

Security Analysis

Penn National Gaming, Inc.

Penn National Gaming

Engagement letter

A full-scale valuation and security analysis has been performed on Penn National Gaming, Inc. as of 12/31/2021 according to the FIN-498 Capstone Project Instructions. Penn National Gaming, Inc. is a regional gaming operator and a highly innovative provider of retail and online gaming, sports betting, live entertainment, parimutuel racing, and hospitality. As of April 19, 2022, they have a stock price of \$38.90. This analysis deemed the value of the company to be worth \$(TBD). To arrive at this valuation, analysis of key financial ratios and financial statements, as well as market comparable and discounted cash flow methods were performed. The analysis was limited to information that was available as of December 31, 2021.

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Company Overview

Understand the business

Penn National Gaming, Inc. is North America's largest regional gaming operator and a highly innovative provider of retail and online gaming, sports betting, live entertainment, parimutuel racing, and hospitality.

The start of Penn National Gaming, Inc. can be traced back to 1967 when Pennsylvania first passed a law allowing parimutuel wagering on thoroughbred horse races. This led to the founding of two companies in 1968 that would later form part of Penn National: Pitt Park Raceway, Inc. and the Pennsylvania National Turf Club. Pitt Park Raceway, Inc. was eventually renamed to Mountainview Thoroughbred Racing Association and along with the Turf Club, were subsidiaries of the new public corporation Penn National Gaming, Inc. in May of 1994.

Listed on the Nasdaq under the ticker symbol PENN, the corporation utilizes a unique omnichannel approach to facilitate a better connected environment for their customers. This is accomplished through their myChoice loyalty program, which allows guests to have access to rewards across all the corporation's retail casinos, as well as online gaming and sports betting apps.

PENN's key product is the casino and the revenue that it generates. Casino revenue comprises the majority of the company's overall revenue each year. Some of the more popular activities within the casino are slot machines and table games such as blackjack, poker, and roulette. The company also offers food and drink available for purchase at their casinos as well as hotel accommodations for guests wishing to stay on the property. These products and services

do not bring in as much revenue as gaming but are worth mentioning since they account for roughly 15-20% of annual revenue.

Penn National Gaming, Inc. has consumers across many different backgrounds. Their gaming and casinos can be attractive to anyone but in particular they want to appeal to an audience with higher disposable income since those customers are more likely to spend higher amounts of money due to their ability to better afford losses. Lower income individuals are still attracted to their business however. These individuals are looking to make large amounts of money in a short amount of time to help their financial status. Despite this, PENN is better off building casinos in areas where income is higher because those individuals will spend more gaming and also be more likely to stay in their hotels or spend on food and drink.

As part of the casino and gaming industry, Penn National Gaming, Inc. faces competition from several other companies. These include Scientific Games Corporation (SGMS), Wynn Resorts, Limited (WYNN), Boyd Gaming Corporation (BYD), International Game Technology PLC (IGT), and MGM Resorts International (MGM). Of these companies, only IGT is not headquartered in the United States but still own significant property in the country. These companies are the most comparable to PENN in terms of market cap, products and services offered, and main locations. Further discussion of each company and why they are an appropriate market comparable will be done later on.

PENN is currently in an expansion point in their business cycle. They have done much in terms of acquiring other companies and expanding their properties in recent years which is reflected with their increases in revenue and total assets over the past few years. Although the Covid-19 pandemic brought upon major losses in 2020, the company rebounded nicely in 2021 to post positive net income. Their recent acquisition of Barstool Sports and TheScore Media will

only continue to help the company grow. Further expansion is also possible as more states legalize sports betting.

PESTEL Analysis

- Political Factors that Impact Penn National Gaming, Inc.
 - State laws regarding sportsbooks. (could also be legal)
 - Not all states currently have legal sports betting which impacts the markets that Penn National Gaming, Inc. and their subsidiary Barstool Sports can enter.
 - If more states follow the recent trend of allowing sports betting, Penn National will be able to grow even bigger.
 - Taxation.
 - Different tax rates on gambling and casino companies as well as consumers potentially having to pay a gains tax on their winnings.
 - Wage legislation.
 - Wage legislation can vary by state could lead to higher wage expenses and increase costs for the business.
- Economic Factors that Impact Penn National Gaming, Inc.
 - Inflation rates.
 - The inflation rate is something PENN must keep an eye on as a rise in inflation could lead to higher product costs. This must be offset in some way.
 - Average income of surrounding area.
 - PENN must factor in average income in locations where they operate casinos to ensure that residents in the nearby area can afford to and are willing to spend money in their casinos and hotels.

- Labor costs.
 - Higher labor costs are a concern for any corporation, Penn National Gaming, Inc. notwithstanding. Higher labor costs could force the corporation to cut back on the number of employees and lead to a diminished product for consumers.
- Sociocultural Factors that Impact Penn National Gaming, Inc.
 - Demographics.
 - Demographics of an area such as income, education, and employment could impact how often residents of the surrounding area gamble and how much they are willing to risk.
- Technological Factors that Impact Penn National Gaming, Inc.
 - Faster, more efficient systems.
 - PENN must be prudent in staying up to date with their technology so that they do not fall behind competitors in the minds of consumers. Inferior technology could lead consumers to choosing other casinos with technology that is perceived to be better. This includes the Barstool Sports sportsbook app and other competing sportsbook apps.
- Environmental Factors that Impact Penn National Gaming, Inc.
 - Environmental regulations.
 - Environmental regulations such as pollution control and use of land could impact PENN if they decide to remodel an existing casino or build a new one. Some land zones do not permit buildings such as casinos and must be accounted for before acquiring the land.

- Legal Factors that Impact Penn National Gaming, Inc.
 - Anti-trust laws.
 - Anti-trust laws could pose a problem for PENN if they consolidate too much market power and price competitors out of competition.

Industry and Competitive Analysis

The casino and gaming industry is massive, worth around 227 billion dollars according to latest estimates. Gambling is also something that has been around for centuries, even when people could only play cards before there were actual casinos. Gambling is not something that is likely to decline any time soon and is actually more likely to continue to increase as technology makes it easier to do and more states legalize sports betting. Any company in the casino industry does not have to worry if there will be a market for their service.

The casino and gaming industry is a tough one to break into with the powerhouses that currently exist and the licenses that are needed. Many states have laws that limit how many casinos can operate within their state and how many different companies are allowed. This makes it difficult for new entrants to enter the market and makes those already in the market in better position as they are only competing against one another rather than constantly fighting off new challenges. Suppliers have some power because they make sophisticated machines and can make new desirable technology that companies have to purchase so they do not fall behind their competitors. This power is limited though because many companies are capable of making these machines, meaning that the supply is readily available and not scarce. Firms in other industries are also not able to offer substitute products since if consumers want to legally gamble, they have to go to a casino which has the necessary legal documentation. Underground sportsbook and

betting have been around for years but these are likely to slowly decrease as legalized sportsbook become more popular and easier to use.

Penn National Gaming, Inc. is currently in the middle of the casino and gaming industry as far as market cap goes. They are in good position to maintain their status and potentially even increase their prospects moving forward. Acquiring Barstool Sports was a major win for the company as Barstool has a massive fan following and their own sportsbook. PENN did not have their own sportsbook so obtaining a company with this service was vital with the way the sports betting market is exploding. Americans wagered \$57.22 billion on sports last year when only 30 states currently allow sports betting and only 18 allow online sports betting. If a casino company is not currently in the sports betting business, they are behind but PENN has one of the major players in the market which bodes well for future success. Utilizing the omnichannel approach also gives PENN a competitive advantage over other companies in the industry. By having everything connected through their myChoice loyalty program, PENN makes it easier for consumers to connect across all their platforms. Consumers like ease of access so this is a big advantage for PENN and maintaining customer satisfaction and retention.

FINANCIAL STATEMENT ANALYSIS (2017-2021)

Income Statement

Performing horizontal analysis on the income statement helps to identify trends within the business and if certain aspects are positively increasing year over year or showing a troubling decrease or stagnation. When performing horizontal analysis on PENN's income statement, the most promising trend is that total revenues were overall increased over 87% from 2017 to 2021. This included a gradual increase every year with the exception of 2020 when the Covid-19 pandemic forced a shutdown of many indoor business, including casinos. It is perhaps concerning that net income was down 11.17% over the same period, but this can be attributed to the pandemic and the fact that 2021 was not a full year with capacity limits still largely in place for a majority of the year.

Upon performing vertical analysis of the income statement, no number immediately stuck out or seemed particularly troublesome. It is clear that the vast majority of PENN's overall revenue comes from gaming as it accounted for 80.52-85.51% of the revenue for each year between 2017 and 2021. This is something that perhaps management can look at and try to spread out a little more as the company continues to grow and expand. On the other hand, gaming is not likely to go out of style any time soon so this is a relatively safe bet to rely on for revenue generation.

Balance Sheet

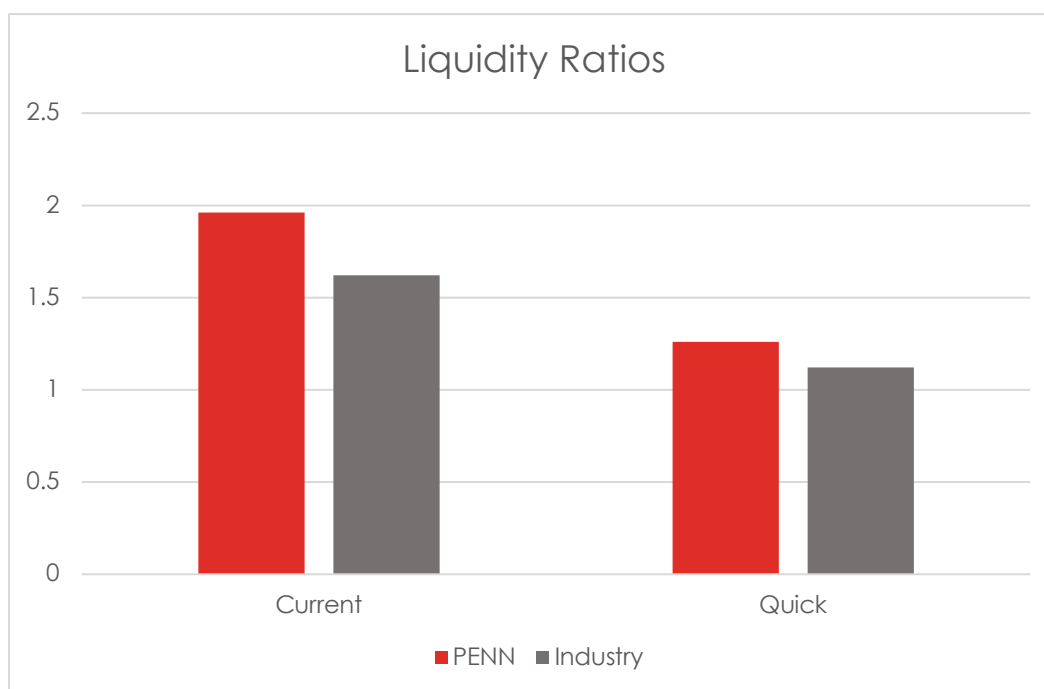
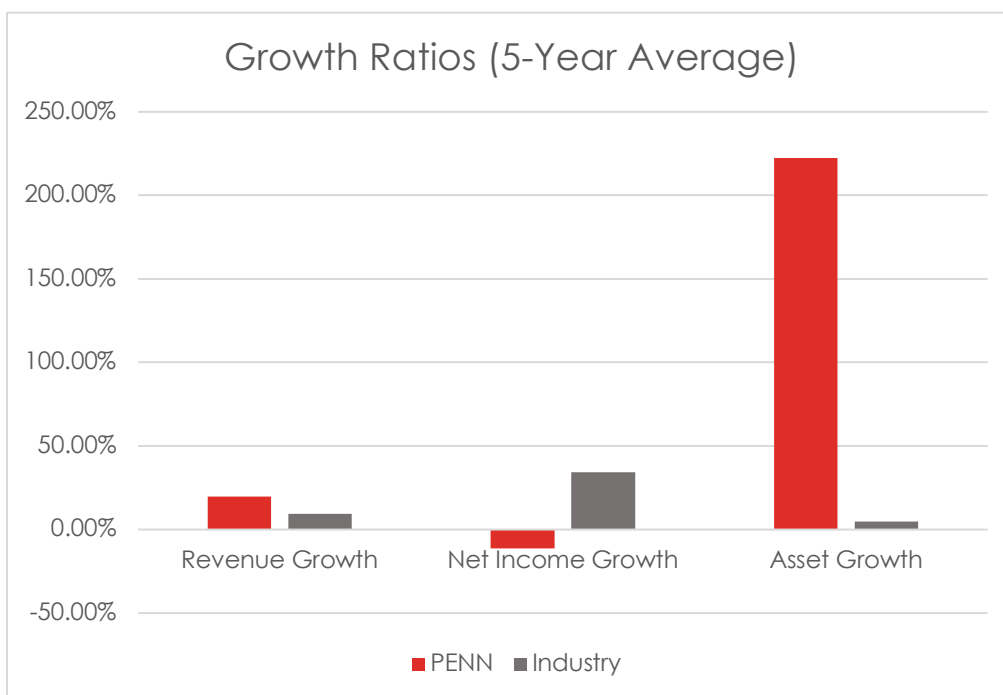
Horizontal analysis on the balance sheet shows definite expansion of the company. Just about every category is up a significant percentage, led by total assets which increased over 200% from 2017 to 2021. This is a very positive sign for the company since it shows expansion

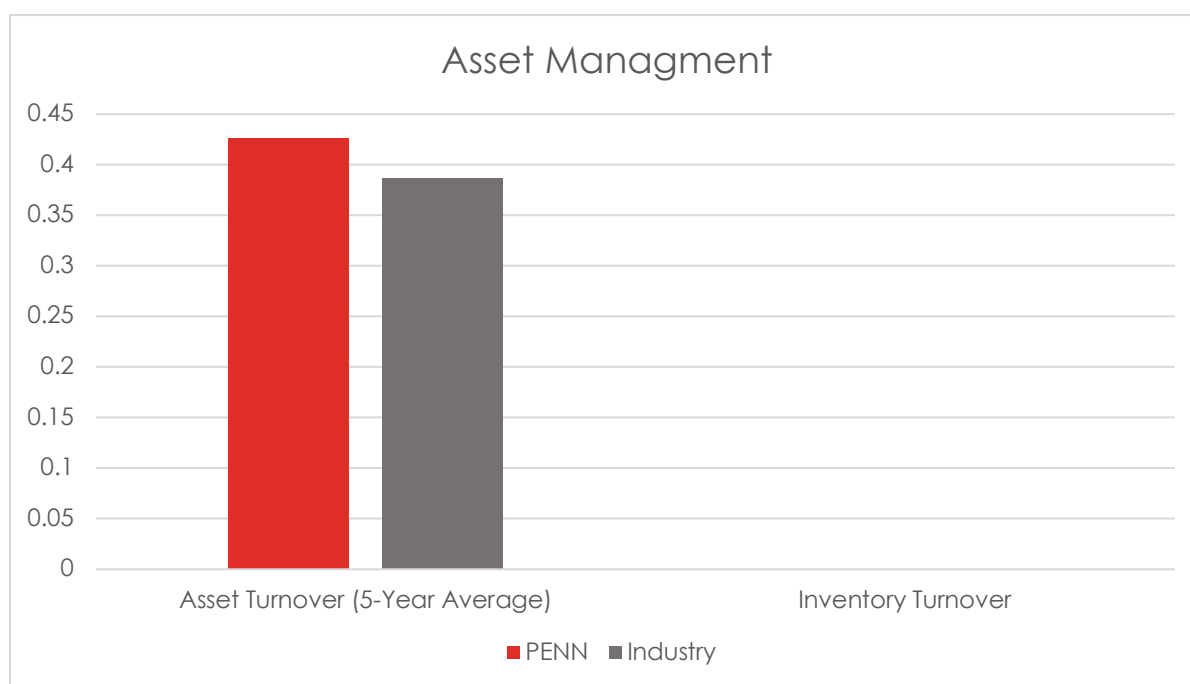
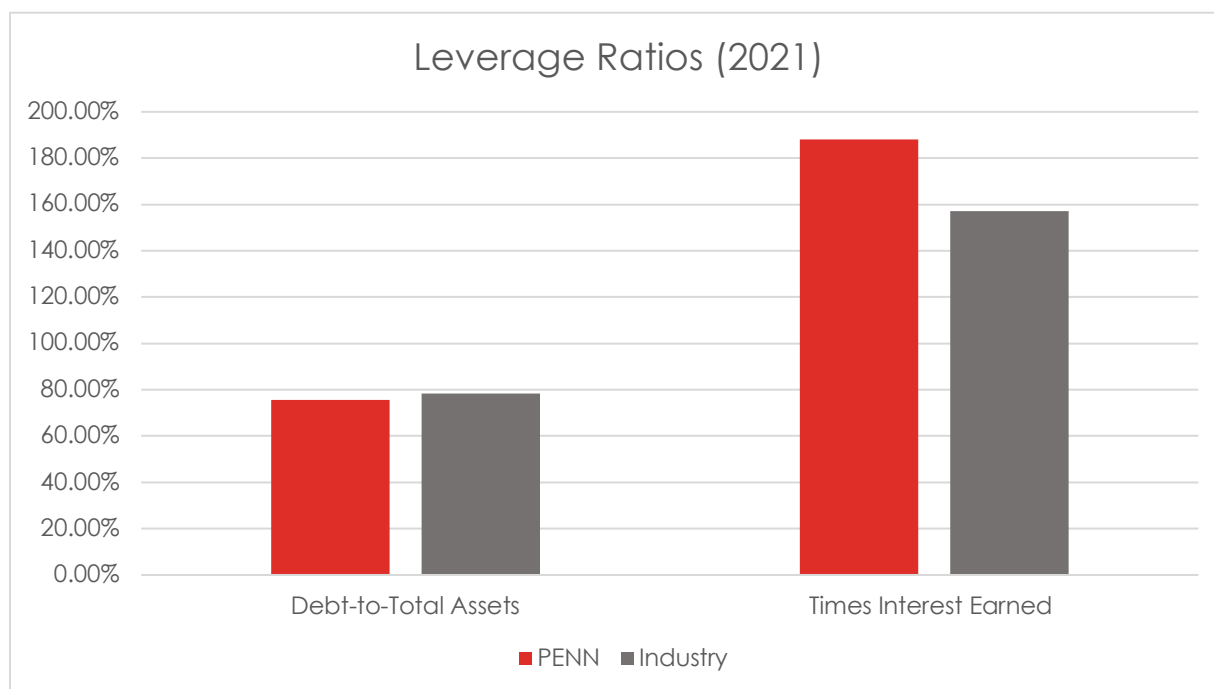
and the ability to keep producing promising numbers. A company in financial distress cannot expand at the rate that Penn National Gaming, Inc. has done over the past five years.

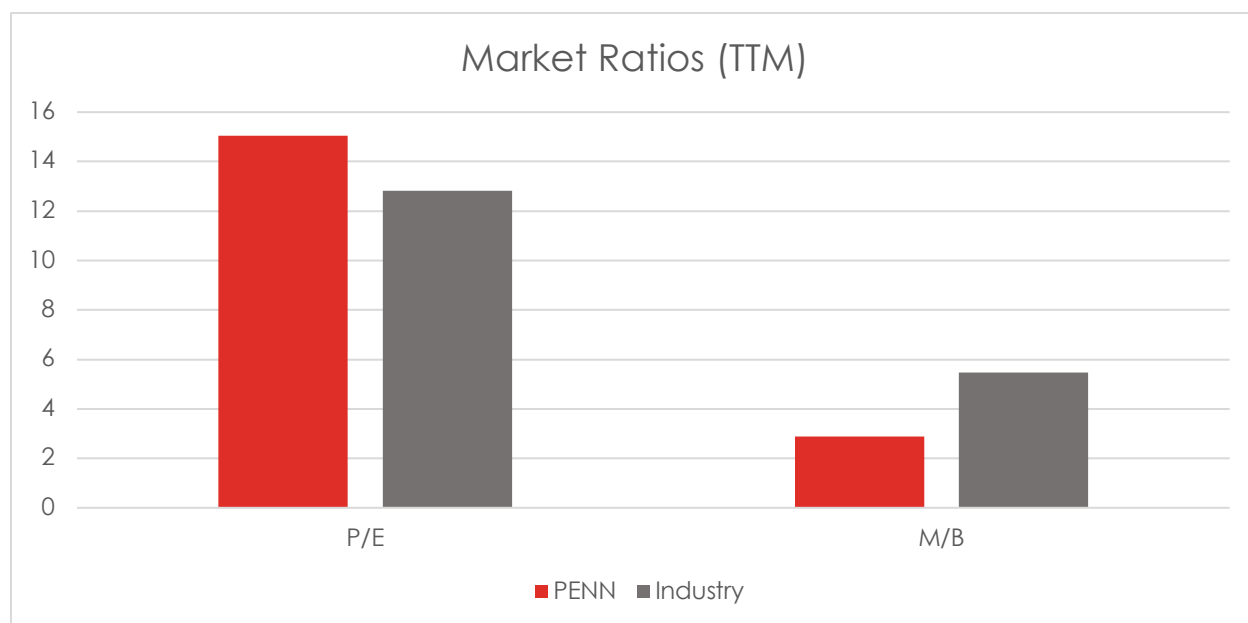
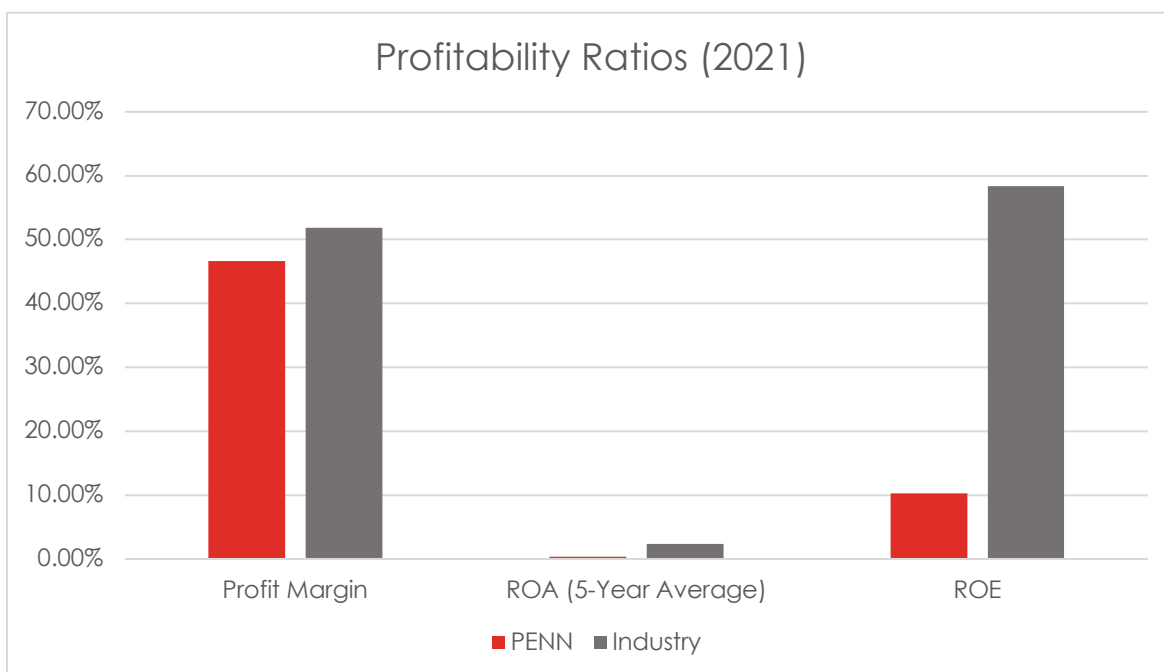
Vertical analysis on the balance sheet also reveals some positive trends. For one, the percentage of total liabilities has decreased each year while equity has increased. This is a good sign since the company has less to pay off in terms of their proportion of revenue and can reinvest in the company for future growth. One area that would be nice to see PENN improve is the proportion of cash they hold. The past two years they have held over 10% of total assets in cash which is probably better off being paid as a dividend to shareholders or being used to finance some new project.

Key Ratios

In analyzing key financial ratios, Penn National Gaming, Inc. outperformed the casino and gaming industry in several areas. These include: revenue growth (19.59% to 9.55%), quick ratio (1.26 to 1.12), current ratio (1.96 to 1.62), and asset turnover (0.426 to 0.386). These are meaningful because they demonstrate that PENN is outperforming competitors in growing revenue year over year, having the ability to satisfy current liabilities, and having the ability to efficiently use assets to generate revenue. In addition, debt-to-total assets has improved each year since 2017 and the return on assets outperformed the industry in 2021. The return on assets is perhaps the most notable since the industry averaged a loss of 2.97% while PENN returned a positive 2.67%. Coming out of the Covid-19 pandemic, this is a positive sign for the management of PENN and their ability to efficiently manage assets to produce a profit.







Market Comparables Valuation

Market comparables is a valuation method in which comparable companies are selected and different performance measures are utilized to estimate the value of a target company, which in this case is Penn National Gaming, Inc. For the purpose of this valuation, the peer companies of Scientific Games Corporation (SGMS), Wynn Resorts, Limited (WYNN), Boyd Gaming Corporation (BYD), International Game Technology PLC (IGT), and MGM Resorts International (MGM) were chosen. These specific companies were chosen because they are all part of the casino and gaming industry and thus face many similar challenges as PENN. They are also relatively similar in market cap size and the products and services that they offer.

MGM is slightly bigger than the rest of the group with a market cap of \$16.322 billion but still offer a good comparison due to their presence in the United States and offering of a mobile betting app, similar to the one that PENN owns through Barstool. They generated revenue of \$10.886 million in 2021 and operate in Las Vegas, Massachusetts, Detroit, Mississippi, Maryland, and New Jersey. They have a similar P/B ratio to PENN, which indicates that investors value the companies in a similar way compared to their book values.

Wynn Resorts, Limited has a market cap of \$7.685 billion and produced revenue of \$3.764 million in 2021. They are able to draw from a different market with locations in China but are headquartered in the United States and have locations in Las Vegas and Massachusetts. They represent an appropriate market comparable due to their similarities in market and revenue, as well as owning the most similar EV/EBITDA ratio of the peer group.

Boyd Gaming owns a market cap of \$6.417 billion and had a revenue of \$3,477 million in 2021. They operate in similar areas to Penn, currently having locations in Las Vegas,

Pennsylvania, Indiana, Missouri, Iowa, and Mississippi. They possess the same EV/Revenue ratio as Penn National, meaning that both companies are worth relatively the same in comparison to their revenues.

Scientific Games possesses a market cap of \$5.127 billion and brought in revenue of \$2,153 million in 2021. They are an adequate market comparable because of their similar market cap, as well as the fact that they have a very similar forward P/E ratio. This is important because it means that there are similar expectations for each company in the future.

International Game Technology has a market cap of \$4.204 billion and generated revenue of \$4,089 million in 2021. They possess a similar P/S as PENN, which indicates that investors are willing to similar amounts for every \$1 of revenue that each company produces.

The multiples that were used in the market comparable approach are as follows:

- Forward P/E
 - Value of current share price to future expected earnings per share
- P/B
 - Compares market value of company to book value
- P/S
 - Compares market value of company to revenue
 - Indicates attractiveness of company
- EV/EBITDA
 - How many times EBITDA is needed to purchase the company
- EV/Revenue
 - How much it costs to purchase a company based on sales

After performing market multiples valuation, PENN was estimated to be worth \$58.22 per share with a low of \$32.34 and a high value of \$83.05. Since there were five companies used for comparison, the median value was used to determine PENN's value to avoid any outliers on either end. PENN is currently worth \$36.85 as of May 9th, 2022, meaning a significant majority of the comparable values suggest it is undervalued. All comparable multiples were used in this valuation because they produced valuations that were deemed to be relevant and reasonable. The low price of \$32.34 was calculated from the forward P/E multiple while the next lowest was slightly above \$51. This suggests that perhaps the forward P/E was too conservative and the other numbers are more indicative of the future but forward P/E was still factored in since it is forecasted.

Company Name	Symbol	Market Cap	Enterprise Value	Forward P/E	P/B	P/S	EV/EBITDA	EV/Revenue		
MGM Resorts International	MGM	16.322	24.389	68.97	1.49	1.50	6.47	2.24		
Wynn Resorts	WYNN	7.685	17.097	11.39		2.04	55.15	4.54		
Boyd Gaming	BYD	6.417	9.104	11.01	4.17	1.85	8.09	2.62		
Scientific Games	SGMS	5.127	13.232	17.01		2.38	22.74	6.15		
International Game Technology	IGT	4.204	10.143	13.04	2.13	1.03	6.24	2.48		
			Average	24.28	2.60	1.76	19.74	3.61		
			Median	13.04	2.13	1.85	8.09	2.62		
			EV using mean (in millions)				28,526.37	21,274.51		
			EV using median (in millions)				11,696.01	15,448.26		
			Price estimate using mean	\$ 60.22	\$ 63.20	\$ 59.17	\$ 157.57	\$ 116.25	average	\$ 91.28
			Price estimate using median	\$ 32.34	\$ 51.84	\$ 62.19	\$ 61.67	\$ 83.05	average	\$ 58.22

Discounted Cash Flows Valuation

The discounted cash flow method (DCF) helps to value a company by forecasting expected cash flows over a horizon period and discounting them by a calculated weighted-average cost of capital (WACC). This produces a present value of the cash flows which is then divided by the company's diluted shares outstanding to calculate a price per share.

The discounted cash flow method has many advantages. One such advantage is that it does not require other comparable companies to be calculated. It is purely based on one such company and projecting their cash future cash flows. Another advantage is that relies on free cash flows which are unrestricted in the sense that they are not involved with certain accounting policies that could affect a company's earnings. Finally, the DCF method is simple to understand since it produces an estimate of what the company should be worth without requiring an explanation as to how that number was calculated.

The weighted average cost of capital is used as the discount factor when calculating the present value of the cash flows. It is determined by using the formula:

$$\text{WACC} = (\text{Weight of Debt} * \text{Cost of Debt}) + (\text{Weight of Equity} * \text{Cost of Equity})$$

The weight of debt is determined by dividing total liabilities by the sum of total liabilities and total equity. The weight of equity is 1 minus the weight of debt since they must add up to equal 1. The total liabilities number was taken directly from the financial statements of PENN and the total equity was the market cap at the time of calculation. The cost of debt was determined by dividing the interest expense by total liabilities. Beta, risk-free rate, and market risk premium were found using online sources and used to calculate the cost of equity.

Market cap (in millions)	8,141.31
Total liabilities	12,775.00
Total debt and equity	20,916.31
Weight of debt	61.08%
Weight of equity	38.92%
YTM on LT bond	4.125%
Risk-free rate	3.16%
Beta (Yahoo finance)	2.39
Market risk premium	5.50%
Cost of equity	16.31%
Interest expense (in millions)	562.8
Cost of debt (using interest expense)	4.41%
Tax Rate	21%
WACC (using YTM on LT bond)	8.337%

To calculate the free cash flows, a few steps were followed. Firstly, a horizon period had to be determined. For the purposes of this valuation, I determined that a five year horizon period along with a terminal growth period was sufficient to estimate PENN's equity value per share. Next, I had to estimate sales growth. With a mostly full year of no limitations due to the Covid-19 pandemic, I estimated that 2022 will bring an increase in revenue which is shown in my calculations. After that I estimate that growth will not happen quite as much, however it should still see an upward trajectory. This is particularly true if more states legalize sports betting or make it easier for residents to gamble online. The next step was to use the growth rate to find future EBIT, taxes, net income, change in net working capital, and capital expenditures. After these were found, change in net working capital and capital expenditures were subtracted from net income plus depreciation and amortization to determine the free cash flows. They were then discounted by the WACC and added together to find the enterprise value.

Forecast Period Selection

As the Covid-19 pandemic continues to slow and life returns to normal, I estimate that the casino industry in general will see revenue growth. I am optimistic about PENN's competitive position in the market so I believe they will grow around 6% in 2022 and then the growth will slowly level off in about five years. This growth could be higher if more states legalize sports betting which would increase the amount of money that can be earned.

Assumptions

One assumption in the DCF model is that of the growth rate. Determining growth rates for the horizon period and terminal periods are necessary for the model in order to reach a final equity value for the firm. In this valuation, the growth rates were estimated to be 6.00% for 2022 before slowly decreasing each year to be 3.00% in 2027. The terminal period growth rate was estimated to be 2.00%.

Another assumption within the DCF model is the forecast period. The forecast period is an estimate that is made by researching the company's financials and their previous growth. This estimation is to determine when the company will enter a mature state, which was estimated to still have a growth rate of 2.00% in this valuation.

Estimating the Terminal Value

The perpetuity growth rate model assumes that the company will generate free cash flows at a constant rate forever once the terminal period is reached. The exit multiple method assumes that the company will be sold at the EBITDA value in the terminal period and then utilizes a value from the market comparable approach to estimate the company's enterprise value.

Perpetuity Growth Rate Model

Calculating the Terminal Value

To calculate the terminal value, the terminal period's free cash flow was divided by the difference of the cost of capital and terminal growth rate. This value was then discounted by the WACC and added to the present value of the horizon period free cash flows to come up with the enterprise value.

Terminal Value	18,609.13
PV of Terminal Value	12,469.43
Enterprise Value	16,602.24
Less: Debt	2,637.30
Less: Pref Stock	775.00
Cash & Cash Equivalents	1,863.90
Equity Value	15,053.84

Debt and preferred stock were then subtracted while cash & cash equivalents were added back to calculate the equity value. This value was then divided by PENN's diluted shares outstanding to come up with a price per share of \$83.99. This value is only relevant if PENN matches the estimated revenue growth rates however I believe in the analysis done to think that they can match this number.

Shares Outstanding	175.50
Price per Share	\$ 85.78

Exit Multiple Approach

Calculating the Terminal Value

The exit multiple approach focuses on calculating a terminal value from EBITDA. I estimated the exit multiple to be 8.09x by using the median value of EV/EBITDA from the market comparable approach. The average value of 19.74 seemed too high which is why I decided to use the median value. Future growth of EBITDA was determined by multiplying the EBITDA % of sales. Once the terminal period was reached, I multiplied the value by the exit multiple and then found the present value.

Terminal Year EBITDA	1,762.17
Exit Multiple	8.09
Terminal Value	14,255.95
PV of Terminal Value	9,552.49

As with the perpetuity growth model, I then added the horizon period values to come up with the enterprise value. Debt and preferred stock were once again subtracted while cash & cash equivalents were again added to determine the equity value.

Enterprise Value	13,654.41
Less: Debt	2,637.30
Less: Pref. Stock & Minority Interest	775.00
Cash & Cash Equivalents	1,863.90
Equity Value	<u>12,106.01</u>

The equity value was then divided by the diluted shares outstanding again to come up with the equity value per share of \$68.98.

Shares Outstanding	175.50
Price per Share	<u>\$ 68.98</u>

Sensitivity Analysis

The DCF and exit multiple valuations were done based on one set of assumptions. Sensitivity analysis shows how the valuation could be different if those assumptions were to change slightly. It accomplishes this by changing the WACC, terminal growth rate, and exit multiple. This is important to see how much the price per share would change if one variable would change.

Sensitivity Analysis on Perpetuity Growth Model

The perpetuity growth model is heavily dependent upon the WACC and terminal growth rate. Sensitivity analysis for this model changes both of those variables to determine the impact these can have.

	Sensitivity Analysis							
	8.60%	8.50%	8.40%	8.337%	8.20%	8.10%	8.00%	
2.30%	\$ 85.05	\$ 86.58	\$ 88.16	\$ 89.19	\$ 91.48	\$ 93.23	\$ 95.04	
2.20%	\$ 83.98	\$ 85.48	\$ 87.01	\$ 88.01	\$ 90.25	\$ 91.94	\$ 93.70	
2.10%	\$ 82.95	\$ 84.41	\$ 85.90	\$ 86.88	\$ 89.05	\$ 90.70	\$ 92.41	
2.00%	\$ 81.95	\$ 83.37	\$ 84.43	\$ 85.78	\$ 87.89	\$ 89.50	\$ 91.16	
1.90%	\$ 80.98	\$ 82.36	\$ 83.79	\$ 84.71	\$ 86.77	\$ 88.33	\$ 89.95	
1.80%	\$ 80.04	\$ 81.39	\$ 82.78	\$ 83.68	\$ 85.68	\$ 87.21	\$ 88.78	
1.70%	\$ 79.13	\$ 80.44	\$ 81.80	\$ 82.67	\$ 84.63	\$ 86.12	\$ 87.65	

*WACC is the columns and terminal growth rate is the rows

Sensitivity Analysis on Exit Multiple

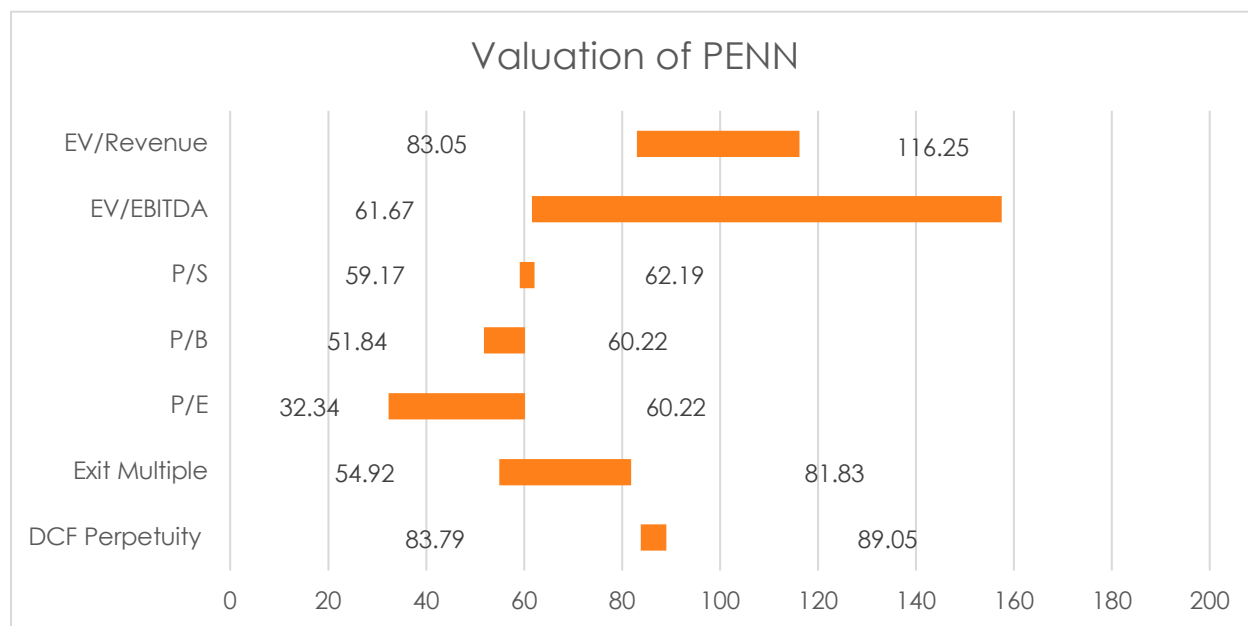
The exit multiple method is dependent entirely upon the selection of the exit multiple. As expected, a lower exit multiple leads to a lower price per share while a higher exit multiple produces a higher price per share. This demonstrates that if PENN can increase their EBITDA over the coming years, their stock price should also in turn see an increase.

Exit Multiple Sensitivity		
10x	\$	81.83
9x	\$	75.10
8.09x	\$	68.98
7x	\$	61.65
6x	\$	54.92

Valuation Chart

This football field valuation chart displays the highs and lows of the sensitivity analysis, as well as the median and average values of the market comparable analysis to show how PENN could change in price.

As of May 9, 2022, Penn National Gaming, Inc. was trading at \$36.85.



In just about every valuation shown, PENN is currently undervalued based on its current stock price. The only value that shows that PENN could be overvalued is the low value of the forward P/E. All calculated values were used in this valuation chart.

Weighted Average Valuation

After putting together all calculated values, I assigned each a relevant weight as to what I thought would be an appropriate price. EV/Revenue was weighted the lowest because I determined its value to be a little too high but was still included in the valuation because PENN's multiple was the same as the median of the industry and thus provided an adequate comparison. My weighted average valuation came out to be \$58.70.

	Valuation	Weight	Weighted Value
DCF Perpetuity	85.78	10%	8.58
Exit Multiple	68.98	15%	10.35
P/E	32.34	20%	6.47
P/B	51.84	18%	9.33
P/S	62.19	17%	10.57
EV/EBITDA	61.67	15%	9.25
EV/Revenue	83.05	5%	4.15
Price			\$ 58.70

Recommendation

After all my analysis and calculations, I do believe that PENN is worth investing in. Their services have a strong market that is only likely to get bigger and they have a strong position within that market to capitalize on its growth. The likely increase in sports betting revenue, as well as PENN's increased stake in Barstool Sports and their sports betting app make me particularly optimistic on the direction of the company.

Appendix

Consolidated Balance Sheet - \$ in Millions																				
	12/31/2021	12/31/2020	12/31/2019	12/31/2018	12/31/2017	2017-2018		Horizontal Analysis 2017-2019		2017-2020		2017-2021		Vertical Analysis Common Size						
						\$	%	\$	%	\$	%	\$	%	2017	2018	2019	2020	2021		
Current assets																				
Cash and cash equivalents	\$ 1,861.9	\$ 1,853.8	\$ 437.4	\$ 479.6	\$ 278.0	201.6	72.52	159.4	57.34	1,575.8	566.83	1,585.9	570.47	5.31	4.38	3.08	12.64	11.05		
Accounts receivable, net	195	96.4	88.7	106.8	62.8	44.0	70.06	25.9	41.24	32.6	53.50	132.2	210.51	1.20	0.97	0.64	0.66	1.16		
Prepaid expenses	122.3	103.5	76.7	69	43.8	19.2	43.84	32.9	75.11	59.7	136.30	88.5	202.05	0.84	0.57	0.54	0.71	0.78		
Other current assets	32.4	31.3	40	28.2	16.5	11.7	70.91	23.5	14.2	14.8	89.70	15.9	96.36	0.32	0.26	0.28	0.21	0.19		
Total current assets	2,223.6	2,085	642.8	677.6	401.0	276.6	68.88	241.8	60.30	1,684.0	419.95	1,822.6	454.51	7.66	6.18	4.53	14.22	13.18		
Property and equipment, net	4,582.2	4,529.3	5,120.2	6,888.8	2,756.7	4,111.1	149.17	2,363.5	85.74	1,772.6	64.30	1,825.5	66.22	52.66	62.67	36.07	30.88	27.16		
Investment in and advances to unconsolidated affiliates	255.1	266.8	128.3	128.5	148.9	(20.4)	(13.70)	(20.6)	(13.83)	117.9	79.18	106.2	71.32	2.84	1.17	0.90	1.82	1.51		
Goodwill	2,822.5	1,517.1	1,270.7	1,238.4	1,088.1	220.3	21.85	262.6	26.05	1,460	14.78	1,814.4	179.88	19.26	11.21	8.95	7.89	16.73		
Other intangible assets, net	1,494.3	1,513.5	2,026.5	1,856.9	422.6	1,493.9	339.40	1,653.9	379.53	1,090.9	238.14	1,450.0	343.11	8.07	16.94	14.28	10.32	11.10		
Deferred income taxes	0.0	0.0	0.0	80.6	390.9	(310.3)	(79.38)	(390.9)	(100.00)	(390.9)	(100.00)	(390.9)	(100.00)	7.47	0.74	0.00	0.00	0.00		
Lease right-of-use assets	4,853	4,817.7	4,837.3	0.0	0.0	0.0	-	4,837.3	100.00	4,817.7	100.00	4,853.0	100.00	0.00	0.00	34.08	32.85	28.76		
Other assets	263.1	297.9	188.7	120	85.7	34.5	40.26	83.0	96.85	212.2	247.61	177.4	207.00	1.64	1.10	1.19	2.03	1.56		
Total other assets	0.0	0.0	0.0	0	2,077.1	(2,077.1)	(100.00)	(2,077.1)	(100.00)	(2,077.1)	(100.00)	(2,077.1)	(100.00)	39.68	0.00	0.00	0.00	0.00		
Total assets	15,872.1	14,667.3	14,194.5	10,961.0	5,234.8	5,726.2	109.39	8,959.7	171.16	9,432.5	180.19	11,697.3	222.31	100.00	100.00	100.00	100.00	100.00		
Current liabilities																				
Accounts payable	53.3	33.2	40.3	30.5	26.0	4.5	17.31	14.3	55.00	7.2	27.69	27.3	105.00	0.50	0.28	0.28	0.23	0.32		
Current maturities of long-term debt	99.5	81.4	62.9	62.1	35.6	26.5	74.44	27.3	76.69	45.8	128.65	63.9	179.49	0.68	0.57	0.44	0.55	0.59		
Current portion of financing obligations	39	36	40.5	67.8	56.2	11.6	20.64	(15.7)	(27.94)	(20.2)	(55.94)	(17.2)	(30.60)	1.07	0.62	0.29	0.25	0.23		
Current portion of lease liabilities	142.9	134.3	130.6	0.0	0.0	0.0	-	130.6	100.00	134.3	100.00	142.9	100.00	0.00	0.00	0.92	0.92	0.85		
Accrued expenses and other current liabilities	798.5	575.1	613.3	578.0	321.1	265.9	85.20	319.2	102.27	265.0	64.27	486.4	155.85	5.96	5.27	4.45	3.92	4.73		
Total current liabilities	1,133.2	860	905.6	738.4	580.0	206.4	39.32	375.6	70.87	330.0	62.26	603.2	113.81	10.12	6.74	6.38	5.86	6.72		
Long-term debt, net of current maturities, debt discount and debt issuance costs	2,637.3	2,231.2	2,322.2	2,390.1	1,214.6	1,135.5	93.49	1,101.6	91.19	1,016.6	83.70	1,422.7	117.13	23.20	21.44	16.36	15.21	15.63		
Long-term portion of financing obligations	4,057.8	4,096.4	4,102.2	7,080.6	3,482.6	3,598.0	103.31	619.6	17.79	613.8	17.62	575.2	16.52	66.53	64.60	28.90	27.93	24.05		
Long-term portion of lease liabilities	4,828.6	4,578.2	4,670	0.0	0.0	0.0	-	4,670.0	100.00	4,578.2	100.00	4,628.6	100.00	0.00	0.00	32.90	31.21	27.43		
Deferred income taxes	188.1	126.3	244.6	0.0	0.0	0.0	-	244.6	100.00	126.0	47.65	189.1	100.00	0.00	0.00	1.72	0.86	1.12		
Other long-term liabilities	129	119.4	98	60.7	80.8	(20.1)	(24.88)	17.2	21.29	38.6	47.77	48.2	59.65	1.54	0.55	0.69	0.81	0.76		
Total liabilities	12,775	12,011.5	12,342.6	10,229.8	5,308.0	4,921.8	92.72	7,094.6	132.53	6,703.5	126.29	7,467.0	140.67	100.40	93.33	86.55	81.89	75.72		
Stockholders' equity																				
Treasury stock, at cost (2,157,393 shares held in both periods)	(28.4)	(28.4)	(28.4)	(28.4)	(28.4)	0.0	-	0.0	-	0.0	-	0.0	-	-0.54	-0.26	-0.20	-0.19	-0.17		
Additional paid-in capital	4,239.6	3,672	1,718.3	1,766.4	1,007.6	718.8	71.34	710.7	70.53	2,159.6	214.33	3,222.0	320.76	19.25	15.75	12.11	21.59	25.13		
Retained Earnings (Accumulated deficit)	(98.5)	(507.3)	161.6	(988.0)	(1,051.8)	83.8	(77.87)	1,213.4	(115.86)	544.5	(61.77)	965.3	(91.78)	-20.09	-8.83	1.14	-3.46	-0.51		
Accumulated other comprehensive loss	(54.4)	0	0	0	(1.5)	1.5	(100.00)	1.5	(100.00)	1.5	(100.00)	(52.9)	3,526.67	-0.03	0.00	0.00	0.00	-0.32		
Total Non National stockholders' equity (deficit)	4,097.8	2,656.2	1,657.7	731.2	(73.1)	804.3	(1,100.27)	1,925.8	(2,634.47)	2,793.3	(3,733.65)	4,170.9	(5,705.75)	-1.40	6.67	13.05	18.11	24.29		
Non-controlling interest	(0.7)	(0.4)	(0.8)	0.0	0.0	-	-	(0.8)	(100.00)	(0.4)	(100.00)	(3,133.11)	4,170.2	-1.40	6.67	13.05	18.11	24.28		
Total stockholders' equity (deficit)	4,097.1	2,655.8	1,656.9	731.2	(73.1)	804.3	(1,100.27)	1,925.0	(2,633.88)	2,792.9	(3,733.11)	4,169.8	(5,704.79)	-1.40	6.67	13.05	18.11	24.28		
Total liabilities and stockholders' equity (deficit)	15,872.1	14,667.3	14,194.5	10,961.0	5,234.8	5,726.2	109.39	8,959.7	171.16	9,432.5	180.19	11,697.3	222.31	100.00	100.00	100.00	100.00	100.00		

	12/31/2021	12/31/2020	12/31/2019	12/31/2018	12/31/2017	Horizontal Analysis										Vertical Analysis				
						2017-2018	2017-2019	2017-2020	2017-2021		2017	2018	2019	2020	2021					
						\$	%	\$	%	\$	%	\$	%	\$	%					
Revenues																				
Total revenues	\$ 5,905	\$ 3,576.7	\$ 5,301.4	3,587.9	3,148	439.9	13.97	2,153.4	68.41	430.7	13.68	2,757.00	87.58			100.00	100.00	100.00	100.00	100.00
Operating expenses																				
General and administrative	1,352.9	1,130.8	1,187.7	618.9	514.5	104.4	20.29	673.2	130.85	616.3	119.79	838.40	162.95			16.34	11.75	22.40	31.60	22.91
Depreciation and amortization	344.5	366.7	414.2	269	267.1	1.9	0.71	147.1	55.07	99.6	37.29	77.40	28.98			8.48	7.50	7.81	10.25	5.83
Impairment losses	0	623.4	173.1	34.9	18	16.9	93.89	155.1	861.67	605.4	3,363.33	(18.00)	(100.00)			0.57	0.97	3.27	17.42	-
Provision for (recoveries on) loan loss and unfunded loan	0	0.0		(17)	89.8	(106.8)	(118.93)	(89.8)	(100.00)	(89.8)	(100.00)	(89.80)	(100.00)			2.85	(0.47)	-	-	-
Total operating expenses	4,845.4	3,988.9	4,729.5	2,953.8	2,702.3	251.5	9.31	2,027.2	75.02	1,288.6	47.61	2,343.10	79.31			85.84	82.33	89.21	111.46	82.06
Operating income (loss)	1,059.6	(410.2)	571.9	634.1	445.7	188.4	42.27	126.2	28.32	(85.9)	(192.04)	613.90	137.74			14.16	17.67	10.79	(11.46)	17.94
Other income (expenses)																				
Interest expense, net	(561.7)	(543.2)	(534.2)	(538.4)	(463.2)	(75.2)	16.23	(71.0)	15.33	(80.0)	17.27	(98.50)	21.27			(14.71)	(15.01)	(10.08)	(15.18)	(9.51)
Income from unconsolidated affiliates	38.7	13.8	28.4	22.3	18.7	3.6	19.25	9.7	51.87	(4.9)	(26.20)	20.00	106.95			0.59	0.62	0.54	0.39	0.66
Loss on early extinguishment of debt	0	(1.2)	0	(21)	(24)	3.0	(12.50)	24.0	(100.00)	22.8	(95.00)	24.00	(100.00)			(0.76)	(0.59)	-	(0.03)	-
Other	2.5	106.6	20	(7.1)	(2.3)	(4.8)	208.70	22.3	(969.57)	108.9	(4,734.78)	4.80	(208.70)			(0.07)	(0.20)	0.38	2.98	0.04
Total other expenses	(520.5)	(424)	(485.8)	(544.2)	(470.8)	(73.4)	15.59	(15.0)	3.19	46.8	(9.94)	(49.70)	10.56			(14.96)	(15.17)	(9.16)	(11.85)	(8.81)
Income (loss) before income taxes	539.1	(834.2)	86.1	89.9	(25.1)	115.0	(458.17)	111.2	(443.03)	(809.1)	3,223.51	564.20	(2,247.81)			(0.80)	2.51	1.62	(23.31)	9.13
Income tax benefit (expense)	(118.6)	165.1	(43)	3.6	498.5	(494.9)	(99.28)	(541.5)	(108.63)	(333.4)	(66.88)	(617.10)	(123.79)			15.84	0.10	(0.81)	4.61	(2.01)
Net income (loss)	420.5	(669.1)	43.1	93.5	473.4	(379.9)	(80.25)	(430.3)	(90.90)	(1,142.5)	(241.34)	(52.90)	(11.17)			15.04	2.61	0.81	(18.70)	7.12
Less: Net income (loss) attributable to non-controlling interest	0.3	(0.4)	0.8	0	0	0.0	-	0.8	100.00	(0.4)	(100.00)	0.30	100.00			-	-	0.02	(0.01)	0.01
Net income (loss) attributable to Penn National Gaming, Inc.	\$ 420.8	\$ (669.5)	\$ 43.9	\$ 93.5	\$ 473.4	(379.9)	(80.25)	(429.5)	(90.73)	(1,142.9)	(241.42)	(52.60)	(11.11)			15.04	2.61	0.83	(18.71)	7.13
Earnings Per Share (Abstract)																				
Basic earnings (loss) per share (in dollars per share)	\$ 2.64	\$ (5.00)	\$ 0.38	\$ 0.96	\$ 5.21	(4.3)	(81.57)	(4.8)	(92.71)	(10.2)	(195.97)	(2.57)	(49.33)			0.17	0.03	0.01	(0.14)	0.04
Diluted earnings (loss) per share (in dollars per share)	\$ 2.48	\$ (5.00)	\$ 0.37	\$ 0.93	\$ 5.07	(4.1)	(81.66)	(4.7)	(92.70)	(10.1)	(198.62)	(2.59)	(51.08)			0.16	0.03	0.01	(0.14)	0.04
Weighted-average common shares outstanding - basic (in shares)	158.7	134	115.7	97.1	90.9	6.2	6.82	24.8	27.28	43.1	47.41	67.80	74.59			2.89	2.71	2.18	3.74	2.69
Weighted-average common shares outstanding - diluted (in shares)	175.5	134	117.8	100.3	93.4	6.9	7.39	24.4	26.12	40.6	43.47	82.10	87.90			2.97	2.80	2.22	3.74	2.97
Gaming																				
Revenues																				
Total revenues	\$ 4,945.3	\$ 3,051.1	\$ 4,268.7	\$ 2,894.9	\$ 2,692	202.9	7.54	1,576.7	58.57	359.1	13.34	2,253.30	83.70			85.51	80.69	80.52	85.26	83.75
Operating expenses																				
Cost of revenue	2,540.7	1,530.3	2,281.8	1,551.4	1,365	186.4	13.66	916.8	67.16	165.3	12.11	1,175.70	86.13			43.36	43.24	43.04	42.76	43.03
Food, beverage, hotel and other																				
Revenues																				
Total revenues	959.7	527.6	1,032.7	629.7	601.7	28.0	4.65	431.0	71.63	(74.1)	(12.32)	358.00	59.50			19.11	17.55	19.48	14.74	16.25
Operating expenses																				
Cost of revenue	\$ 607.3	\$ 337.7	\$ 672.7	499.3	421.8	17.5	4.15	250.9	59.48	(84.1)	(19.94)	185.50	43.98			13.40	12.24	12.69	9.44	10.28

Growth Ratios (5-year average)			
	Revenue Growth	Net Income Growth	Asset Growth
PENN	19.59%	-11.17%	222.31%
Industry	9.55%	34.36%	4.79%
Liquidity Ratios			
	Current	Quick	
PENN	1.96	1.26	
Industry	1.62	1.12	
Leverage Ratios (2021)			
	Debt-to-Total Assets	Times Interest Earned	
PENN	75.72%	1.88	
Industry	78.26%	1.57	
Asset Management			
	Asset Turnover (5-Year Average)	Inventory Turnover	
PENN	0.426	0	
Industry	0.386	0	
Profitability Ratios (2021)			
	Profit Margin	ROA (5-Year Average)	ROE
PENN	46.69%	0.33%	10.27%
Industry	51.89%	2.34%	58.38%
Market Ratios (TTM)			
	P/E	M/B	
PENN	15.04	2.89	
Industry	12.82	5.48	

[illegible]

		Reported	Horizon Period					Terminal
		2021	2022	2023	2024	2025	2026	Period
Cost of Capital		8.337%						
Terminal Growth Rate		2.00%						
EBITDA %		24.48%						
*all numbers in millions								
Sales		5,905.00	6,259.30	6,540.97	6,769.90	6,989.92	7,199.62	7,343.61
Growth Rate			6.00%	4.50%	3.50%	3.25%	3.00%	2.00%
EBITDA		1,445.30	1,532.02	1,600.96	1,656.99	1,710.84	1,762.17	1,797.41
EBIT		1,059.60	1,123.18	1,173.72	1,214.80	1,254.28	1,291.91	1,317.75
Less Taxes			235.87	246.48	255.11	263.40	271.30	276.73
Net Income			887.31	927.24	959.69	990.88	1,020.61	1,041.02
Plus: Depreciation & Amortization			408.84	427.24	442.19	456.56	470.26	479.67
Less: Change in NWC			65.42	52.01	42.27	40.63	38.72	26.59
Less: Capex			284.40	297.20	307.60	317.59	327.12	333.66
Unlevered CF			946.33	1,005.27	1,052.01	1,089.22	1,125.02	
			873.51	856.51	827.36	790.70	753.85	
Terminal Year EBITDA	1,762.17							
Exit Multiple	8.09							
Terminal Value	14,255.95							
PV of Terminal Value	9,552.49							
Enterprise Value	13,654.41							
Less: Debt	2,637.30							
Less: Pref. Stock & Minority Interest	775.00							
Cash & Cash Equivalents	1,863.90							
Equity Value	12,106.01							
Shares Outstanding	175.50							
Price per Share	\$ 68.98							

		Reported	Horizon Period					Terminal
		2021	2022	2023	2024	2025	2026	Period
Cost of Capital		8.337%						
Terminal Growth Rate		2.00%						
EBIT %		17.94%						
*all numbers in millions								
Sales		5,905.00	6,259.30	6,540.97	6,769.90	6,989.92	7,199.62	7,343.61
Growth Rate			6.00%	4.50%	3.50%	3.25%	3.00%	2.00%
EBIT		1,059.60	1,123.18	1,173.72	1,214.80	1,254.28	1,291.91	1,317.75
Taxes			235.87	246.48	255.11	263.40	271.30	276.73
Net Income			887.31	927.24	959.69	990.88	1,020.61	1,041.02
Plus: Depreciation & Amortization			412.70	433.33	449.58	466.44	483.93	498.45
Less: Change in NWC			65.42	52.01	42.27	40.63	38.72	26.59
Less: CAPEX			284.40	297.20	307.60	317.59	327.12	333.66
FCF			950.19	1,011.36	1,059.40	1,099.10	1,138.70	1,179.22
Discounted FCF			877.07	861.70	833.17	797.87	763.01	
Terminal Value	18,609.13							
PV of Terminal Value	12,469.43							
Enterprise Value	16,602.24							
Less: Debt	2,637.30							
Less: Pref Stock	775.00							
Cash & Cash Equivalents	1,863.90							
Equity Value	15,053.84							
Shares Outstanding	175.50		*weight avg outstanding diluted shares (from financial statement)					
Price per Share	\$ 85.78							

Exit Multiple Sensitivity	
10x	\$ 81.83
9x	\$ 75.10
8.09x	\$ 68.98
7x	\$ 61.65
6x	\$ 54.92

Sensitivity Analysis							
	8.60%	8.50%	8.40%	8.337%	8.20%	8.10%	8.00%
2.30%	\$ 85.05	\$ 86.58	\$ 88.16	\$ 89.19	\$ 91.48	\$ 93.23	\$ 95.04
2.20%	\$ 83.98	\$ 85.48	\$ 87.01	\$ 88.01	\$ 90.25	\$ 91.94	\$ 93.70
2.10%	\$ 82.95	\$ 84.41	\$ 85.90	\$ 86.88	\$ 89.05	\$ 90.70	\$ 92.41
2.00%	\$ 81.95	\$ 83.37	\$ 84.43	\$ 85.78	\$ 87.89	\$ 89.50	\$ 91.16
1.90%	\$ 80.98	\$ 82.36	\$ 83.79	\$ 84.71	\$ 86.77	\$ 88.33	\$ 89.95
1.80%	\$ 80.04	\$ 81.39	\$ 82.78	\$ 83.68	\$ 85.68	\$ 87.21	\$ 88.78
1.70%	\$ 79.13	\$ 80.44	\$ 81.80	\$ 82.67	\$ 84.63	\$ 86.12	\$ 87.65

	Valuation	Weight	Weighted Value
DCF Perpetuity	85.78	10%	8.58
Exit Multiple	68.98	15%	10.35
P/E	32.34	20%	6.47
P/B	51.84	18%	9.33
P/S	62.19	17%	10.57
EV/EBITDA	61.67	15%	9.25
EV/Revenue	83.05	5%	4.15
Price			\$ 58.70

	Low	Difference	High
DCF Perpetuity	83.79	5.26	89.05
Exit Multiple	54.92	26.91	81.83
P/E	32.34	27.88	60.22
P/B	51.84	8.38	60.22
P/S	59.17	3.02	62.19
EV/EBITDA	61.67	95.90	157.57
EV/Revenue	83.05	33.20	116.25

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