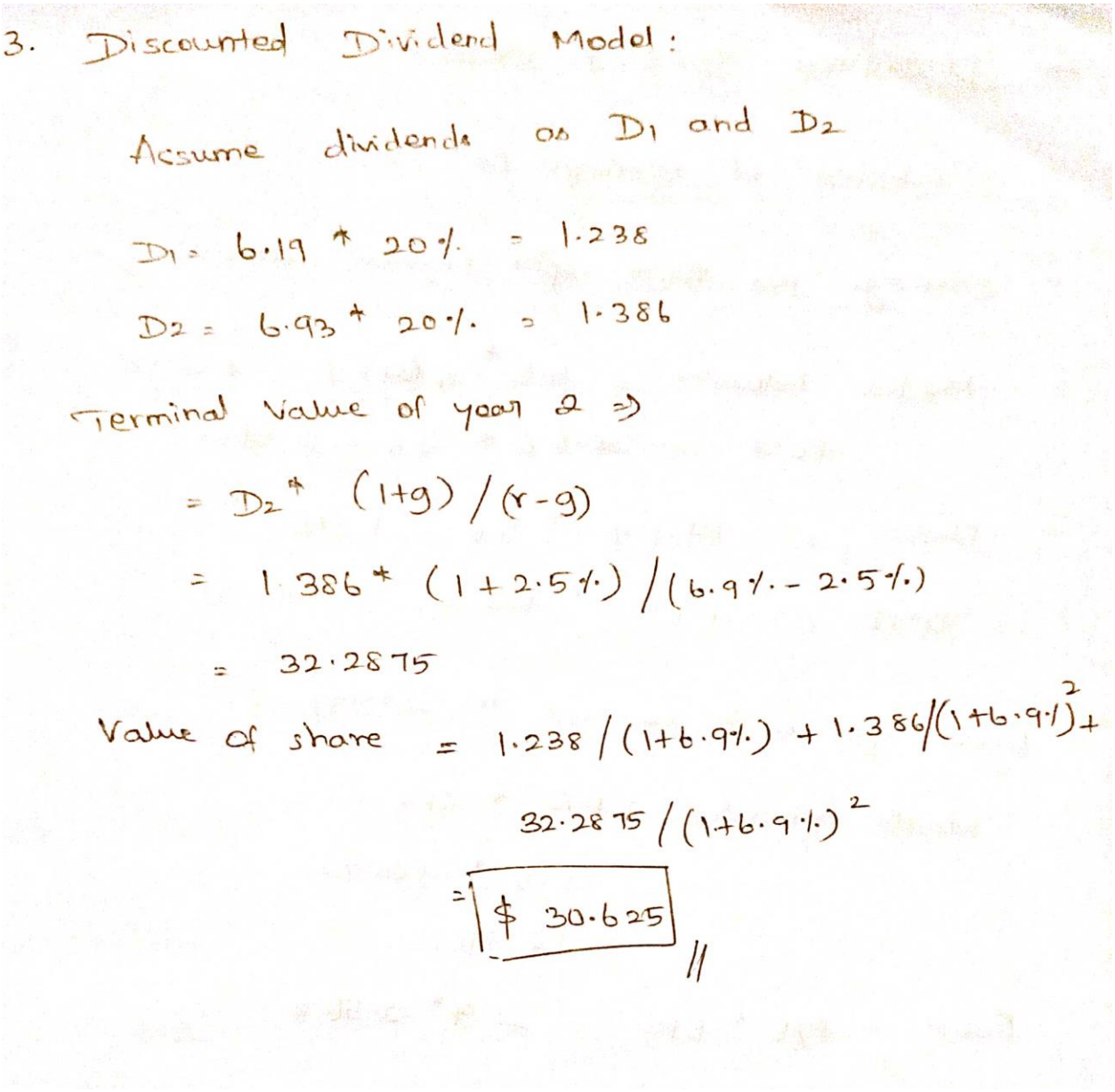
To calculate a stock's intrinsic value using the discounted dividend model, three main steps are involved:

1. Calculating future dividends
2. Determining the terminal value of the stock
3. Discounting these dividends to their present value using a timeline.

Formula:



Problem Solution:



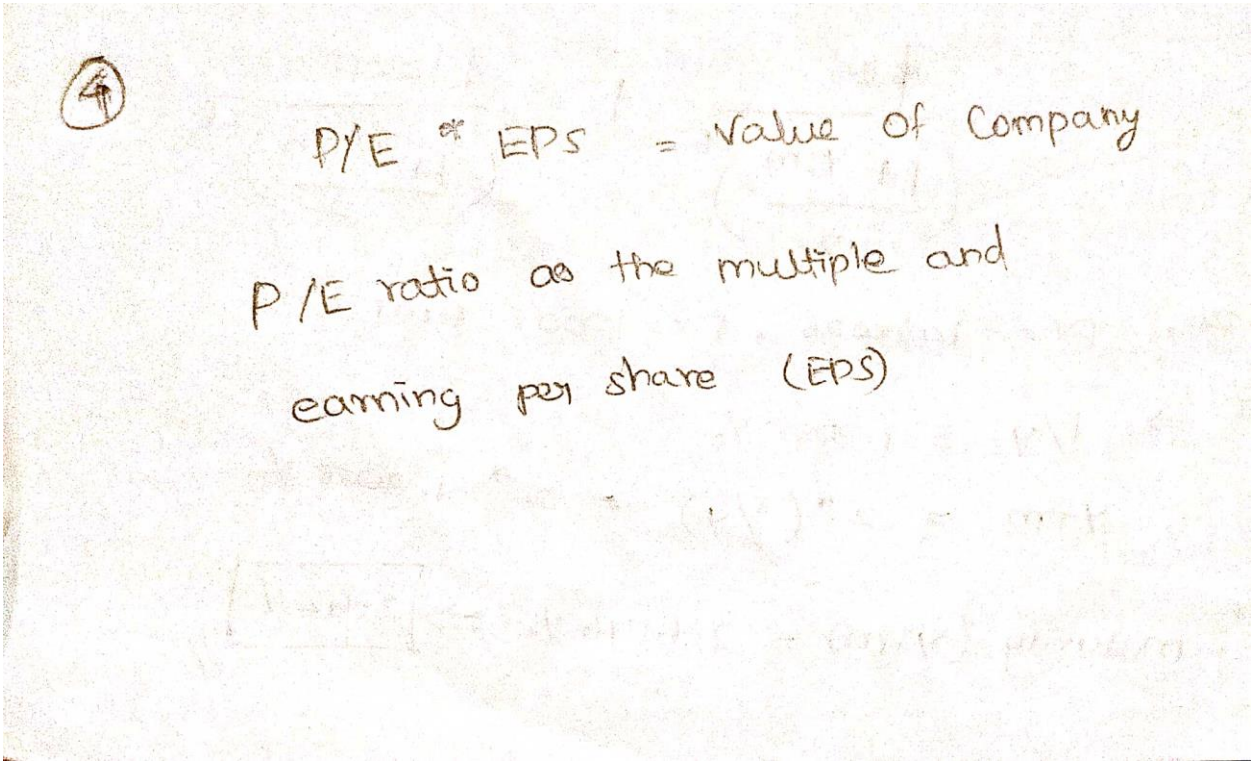
Conclusion:

Since the dividend discount model is limited to what the company is willing to pay its investors in dividends, it is accused of inaccuracy. The company may make progress in their industry, but not to the full extent that it is reflected in its dividends.

- **Market Multiples Approach**

Definition: (as per Bloomberg Case Study)
In essence, all the valuation models discussed so far could be categorized as dividend discount models because they aim to determine the present value of future cash flows or dividends.

Formula:



Problem Solution:

4. Estimate of earnings of 2019:

Earnings per share split segment wise

Media networks = 6.6 * 46.7 % = 3.0822

PECP = 38.8 % * 6.6 = 2.5608

Studio = 19.1 % * 6.6 = 1.2606

DCTI = -4.7 % * 6.6 = -0.3102

Price for each segment in Dieney:

Media networks = P/E * EPS

= 25.5 * 3.0822

= 78.5961

PECP = P/E * EPS = 21.9 * 2.5608

= 56.08152

Studio = P/E * EPS = 19.1 * 1.2606

= 24.07746

DCTJ = P/E * EPS = 14.1 * -0.3102

= -4.37382

Value = 78.5961 + 56.08152 + 24.07746 - 4.37382

= $154.38 //

Conclusion:

The multiple market method does not require forecasted values, but since it uses historical data, it may overlook the future circumstances of the company. The best available information for this case can be found in the model.

2. **Reconcile Disney stock's intrinsic value, considering the strengths and weaknesses of each valuation approach.**

- **Constant Growth Model**

Strength:

- In cases where dividends are predictable to grow continuously, the continuous growth model is simple and gives an accurate estimate of internal value.

Weakness:

- The constant growth model assumes indefinite dividend constancy, which is often unrealistic. It's sensitive to growth rate changes, impacting reliability.

- **Multi-Stage Growth Model**

Strength:

- Accounts for different growth rates over different periods of time. It reflects the complex growth patterns of real companies. Provides a more precise estimation of intrinsic value. This contrasts with models that assume constant growth.

Weakness:

- More assumptions and calculations than simple models such as constant growth, increasing complexity and the potential for error. The calculated intrinsic value may be greatly affected by minor changes in assumptions, which can affect the model's sensitivity to input assumptions.

- **Discounted Dividend Model**

Strength:

- Considers present value of future dividends. It is based on actual cash flows, offering reliability. Accounts for the time value of money by discounting. Provides a realistic view on the current price of stocks.

Weakness:

- Relies on accurate dividend forecasts, challenging for companies with fluctuating dividend policies. The value of stocks without dividends or irregular dividend patterns may be underestimated, limiting their applicability.

- **Market Multiples Approach**

Strength:

- It's simple, easy to understand. Measures market sentiment and investor behavior. For quick valuation information, it's widespread use in the industry.

Weakness:

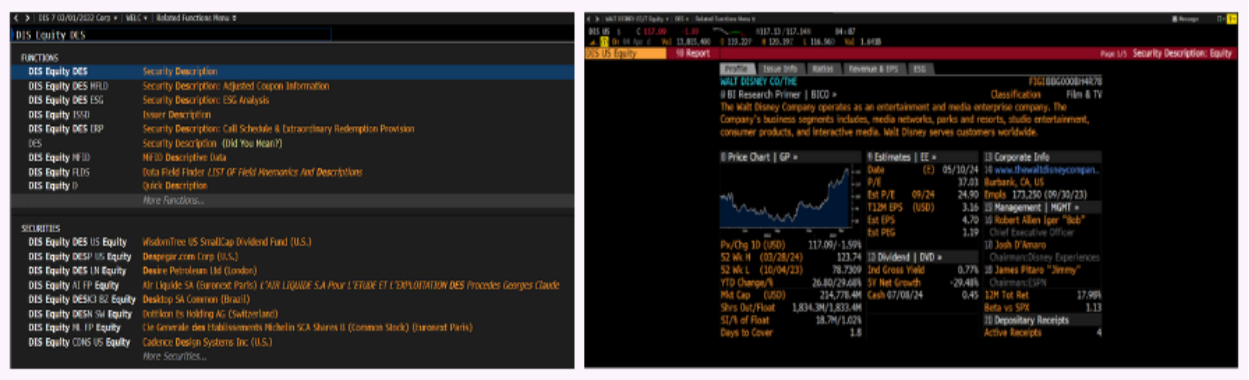
- It is strongly influenced by the selection and comparability of the peer companies. Limited applicability to companies with specific business models, or in special markets. Ignores important company specific factors, such as growth prospects and profitability.

3. **After completing the Terminal Tutorial, attach a screenshot of the GP function screen comparing Disney to the S&P 500 from August 1, 2018, to August 1, 2019. Describe in one sentence if and how the comparison has changed from what was shown in the video.**

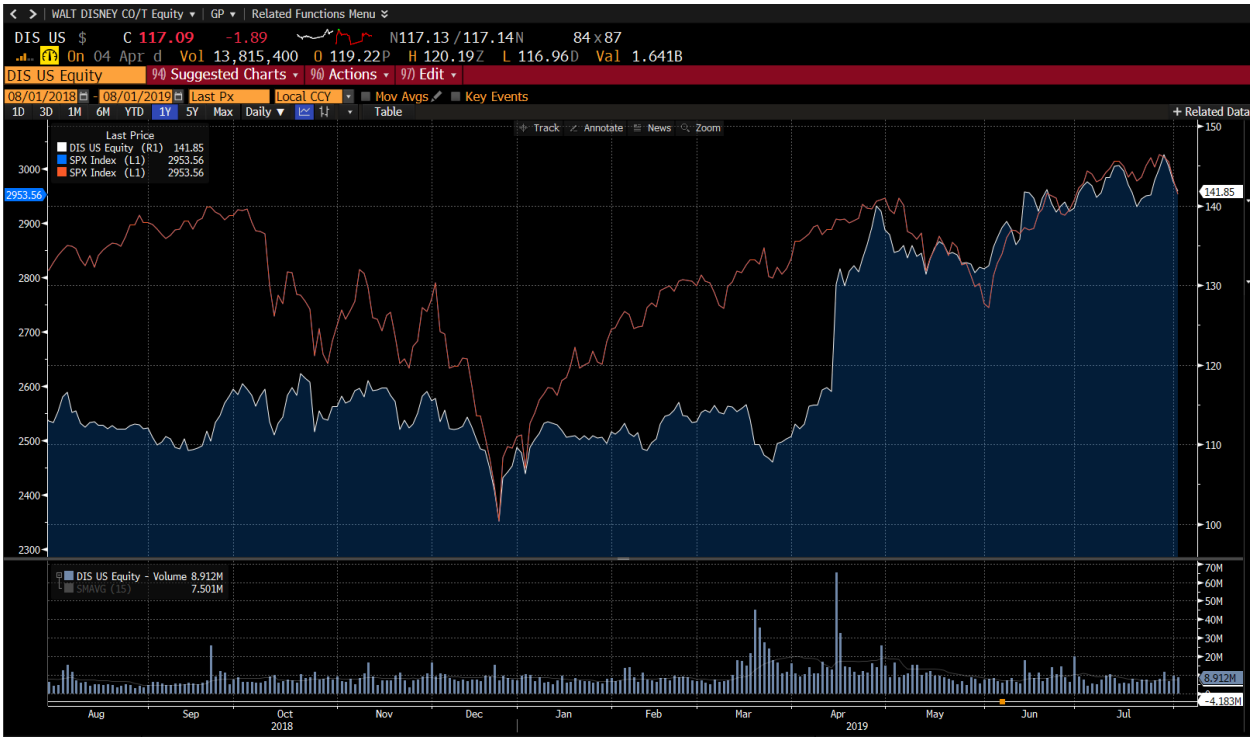
The selection of models is driven by factors such as the company's characteristics and investor goals. It is best to use a combination of valuation approaches to achieve a holistic understanding of the intrinsic value of stocks. The chart shows that, while the SPX index and DIS US Equity both show synchronized movements from mid-April to the end of the year, periods in which the S&P 500 outperforming Disney have been extended.

Below screenshot shows -

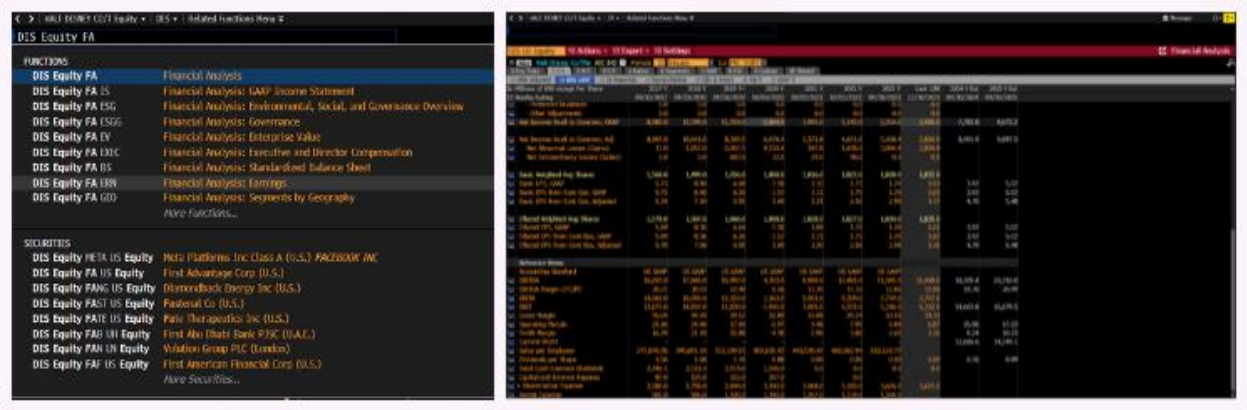
- Log in to Bloomberg. In the command line type DIS, press the F8 equity sector key, type DES for Security Description, and press Enter or <GO>. This is the description page for the Walt Disney Company. Here we can see key data such as the P/E ratio (glow) and the estimated earnings per share (glow).
- If we click on the Price Chart, we will go to the GP page which shows us a line graph of the stock price for Disney.



- The below screenshot shows GP function for the Disney which has the S&P 500 from August 1, 2018, to August 1, 2019 which has DIS US Equity – 141.85

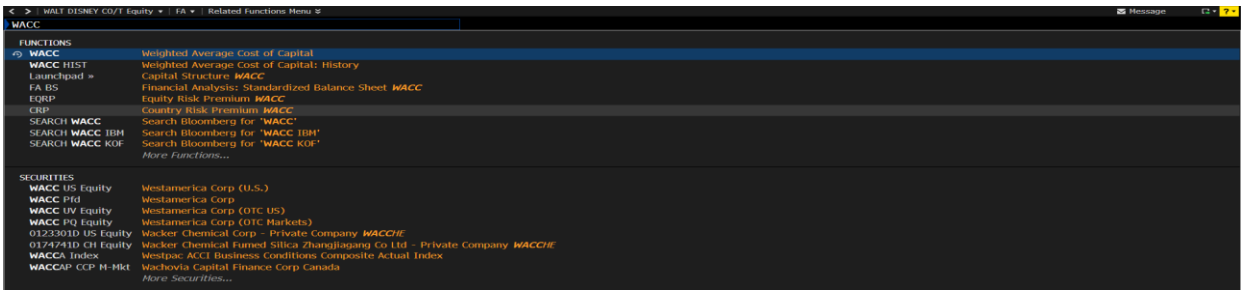


- If we wanted to build a model to value Disney's stock, we need to gather some financial information. Let's type Financial Analysis in the command line and select FA.
- All of Disney's financial statements are accessible in the folders of this page (glow). A company's dividends are often used to value its stock. Click on the I/S tab to see Disney's historical income statements. Scroll toward the bottom of the screen and find dividends per share. The numbers in amber are historical while those in white are projections.



- The below screenshot shows graph for FA the Disney which has the I/S and BBG GAAP which shows the dividend per share – 0.988.

- A company's cost of equity, which can be used as the expected return for its stock, can be found by typing WACC in the command line for Weighted Average Cost of Capital and pressing Enter or <GO>.



- Disney's cost of equity is 9.1% at the time of this recording. These data points are all useful to value stock.

- Disney's cost of equity is 9.1% at the time of this recording. These data points are all useful to value stock.
- At last, the graph shows the WACC – 9.0955 which is mentioned as 9.1%

Fixed Income Analysis & Valuation

1. **Using the debt ratios provided, write a few bullet points analyzing the relative creditworthiness of Disney and its peers.**

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Broadcasting						Content			Facilities		
	Disney	Charter	Comcast	CBS	Netflix	Discovery	Scripps	Lions Gate	Six Flags	Cedar Fair	Merlin
Debt/Assets	21.2	49.8	44.4	46.4	39.9	52.4	32.3	32.5	83.7	82.2	34.5
Coverage Ratio	18.4	1.5	5.4	5.9	3.8	2.7	3.6	1.6	4.8	3.3	7.0
Debt/EBITDA	1.2	4.7	3.8	3.4	6.1	5.1	3.6	7.1	3.3	3.7	2.7

- Debt/Assets Ratio:

It measures the proportion of a company's assets financed by debt, with a lower ratio indicating lower financial risk and greater creditworthiness. **Disney's debt to assets ratio is relatively low** at 21.2%, implying that only about 21% of its total assets are financed with debt. In contrast, the debt to assets ratio of peers such as Charter, Comcast and CBS are higher indicating a greater reliance on borrowed funds. This indicates that Disney is in a strong financial position, having a significant asset base, but maintaining a low level of debt, which makes it highly creditable in adverse market conditions. Furthermore, while broadcasting peers typically display higher Debt/Assets ratios compared to content peers, the facilities peer category appears particularly leveraged and vulnerable to market fluctuations.

- Coverage Ratio:

It is also known as the interest coverage ratio, measures a company's ability to meet its interest obligations with its earnings before interest and taxes (EBIT). A greater ability to cover interest payments is indicated by an increased coverage ratio. It is defined as:

Interest Coverage Ratio = Earnings before Interest and Tax / Interest Expense

Disney's strong creditworthiness is demonstrated by its impressive Coverage Ratio of 18.4, which shows that it can almost cover its interest payments with its earnings 18.4 times over. Leading its closest peer (Merlin) by almost 2.5X. On the other hand, businesses with much lower coverage ratios, such as Charter and Lions Gate, show that they are more susceptible to earnings shocks and raise questions about their capacity to service debt.

- Debt/EBITDA:

A company's total debt is compared to its earnings before interest, taxes, depreciation, and amortization (EBITDA) using the Debt/EBITDA ratio. **Disney's comparatively low ratio** of 1.2 indicates a lower level of financial risk because its debt is only 1.2 times its yearly EBITDA. Furthermore, Disney's strong creditworthiness is highlighted by its significant lead in terms of Debt/EBITDA ratio—nearly 2.5 times that of its closest peer, Mercedes. On the other hand, businesses such as Lions Gate have considerably higher ratios; their debt is almost seven times their EBITDA income, which is concerning for their stability.

2. **Write a few bullet points justifying why credit rating agencies rate Disney's debt higher than its peers.**

- Disney maintains a low Debt/Assets ratio of 21.2%, reflecting conservative debt management and a strong financial position. With a coverage ratio of 18.4, Disney can cover its earnings nearly 18.4 times in interest payments. As compared to its debt, Disney has the lowest level of leverage thus indicating that it is less exposed to financial leverage risk.
- The company has a favorable debt to EBITDA ratio of 1.2, which allows it to effectively manage its indebtedness. Provides multiple times of its EBITDA to cover interest and debt payments. Therefore, there is a very low risk that Disney will default on its interest and principal repayments.
- To meet debt obligations, different revenue streams from media networks, theme parks and film studios ensure a stable financial position.

Disney's reputation as a global brand and its strategy investments are the reason for high credit ratings. A positive impact on credit ratings is the strengthening of Disney's finances and its growth potential by means of investment and acquisitions.

3. **Calculate the yield-to-maturity on a Disney bond that matures in 13 years, pays 7.0% coupon, semi-annually, with a current price of $148.026. bond has a par value of $1,000.**

3. Number of periods = 13 years * 2

= 26 semi-annual periods

$$\text{Coupon per period} = \left[\frac{\text{Coupon rate}}{\text{No. of coupon payments per year}}\right] * \text{Par value}$$

$$\text{Coupon per period} = \left[\frac{7\%}{2}\right] * \$1000$$

$$= \$35$$

$$\text{Bond price} = \sum \frac{\text{Coupon}}{\left(1+\frac{YTM}{2}\right)^{\text{period}}} + \frac{\text{Par value}}{\left(1+\frac{YTM}{2}\right)^{\text{period}}}$$

$$\$1480.26 = \frac{\$35}{\left(1+\frac{YTM}{2}\right)^{1}} + \frac{\$35}{\left(1+\frac{YTM}{2}\right)^{2}} + \ldots + \frac{\$35}{\left(1+\frac{YTM}{2}\right)^{26}} + \frac{\$1000}{\left(1+\frac{YTM}{2}\right)^{26}}$$

SET N = 26, PV = -1480.26, FV = 1000, PMT = 35

CPT ⇒ I/Y = 1.3088 %

YTM = 2*(I/Y) = 2 * 1.3088 %

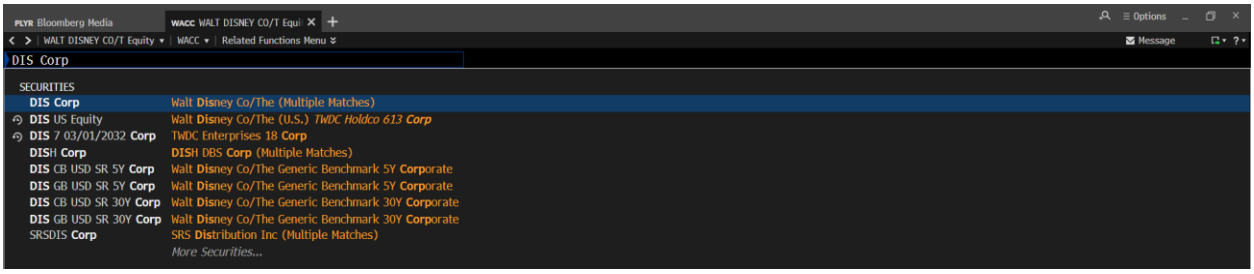
Yield to maturity (YTM) = 2.6176 % ⇒ **2.62 %** //

4. **Use the Terminal Tutorial section to find the yield-to-maturity on the same bond in question 3. Explain the difference between your calculation and the Terminal Tutorial result.**

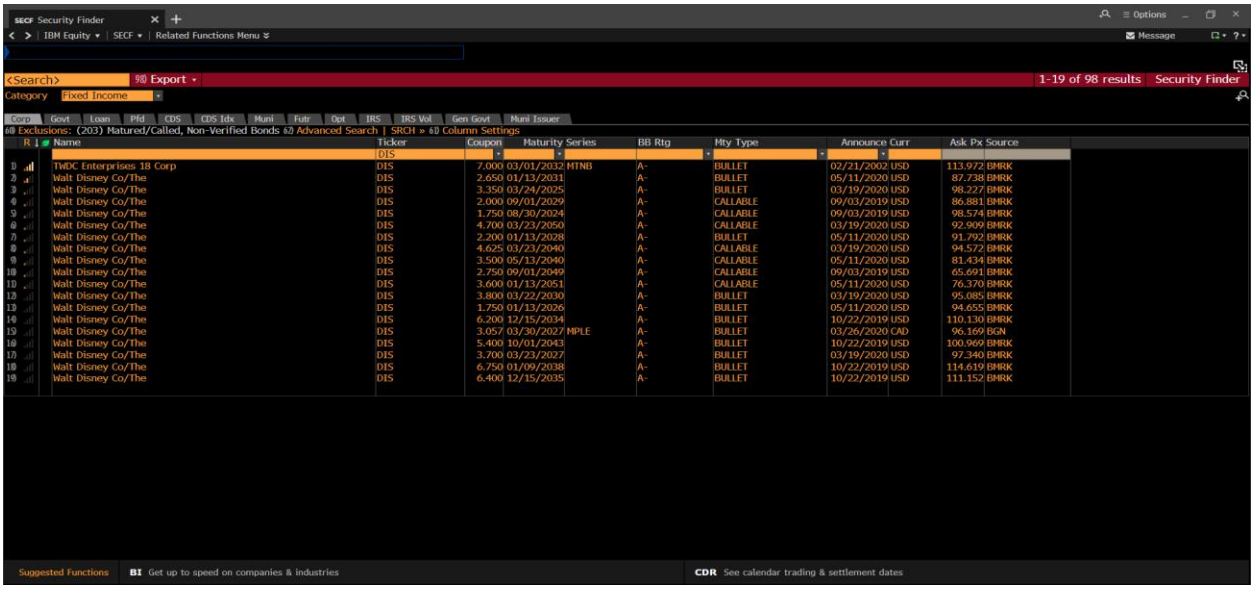
The differences in YTM values are mainly due to the difference of bond prices. Higher bond prices result in lower YTMs, indicating a premium, while lower bond prices lead to higher YTMs which indicate discounts. Therefore, the price of bonds is correlated with the YTM.

Below screenshot shows –

- Log in to the Terminal. In the command line, type DIS followed by the yellow F3 Corp key and press Enter or <GO>.



- This is the Security Finder, or SECF, page for finding securities on the terminal. The "DIS Corp" command filtered the SECF page to show a table of all The Walt Disney Company's bonds. Select the bond that matures on 03/01/2032 with a coupon of 7.000.



- The below output shows for Yield and Spread Analysis (YAS) in which the given Price is 148.026 the yield is 2.521749.

- A positive YTM indicates that the bond is trading at a premium because of its lower yield compared to the coupon rate, indicating that the bond is preferred by investors and perceived to be less risky than other investments.

- The below output shows for Yield and Spread Analysis (YAS) in which the given Price – 1480.26 the yield is -18.150688.

- A negative YTM indicates that the bond is trading at a discount because of its higher yield compared to the coupon rate, reflecting investor demand for higher returns to compensate for the lower price of the bond. The perception of increased risk or lower attractiveness as compared to alternative investments could be indicated by this.


YAS DIS 7 03/01/2032 Corp
Options
DIS 7 03/01/2032 Corp | YAS | Related Functions Menu
Message
DIS 7 03/01/32 $↑113.602 +.022 59.2 bp vs T 4.00 02/15/2034
As of 04 Apr Source BMRK
DIS 7 03/01/32 Corp
Settings
Yield and Spread Analysis
Notes
Buy
Sell
1) Yield & Spread
2) Graphs
3) Pricing
4) Description
5) Custom
DIS 7 03/01/32 (25468PBW5)
Spread -2021.6 bp vs 10y T 2 3/8 05/15/29
Price 1480.26 102.7266
Yield -18.150688 Wst 2.065879 S/A
Wkout 03/01/2032 @ 100.00 Yld 6 6
Settle 07/31/19 07/30/19
Trade 07/29/19 Retro (Using input price)
Risk
Workout
OAS
M.Dur
Dur
Risk 189.029 190.666
Convexity 1.762 1.787
DV 01 on 1MM 18,903 19,067
Benchmark Risk 8.961 9.013
Risk Hedge 21,096M 21,154M
Proceeds Hedge 14,369M
Spreads
11) G-Sprd -2029.
12) I-Sprd -1994.
13) Basis 2026.6
14) Z-Sprd -1996.
15) ASW -1160
16) OAS -2029.
Yield Calculations
Street Convention -18.150688
Equiv 1 /Yr -17.327069
Mmkt (Act/360) -18.145701
Current Yield 0.473
Invoice
Face 1,000 M
Principal 14,802,600.00
Accrued (150 Days) 29,166.67
Total (USD) 14,831,766.67
After Tax (Inc 40.800 % CG 23.800 %) -9.076103
Issue Price = 99.170. Bond Purchased at Par.
Suggested Functions
CRPR Analyze credit ratings for a debt issuer
GY See if yields are historically high/low