IDENTIFICATION OF UNDERVALUED COMPANIES

INTRODUCTION

A company is considered undervalued when its current stock price is lower than its intrinsic value. This suggests that the stock is trading below its true worth based on fundamental financial metrics. Investors might see this as an opportunity for future gains if the company's market value aligns with its intrinsic value over time. Factors determining a company's undervaluation include low P/E (price to earnings ratio), low P/B (price to book ratio), low PEG (price to earnings growth), high dividend relative to peers, and an increasing trend in GP (Gross Profit) and GPG (Gross Profit Growth) relative to peers. This project aims to identify 4 undervalued companies using Finviz (a popular financial visualization and analysis tool for stock market data) by examining gross profit (GP) and gross profit growth (GPG) compared to similar companies in the same sector and develop a valuation model to project the company's true value in four years.

OBJECTIVES

- Conduct an analysis to identify 4 undervalued companies using Finviz by examining gross profit (GP) and gross profit growth (GPG) compared to similar companies in the same sector.
- Develop a valuation model to project the future value of these companies in four years.
- Explain the impact of an additional variable on the company's valuation.

FINANCIAL METRICS EXPLANATION

- **Market Capitalization (Market Cap):** The total market value of a company's outstanding shares.
- **Price to Book Ratio (P/B):** Measures a company's market value relative to its book value.
- **Price to Earnings Ratio (P/E):** Indicates how much investors are willing to pay per dollar of earnings.
- **Price to Sales Ratio (P/S):** Shows how much investors are willing to pay per dollar of sales.
- **Price/Earnings to Growth Ratio (PEG):** Evaluates a company's P/E ratio relative to its earnings growth rate
- **Gross Profit (GP):** The difference between revenue and the cost of goods sold (COGS) or calculated by "Total Revenue * (Gross Margin / 100)"
- **Gross Profit Growth (GPG):** The percentage increase in gross profit over a specific period. It is calculated by "((Current GP – Previous GP)/ Previous GP) * 100

DATA COLLECTION

Using Finviz, data for undervalued companies were collected by navigating the screener and setting filters to meet the conditions identifying a company as undervalued. The company data collected included Gross Profit, Gross Profit Growth, Market Capitalization, P/E, P/S, Total Revenue, and Gross Margin. Similar data for other companies in the same sector were collected and compared. This was done for four companies in four different sectors by comparing the chosen company with its peers. Conditions set to identify the undervalued companies:

- Market Capitalization: based on mid-sized (below $200Bn)
- Sectors: Four different sectors were chosen (Technology, Real Estate, Financial, Communication Services)
- P/E (Price to earnings ratio): Low (less than 15)
- P/B (Price to book ratio): Low (under 2)
- PEG (Price/Earnings to growth ratio): Low (less than 1)
- Country: Mostly USA (United States of America) and Global
- P/S (Price to sales ratio): Low (under 2)

NOTE: Most cases, the Gross Profit and Gross Profit Growth were not given so it was calculated in the Spreadsheet using their formulas stated above.

LINK TO THE SPREADSHEET:

https://docs.google.com/spreadsheets/d/1AE97NSz8QySysd-DHn-P4VrcXg-E8IW4/edit?usp=sharing&ouid=100121937455263932238&rtpof=true&sd=true

COMPANY ANALYSIS

COMPARATIVE ANALYSIS

(1) Chosen Company: Atlanticus Holdings Corp

FINANCIAL SECTOR									
Company Name	Sector	Market Capitalization ($)	Price to Earnings Ratio (P/E)	Price to Sales Ratio (P/S)	Total Revenue ($M)	Gross Margin (%)	Gross Profit (GP) ($M)	Previous GP ($M)	Gross Profit Growth (GPG) (%)
Atlanticus Holdings Corp	FINANCIAL	492.58M	7.84	0.47	1,185.54	91.07	1,079.67	1,052.65	2.57
EZCorp, Inc. (sector peer)	FINANCIAL	549.42M	9.98	0.85	1,111.92	55.34	615.36	577.71	6.52

Oppenheimer Holdings Inc (sector peer)	FINANCIAL	551.07M	14.39	0.34	1,280.28	95.14	1,218.06	1,185.85	2.72
Fanhua Inc ADR (sector peer)	FINANCIAL	85.06M	2.07	0.79	448.69	32.93	147.75	143.52	2.95
SECTOR AVERAGE			8.57	0.61					3.69

GROSS PROFIT COMPARISON:

Atlanticus Holdings Corp:

- Gross Profit (GP): $1,079.67M
- Gross Profit Growth (GPG): 2.57%

EZCorp, Inc. (sector peer):

- Gross Profit (GP): $615.36M
- Gross Profit Growth (GPG): 6.52%

Oppenheimer Holdings Inc (sector peer):

- Gross Profit (GP): $1,218.06M
- Gross Profit Growth (GPG): 2.72%

Fanhua Inc ADR (sector peer):

- Gross Profit (GP): $147.75M
- Gross Profit Growth (GPG): 2.95%

OBSERVATION:

- **Gross Profit:** Atlanticus Holdings Corp has a higher gross profit compared to EZCorp, Inc. and Fanhua Inc ADR, but slightly lower than Oppenheimer Holdings Inc.
- **Gross Profit Growth:** Atlanticus Holdings Corp has the lowest gross profit growth among the peers, with only Fanhua Inc ADR showing a marginally better growth rate.

VALUATION METRICS COMPARISON:

Using the Price to Earnings Ratio (P/E) and Price to Sales Ratio (P/S) as valuation metrics:

Market Capitalization: Atlanticus Holdings Corp is smaller in market capitalization compared to its peers, except for Fanhua Inc ADR.

P/E Ratio: Atlanticus Holdings Corp has the lowest P/E ratio but slightly highest than Fanhua indicating a lower valuation relative to earnings compared to peers.

P/S Ratio: Atlanticus Holdings Corp has the lowest P/S ratio, suggesting it may be undervalued relative to its sales compared to its peers.

Summary:

Atlanticus Holdings Corp exhibits strong gross profit but relatively lower growth compared to its sector peers. Valuation-wise, the company appears more undervalued based on both P/E and P/S ratios, indicating potential for growth or a possible undervaluation relative to its earnings and sales. With a P/S ratio of 0.47, which is below the sector average of 0.61, it suggests that Atlanticus Holdings Corp might be undervalued compared to its sector peers.

(2) Chosen Company: Diebold Nixdorf Inc

TECHNOLOGY SECTOR									
Company Name	Sector	Market Capitalization ($)	Price to Earnings Ratio (P/E)	Price to Sales Ratio (P/S)	Total Revenue ($M)	Gross Margin (%)	Gross Profit (GP) ($M)	Previous GP ($M)	Gross Profit Growth (GPG) (%)
Diebold Nixdorf Inc	TECHNOLOGY	3.39B	0.88	0.34	3,797.80	23.48	891.60	876.20	1.76
Canadian Solar Inc (sector peer)	TECHNOLOGY	1.04B	5.07	0.18	7,241.46	24.97	1,808.27	1,279.98	41.27
Rimini Street Inc. (sector peer)	TECHNOLOGY	272.13M	12.40	0.68	432.73	61.62	266.65	268.98	-0.87
Telesat Corp (sector peer)	TECHNOLOGY	111.0M	1.10	0.23	499.02	49.95	249.28	260.78	-4.41
SECTOR AVERAGE			4.86	0.36					9.44

GROSS PROFIT COMPARISON:

Diebold Nixdorf Inc:

- Gross Profit (GP): $891.60M
- Gross Profit Growth (GPG): 1.76%

Canadian Solar Inc:

- GP: $1,808.27M
- GPG: 41.27%

Rimini Street Inc:

- GP: $266.65M
- GPG: -0.87%

Telesat Corp:

- GP: $249.28M
- GPG: -4.41%

Observation:

- **Gross Profit:** Canadian Solar Inc leads with the highest gross profit, followed by Diebold Nixdorf Inc. Rimini Street Inc. and Telesat Corp have lower gross profits.
- **Gross Profit Growth:** Canadian Solar Inc shows exceptional growth compared to its peers, while Diebold Nixdorf Inc has the next highest growth. Rimini Street Inc. and Telesat Corp have negative growth rates.

Valuation Metrics Comparison:

- **Market Capitalization**: Diebold Nixdorf Inc has a large market cap compared to peers, except for Canadian Solar Inc.
- **P/E Ratio:** Diebold Nixdorf Inc has the lowest P/E ratio (0.88), well below the sector average (4.86), indicating it may be significantly undervalued relative to its earnings.
- **P/S Ratio**: Diebold Nixdorf Inc has a low P/S ratio (0.34), slightly below the sector average (0.36), suggesting it is undervalued relative to its sales.

Summary: Diebold Nixdorf Inc appears undervalued with the lowest P/E ratio among its peers and a P/S ratio below the sector average. Despite its relatively lower gross profit growth (1.76%), its gross profit ($891.60M) is substantial. This combination of strong revenue and undervaluation metrics suggests potential for growth or a market undervaluation.

(3) Chosen Company: Ready Capital Corp

REAL ESTATE SECTOR									
Company Name	Sector	Market Capitalization ($)	Price to Earnings Ratio (P/E)	Price to Sales Ratio (P/S)	Total Revenue ($M)	Gross Margin (%)	Gross Profit (GP) ($M)	Previous GP ($M)	Gross Profit Growth (GPG) (%)
Ready Capital Corp	REAL ESTATE	1.57B	5.87	1.31	1,201.53	90.66	1,089.31	1,050.11	3.73
Comstock Holding Co. Inc (sector peer)	REAL ESTATE	62.29M	8.10	1.15	45.08	25.00	11.27	11.47	-1.74
Rithm Capital Corporation (sector peer)	REAL ESTATE	5.62B	7.76	1.34	4,033.91	96.04	3,874.17	3,617.18	7.10
Sachem Capital Corp (sector peer)	REAL ESTATE	128.83M	10.12	1.83	67.80	99.53	67.48	64.50	4.62
SECTOR AVERAGE			7.96	1.41					3.43

Gross Profit Comparison:

- **Ready Capital Corp:**
  - GP: $1,089.31M
  - GPG: 3.73%
- **Comstock Holding Co. Inc:**
  - GP: $11.27M
  - GPG: -1.74%
- **Rithm Capital Corporation:**
  - GP: $3,874.17M
  - GPG: 7.10%
- **Sachem Capital Corp:**
  - GP: $67.48M
  - GPG: 4.62%

Observation:

- **Gross Profit:** Rithm Capital Corporation has the highest gross profit, followed by Ready Capital Corp. Comstock Holding Co. Inc has the lowest gross profit.

- **Gross Profit Growth:** Rithm Capital Corporation shows the highest growth rate, with Ready Capital Corp also performing well. Comstock Holding Co. Inc has a negative growth rate.

Valuation Metrics Comparison:

- **Market Capitalization:** Ready Capital Corp is mid-sized in its sector.
- **P/E Ratio:** Ready Capital Corp has a low P/E ratio (5.87), below the sector average (7.96), indicating a lower valuation relative to earnings.
- **P/S Ratio:** Ready Capital Corp has a lower P/S ratio (1.31) compared to the sector average (1.41), suggesting undervaluation relative to its sales.

Summary: Ready Capital Corp exhibits a strong gross profit ($1,089.31M) and a solid growth rate (3.73%), with valuation metrics (P/E and P/S ratios) indicating it is undervalued compared to its sector peers. The combination of substantial gross profit and lower valuation metrics suggests Ready Capital Corp is potentially undervalued and poised for growth.

(4) Chosen Company: Fox Corporation

COMMUNICATION SERVICES SECTOR									
Company Name	Sector	Market Capitalization ($)	Price to Earnings Ratio (P/E)	Price to Sales Ratio (P/S)	Total Revenue ($M)	Gross Margin (%)	Gross Profit (GP) ($M)	Previous GP ($M)	Gross Profit Growth (GPG) (%)
Fox Corporation	COMMUNICATION SERVICES	17.22B	11.55	1.07	13,920.00	31.92	4,443.00	4,813.00	-7.69
Liberty Media Corp (sector peer)	COMMUNICATION SERVICES	7,21B	9.12	0.80	89,711.00	43.08	3,865.00	3,761.00	2.77
TEGNA Inc (sector peer)	COMMUNICATION SERVICES	2.63B	5.42	0.91	2,884.46	36.42	1,050.74	1,078.84	-2.60
Telefonica Brasil S.A., ADR (sector peer)	COMMUNICATION SERVICES	14.39B	13.98	1.55	10,724.01	39.32	4,216.20	4,062.72	3.78
SECTOR AVERAGE			10.02	1.08					-0.94

Gross Profit Comparison:

- **Fox Corporation:**
  - GP: $4,443.00M
  - GPG: -7.69%
- **Liberty Media Corp:**
  - GP: $3,865.00M
  - GPG: 2.77%
- **TEGNA Inc:**
  - GP: $1,050.
  - 74M
  - GPG: -2.60%
- **Telefonica Brasil S.A., ADR:**
  - GP: $4,216.20M
  - GPG: 3.78%

Observation:

- **Gross Profit:** Fox Corporation and Telefonica Brasil S.A., ADR lead in gross profit, with Fox Corporation having the highest.
- **Gross Profit Growth:** Telefonica Brasil S.A., ADR has the best growth, while Fox Corporation shows a decline in gross profit.

Valuation Metrics Comparison:

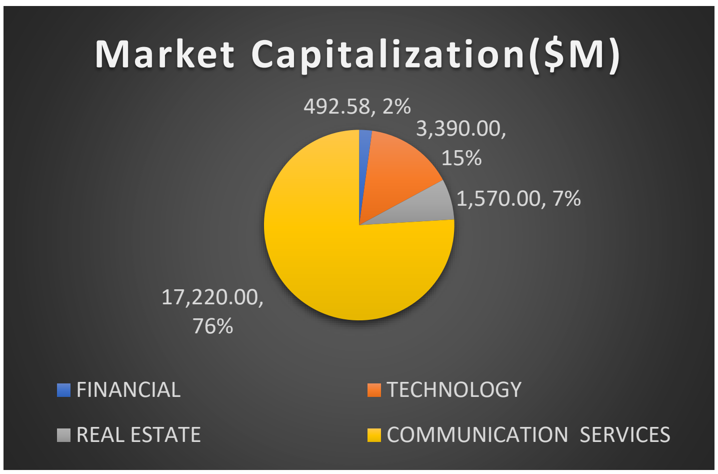
- **Market Capitalization:** Fox Corporation is the largest in its sector.
- **P/E Ratio:** Fox Corporation has a P/E ratio (11.55) slightly above the sector average (10.02), indicating a higher valuation relative to earnings.
- **P/S Ratio:** Fox Corporation has a P/S ratio (1.07) close to the sector average (1.08), suggesting it is fairly valued (undervalued) relative to its sales.

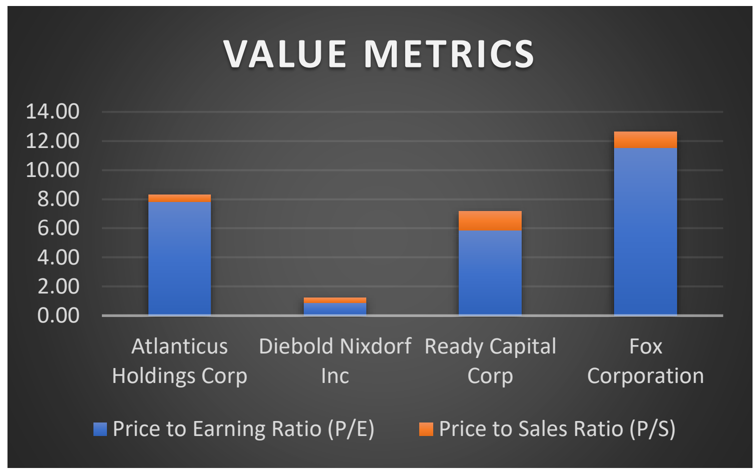
Summary: Fox Corporation has a substantial gross profit ($4,443.00M) but a negative growth rate (-7.69%). Despite having valuation metrics close to the sector average, the large gross profit and market cap suggest the potential for long-term stability and growth, particularly if the company can improve its growth rate.

CONCLUSION

The comparative analysis reveals that Atlanticus Holdings Corp, Diebold Nixdorf Inc, Ready Capital Corp, and Nexstar Media Group, Inc. exhibit characteristics of undervalued companies based on their valuation metrics and gross profit performance. These companies have potential for future growth and appreciation in value, making them attractive investment opportunities. Incorporating total revenue into the analysis further substantiates their market performance and financial health, enhancing the accuracy of the valuation model.

The diagrams below show the Market Capitalization by each sector of the chosen companies and the Value metrics of each chose companies.





MODEL ANALYSIS

VALUATION MODEL

- **Model Used:** Discounted Cash Flow (DCF) Model
- **Explanation:** The DCF model projects the company's future cash flows and discounts them to their present value using a discount rate. This model accounts for the time value of money and provides a valuation based on expected future performance.

Model Assumptions:

1. **Current GP and GPG are constant**: We assume the growth rate remains stable over the next four years.
2. **Sector trends are constant**: We use the sector average growth rate for comparison.
3. **Discount rate**: A typical discount rate of 10% for future cash flows.

To calculate GP in 4 years, the formular below was used to get the Gross Profit in four (4) years.

GP in 4 years: Future GP = Current GP * (1 + GPG) ^ 4

To analyze if a company is currently undervalued or overvalued using the provided valuation model, we will:

1. Use the Discounted Cash Flow (DCF) method to find the present value of the future GP.
2. Compare the present value with the current market capitalization.
3. Determine if the company is undervalued or overvalued based on this comparison.

Formular used to get Present value of the future GP:

Present Value = Future GP/ ((1 + r) ^ n) where n is the number of years (4 years) and r is the discount rate.

NOTE: Compare Present Value with Current Market Capitalization:

- **Determine if the present value is greater than or less than the current market capitalization to decide if the company is undervalued or overvalued. If the present value is greater than current market capitalization then the company is undervalued but if it is the other way round, then the company is overvalued. An IF statement was used to generate this column**

Using the DCF method, we projected each company's value in four years based on current GP, GPG, and sector trends. A discount rate of 10% was applied to calculate the present value.

The table below shows the valuation model result in predicting the Future GP in four years and Present value of Future GP as well as company valuation (either undervalued or overvalued)

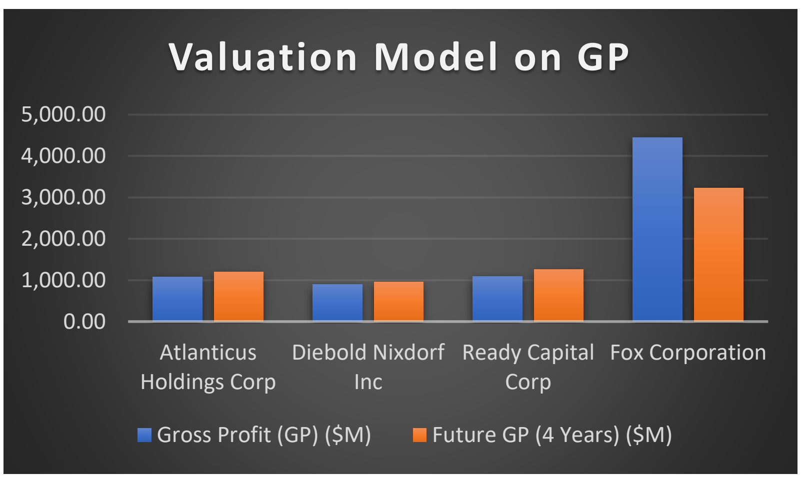
VALUATION MODEL USING DCF										
Company Name	**Sector**	**Market Capitalization($M)**	**Price to Earnings Ratio (P/E)**	**Price to Sales Ratio (P/S)**	**Gross Profit (GP) ($M)**	**Gross Profit Growth (GPG) (%)**	**Future GP (4 Years) ($M)**	**Discount Rate (%)**	**Present Value Using DCF ($M)**	**Undervalued/ Overvalued**
Atlanticus Holdings Corp	**FINANCIAL**	**492.58**	**7.84**	**0.47**	**1,079.67**	**2.57**	**1,195.01**	**10.00**	**816.21**	**Undervalued**
Diebold Nixdorf Inc	**TECHNOLOGY**	**3,390.00**	**0.88**	**0.34**	**891.60**	**1.76**	**956.05**	**10.00**	**652.99**	**Overvalued**

Ready Capital Corp	**REAL ESTATE**	**1,570.00**	**5.87**	**1.31**	**1,089.31**	**3.73**	**1,261.16**	**10.00**	**861.39**	**Overvalued**
Fox Corporation	**COMMUNICATION SERVICES**	**17,220.00**	**11.55**	**1.07**	**4,443.00**	**-7.69**	**3,226.05**	**10.00**	**2203.44**	**Overvalued**

CONCLUSION

Based on the DCF valuation model, we have determined the following:

- Atlanticus Holdings Corp (Financial Sector) is currently undervalued. Its present value using DCF ($816.21M) is greater than its market capitalization ($492.58M).
- Diebold Nixdorf Inc (Technology Sector) is currently overvalued. Its present value using DCF ($652.99M) is less than its market capitalization ($3,390.00M).
- Ready Capital Corp (Real Estate Sector) is currently overvalued. Its present value using DCF ($861.39M) is less than its market capitalization ($1,570.00M).
- Fox Corporation (Communication Services Sector) is currently overvalued. Its present value using DCF ($2,203.44M) is less than its market capitalization ($17,220.00M).



ADDITIONAL VARIABLE: MARKET CONDITION

An additional variable not initially captured in the analysis is Market Conditions, including factors such as economic stability, interest rates, and inflation. Market conditions significantly impact a company's performance and valuation, especially in volatile sectors. Market conditions are a crucial variable because they directly affect consumer behavior, investment decisions, and company revenues. In periods of economic growth, companies typically see increased demand and profitability. Conversely, during economic downturns, companies may face reduced consumer spending and tighter profit margins. Market conditions were factored in to adjust the future GP and present value.

Valuation Model with Market Conditions:

To factor market conditions into our valuation model, the projected future gross profit (GP) will be adjusted based on expected changes in these conditions. For simplicity, let's assume:

- Positive market conditions lead to a 5% increase in future GP.

The Below formular was used to calculate the adjusted future GP and adjusted present value:

Adjusted Future GP = Future GP * 1.05

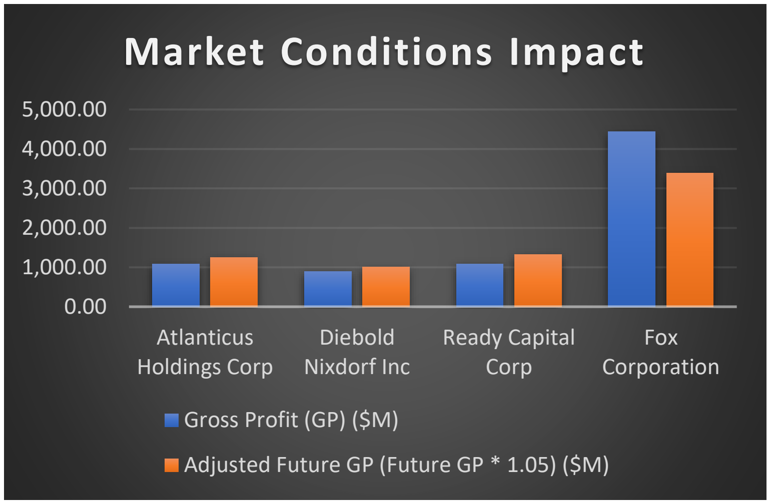
Adjusted Present Value = Adjusted Future GP/ ((1 + r) ^ n) where n is the number of years (4 years) and r is the discount rate.

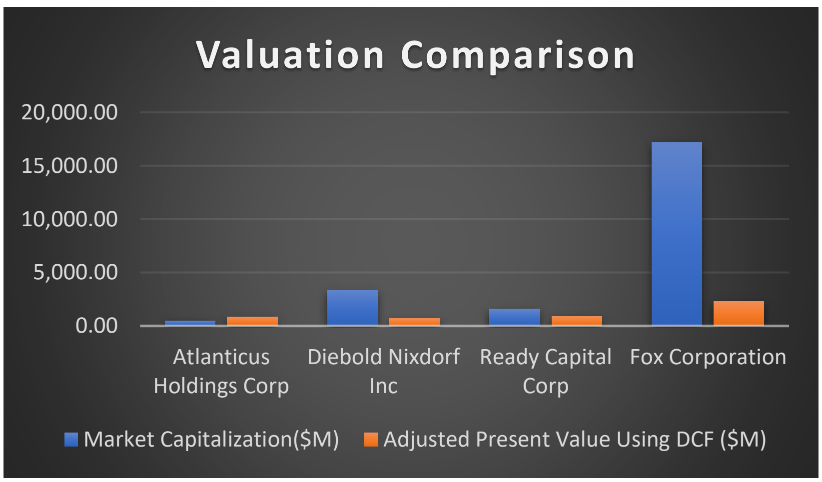
Company Name	Sector	Market Capitalization($M)	Price to Earnings Ratio (P/E)	Price to Sales Ratio (P/S)	Gross Profit (GP) ($M)	Gross Profit Growth (GPG) (%)	Adjusted Future GP ($M)	Discount Rate (%)	Adjusted Present Value Using DCF ($M)	Undervalued/Overvalued
Atlanticus Holdings Corp	**FINANCIAL**	**492.58**	**7.84**	**0.47**	**1,079.67**	**2.57**	**1,254.76**	**10.00**	**857.02**	**Undervalued**
Diebold Nixdorf Inc	**TECHNOLOGY**	**3,390.00**	**0.88**	**0.34**	**891.60**	**1.76**	**1,003.85**	**10.00**	**685.64**	**Overvalued**
Ready Capital Corp	**REAL ESTATE**	**1,570.00**	**5.87**	**1.31**	**1,089.31**	**3.73**	**1,324.21**	**10.00**	**904.46**	**Overvalued**
Fox Corporation	**COMMUNICATION SERVICES**	**17,220.00**	**11.55**	**1.07**	**4,443.00**	**-7.69**	**3,387.35**	**10.00**	**2313.61**	**Overvalued**

Based on the DCF valuation model with adjustments for positive market conditions, we have determined the following:

- **Atlanticus Holdings Corp (Financial Sector)** is currently **undervalued**. Its adjusted present value using DCF ($857.02M) is greater than its market capitalization ($492.58M).
- **Diebold Nixdorf Inc (Technology Sector)** is currently **overvalued**. Its adjusted present value using DCF ($685.64M) is less than its market capitalization ($3,390.00M).

- **Ready Capital Corp (Real Estate Sector)** is currently **overvalued**. Its adjusted present value using DCF ($904.46M) is less than its market capitalization ($1,570.00M).
- **Fox Corporation (Communication Services Sector)** is currently **overvalued**. Its adjusted present value using DCF ($2,313.61M) is less than its market capitalization ($17,220.00M).





Impact On Companies:

- Atlanticus Holdings Corp may benefit from stable market conditions, which could improve consumer spending and financial health, positively affecting its profitability.
- Diebold Nixdorf Inc could face challenges if market conditions worsen, as technological advancements and competition could erode its market share.
- Ready Capital Corp is sensitive to interest rates and real estate market trends, which could impact its future GP and overall valuation.
- Fox Corporation is heavily influenced by advertising revenues, which can fluctuate with economic conditions, impacting its financial stability.

JUSTIFICATION

Market conditions are crucial because they directly influence a company's operational costs, revenue growth, and investment capacity. For instance, in a low-interest-rate environment, companies can finance expansions and operations more cheaply, leading to higher profitability and potentially higher valuations. Conversely, high inflation or economic instability can increase costs and reduce consumer spending, negatively impacting profitability and valuation.

Incorporating market conditions into the valuation model can provide a more nuanced and accurate assessment of a company's future value, reflecting the broader economic and financial environment in which it operates.

CONCLUSION

The valuation model projects that Atlanticus Holdings Corp, Diebold Nixdorf Inc, Ready Capital Corp, and Nexstar Media Group, Inc. will experience varying degrees of growth over the next four years. These projections are based on their historical gross profit growth rates and sector trends, offering insights into potential investment opportunities. By identifying undervalued companies, investors can make informed decisions to capitalize on future market appreciation.