HARVARD | BUSINESS | SCHOOL

Find beta

① Estimate β_E^L

deduct by constant → β is independent of constant

$$r_i - r_f = \beta_i (r_m - r_f)$$

deduct this to get proper β

② Unlevered beta or asset beta (β_e^u / β_A^V)

③ $\beta_m \to k_e$

9-224-007

SEPTEMBER 11, 2023

MALCOLM BAKER

SEBASTIAN HILLENBRAND

JAMES BARNETT

Allocate capital → ROI

→ cost of capital

Cost of Capital at DraftKings

DraftKings <Sport bet>

not risky bcs can take advantage on opportunity risk in mkt capture reward to risk

$r_i = r_f + \beta \cdot MRP$

$\beta = 1 \to$ risk = mkt

CAPM <generic framework>

only mkt risk

asset pricing return

mkt: everything investors can access

idiosyncratic risk is diversified away

In March 2021, Jason Robins and Jason Park, the CEO and CFO of DraftKings, were making final preparations for an upcoming "investor day" webcast. The firm had continued to grow in the year since its listing on the NASDAQ, with its revenue rising by almost 50% from $432 million in 2019 to $644 million in 2020.[1] (See **Exhibit 1**.) DraftKings had raised close to $2 billion through the sale of its common stock in 2020, and Robins and Park expected investors to ask questions about DraftKings' ongoing investment opportunities and its path to profitability as the sports betting company expanded its operations across the U.S.

DraftKings had several apps. Customers used the Daily Fantasy app to participate in Daily Fantasy Sports (DFS)[a] contests; the Sportsbook app enabled customers to place wagers on sports games and events; and the Casino app enabled customers to play casino games. (See **Exhibit 2.**) It also operated retail locations, typically located within casinos, for customers to place bets in person.

MRP = $E[r_m] - r_f$ from rearrange of CAPM

index of selected stocks

① S&P 500 vs. r_f

should include all stocks?

② Historical rate ? How long ?

average vs. latest

most up-to-date

investors care about today into the future

1Q21

DraftKings had sportsbook operations in 12 states that had legalized online sports betting (OSB) as of the spring of 2021. (See **Exhibit 3.**) DraftKings had to decide how to allocate capital to customer acquisition across its existing jurisdictions and new ones that had recently passed legislation. Determining an appropriate cost of capital or hurdle rate for these investments would become increasingly important as DraftKings' business matured and began generating cash flow that could be reinvested in the company, returned to shareholders, or put to other use.

③ Implied risk premium

forward looking

given $P_0 = \frac{D_1}{k_e - g}$ of investor expectation from price

find this

yield curve

- term structure that div will pay in the future ↳ get k_e

④ survey

$$\beta_A = \overset{0\%}{W_D \beta_D} + \overset{100\%}{W_E \beta_E}$$

Company Background

In 2012, DraftKings was founded out of a Watertown, Massachusetts, apartment by Matt Kalish, Paul Liberman, and Jason Robins. Its first product was a DFS competition for Major League Baseball in April 2012. The league would later become an investor in DraftKings, part of the company's broader strategy to partner with sports leagues and sports media outlets. By 2014, DraftKings had 50,000 active daily users and about 1 million registered players. Subsequently, the startup raised

[a] DFS referred to a subset of fantasy sports games in which participants selected a team of real-world athletes and accumulated points based on how their players performed in an actual game. Participants studied athletes' statistics and other information to assemble a team that will score the most possible points.

Professor Malcolm Baker, Instructor in Business Administration Sebastian Hillenbrand, and Case Researcher James Barnett (Case Research & Writing Group) prepared this case. It was developed with permission by a company designate. Funding for the development of this case was provided by Harvard Business School and not by the company. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

additional funding —about $41 million in a 2014 Series C round at first close—and acquired competitors in the fragmented DFS space.[2] By 2017, it had raised a total of $645 million.[3]

Alongside DraftKings, its competitor FanDuel emerged as a leading DFS platform and the two had about 90% of the U.S. DFS space.[4] In 2009, FanDuel had launched in the U.K., and propelled by several rounds of VC funding, it expanded into the U.S. to become a leading DFS app. By 2015, FanDuel was valued at over $1 billion.[5] In 2018, Flutter (then called Paddy Power Betfair) paid $158 million for a 58% stake in FanDuel.[6] Like FanDuel, DraftKings offered a free-to-download app for customers to enter DFS contests and charged contest entry fees.[7]

From 2015 to 2017, DFS platforms faced regulatory uncertainty. DraftKings was forced to withdraw its service from several states after their state attorneys general determined that DFS contests may not be permitted in their jurisdictions.[8] Facing scrutiny, in November 2017, DraftKings announced its intent to merge with rival FanDuel. However, the Federal Trade Commission cited competition and consolidation concerns and filed suit to block the merger; the deal was called off within eight months.[9]

From Daily Fantasy Sports to Sports Betting

In May 2018, the U.S. Supreme Court struck down the Professional and Amateur Sports Protection Act (PASPA), which, since 1992, had banned sports betting across the country with limited exceptions. DraftKings was well prepared for this potential ruling and had been building an online sportsbook product in anticipation. In August of 2018, DraftKings launched its first legal online sportsbook, in New Jersey. The Sportsbook app involved a user wagering money on an outcome or series of outcomes. DraftKings paid winners. The app generated revenue by setting betting odds "such that there is a built-in theoretical margin in each sports wagering opportunity offered to users," per company filings.[10] Revenue equaled all wagers minus payouts made on winning wagers minus promotions.

Between May 2018 and the first quarter of 2021, many states followed New Jersey's lead and legalized sports betting. DraftKings became one of the most popular sportsbooks in each state of operation. The team at DraftKings attributed the company's success to "their strong brand, data-driven marketing techniques that enabled efficient customer acquisition, and strong mobile technology capabilities rooted in its DFS days and further enabled by vertical integration." It often benefited from a first mover advantage as it had "well-organized compliance and regulatory capabilities that allowed DraftKings to be one of the first operators to launch."

Competition included traditional retail casinos who launched retail and online products, such as Caesars Entertainment, WynnBet, FanDuel, as well as a joint venture between MGM and Entain (known as BetMGM). With 100% legalization across states (or through federal legislation), the U.S. online sports betting total addressable market was estimated to exceed $26 billion. In 2021 companies operated in different states, and some sportsbooks operated online only while others operated retail locations and casinos, and some operated a combination of both. In 2020, DraftKings operated in more states than any other operator and accounted for almost one third of U.S. online sports betting revenues.[11]

Public Listing

In April 2020, DraftKings began trading on the NASDAQ exchange under the ticker "DKNG.". Instead of listing through an initial public offering (IPO), DraftKings engaged in a reverse merger with Diamond Eagle Acquisition Corp., a special purpose acquisition company or SPAC.[12] The business combination included OSB tech provider SBTech, which had developed online sports betting technology. SBTech had been a third-party provider that licensed its technology to sportsbook operators across the sports betting industry. Robins explained the business logic: "The combination of DraftKings and SBTech's highly innovative and proven technology platform creates a vertically-integrated powerhouse."[13] Park added: "The SPAC made sense because we wanted to buy SBTech *and* go public. Owning SBTech means we own a betting engine that many other competitors' license. Vertical integration not only allows us to drive differentiation in our product and technology, but also provides meaningful benefit to our Gross Margin by turning a variable cost into a fixed cost." Following the announcement of the SPAC merger, the newly formed and publicly listed DraftKings closed at $19.35 on April 24, 2020, eventually reaching an intraday high price of $74.38 in 2021. (See **Exhibit 4** for the stock's price history.) During this time, DraftKings completed two follow-on stock offerings of primary and secondary shares.[b]

Geographic Expansion

DraftKings made significant upfront investments leading up to and upon launching in each new state. Most spending went towards advertising, and advertising increased around new state launches and major sporting events, such as the start of football season. Other investment outlays included advocacy to legalize sports betting, funding operational costs, such as the development of a sportsbook, research and development, and the payment of state licensing fees.

In its new and existing jurisdictions, DraftKings considered the challenge of allocating capital to attract customers. To identify the most attractive customers, the company forecasted the likelihood of customer acquisition and retention in each market using population and demographic data and its own DFS customer database. Next, they estimated spending, or **handle** per customer, and the average **hold percentage**. The hold percentage varied. Park noted that hold was highest for in-game parlays and lowest for single, pre-game bets.[c] DraftKings then estimated gross profit per customer, which varied by state due to state tax rates and the number of products it could launch. State taxes or revenue share arrangements ranged from 10% to as high as 50%. Robins added that most states were in the 15% range, a level "many industry players and regulators felt was high enough to generate meaningful revenue for the states but not so high that it made it difficult for legal operators to compete with illegal betting sites that were neither paying taxes nor carrying the costs of regulation."

DraftKings could allocate capital through local and national advertising and forgo revenue through promotional spending. The first customers in each state were easier to attract and more profitable. DFS operations helped spur growth with the Sportsbook app. "We consistently cross sell 60%+ of active DFS players during the first 12 to 18 months of a launch," Park noted. "Our substantial DFS customer database, combined with superior cross selling capabilities, allow us to generate great results from day one of a sportsbook state launch." Much of the advertising had been local, but the marketing efficiencies of national advertising increased with each new state launch, a benefit available only to national operators. Finally, new customers were routinely offered a **promo**. For example, the customer might receive $150 of bonus bets following their first $5 bet. Park added, "Promotions are a proven industry tool to acquire and even to reactivate customers, primarily when a new state launches and at the beginning of sports seasons."

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[b] The proceeds from the primary issuance of shares went to the company and increased the number of shares outstanding. The proceeds of the secondary sale of shares went to selling shareholders and did not affect the number of shares outstanding.

[c] A parlay referred to a single bet that was dependent on the outcome of two or more wagers.

The Cost of Capital

Robins and Park recognized the importance of their decisions: investments would drive future cash flow, and investors would compute the enterprise value of DraftKings as the present value of those cash flows, with a cost of capital, which reflected the return they might expect on their best alternative investment with comparable risk. Park and Robins interacted with over 30 analysts, from Jefferies, Morgan Stanley, UBS, Wolfe Research, and other institutions, who used cost of capital estimates that ranged from 7% to more than 10% for DraftKings in early 2021. Most analysts relied on a common formula for this opportunity cost that was familiar to the company:

$$RiskFreeRate + \beta_{DKNG} \times \overbrace{MarketRiskPremium}^{E[r_m]-r_f}$$

Every estimate started with the “risk-free rate” of return on U.S. Treasury securities, sometimes labeled as R_f. (See **Exhibit 5** for **risk-free rates** at varying maturities.) To this they added an extra risk premium, often estimated as the product of an “asset beta” tailored to DraftKings specifically, labeled β_{DKNG}, and the “market risk premium.”

Analysts thought of the **market risk premium** as the extra expected return that a stock index such as the S&P 500, which was designed to track the broad U.S. stock market, might deliver in the future in excess of a risk-free investment. There were a few ways to estimate this extra return. First, 1 analysts looked at long-run historical averages. For instance, from 1872 through 2021, the annual returns on U.S. stocks had exceeded those on Treasuries by 6.4% on average.[14] However, many market observers argued that the market risk premium implied by current stock prices, which were higher relative to dividends and earnings than they had been historically, was lower than 6.4%. For example, the average estimate of the market risk premium in a 2021 survey of CFOs was 4.6% and the average estimate in a 2021 survey of investment professionals was 5.5%.[15] Overall, these recent surveys suggested that a diversified portfolio of U.S. stocks might be expected to outperform Treasuries by 5%.[16]

Some analysts felt that DraftKings did not have the risk of an average U.S. stock, and therefore they chose an asset beta different from 1.0. If potential investors deemed the risk of DraftKings to be higher than the average U.S. stock, those investors would demand a return that exceeded the risk-free rate by more than the average of 5% that was appropriate for the stock market as a whole. Because of its short trading history and the error inherent in any single estimate of a company’s risk, analysts relied on data from a representative group of a larger number of publicly traded firms that were comparable to DraftKings, not an easy group to define for a niche like online sports betting. (See **Exhibit 6** for business descriptions of companies in four select subindustries within the General Industry Classification Standard (GICS) and **Exhibit 7** for their segment revenue breakdown. See **Exhibit 8** for stock return data for these companies.)

To estimate the systematic risk of each company’s equity, analysts used stock return data to compute each company’s equity beta (β_e) relative to a broad market index like the S&P 500.[d] While DraftKings had no debt on its balance sheet, some of its comparable companies did, and debt magnifies the risk of equity. So, for each potential comparable firm, analysts computed the weighted average beta of equity and debt, or the **asset beta** (β_a), as their measure of the systematic risk of each

[d] Analysts generally estimated a company’s equity beta by regressing its stock returns (R_e) on the returns of the U.S. stock market (R_m). The beta ($\square_e$) is the slope coefficient from this regression and is equal to $\beta_e = \mathrm{Cov}(R_e, R_m)/\mathrm{Var}(R_m)$.

firm's assets.[e] (See **Exhibit 9** for a breakdown of the comparable firms' total asset values into equity and debt.) Many analysts assumed a constant systematic risk for the debt of every firm—for instance, it was common to assume a debt beta of 0.2—even though the risk of debt increased when it was a larger share of firm asset value. (See **Exhibit 10** for data on the average systematic risk, measured by beta with respect to the S&P 500, of U.S. corporate bonds grouped by their credit ratings.)

Given its strong competitive position, DraftKings could plausibly set a discount rate above its cost of capital and still attract and retain customers. Indeed, the management team was reassured that there were opportunities for investment in customer acquisition costs (CAC) with a "three-year gross profit payback," which they felt would deliver a return to investors that exceeded DraftKings' cost of capital.

[e] Specifically, analysts typically assumed that $\beta_a = \frac{E}{E+D}\,\beta_e + \frac{D}{E+D}\,\beta_d$ and used weights that mirrored the estimation of the equity beta, namely, the average ratio of net debt to net debt plus equity over the same window that the equity beta was estimated.

Exhibit 1 DraftKings Financial Statements, 2019-2020

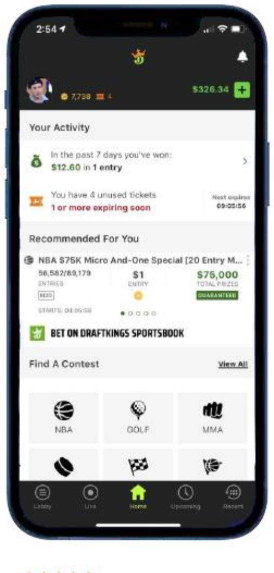
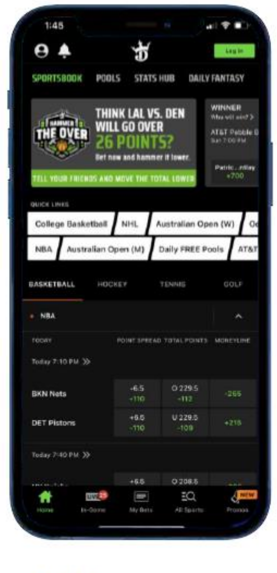
Income Statement	**2019**	**2020**
Revenue	**431,834**	**643,502**
Cost of revenue	202,768	377,191
Sales and marketing	194,672	499,342
Product and technology	95,454	186,204
General and administrative	129,714	430,791
Loss from operations	**(190,774)**	**(850,026)**
Other income (expense)	4,173	(1,530)
Loss before income tax (benefit) provision	**(186,601)**	**(851,556)**
Income tax (benefit) provision and adjustments	(12,639)	3,640
Net loss attributable to common stockholders	**(173,962)**	**(855,196)**
Adjusted for		
Depreciation and amortization (excluding acquired intangibles)	16,933	28,024
Amortization of acquired intangibles	71,079	72,431
Interest expense (income), net	(1,173)	1,530
Income tax (benefit) provision	(13,118)	3,074
Stock-based compensation	18,354	335,660
Transaction related costs	-	5,500
Litigation, settlement, and related costs	3,695	6,839
Other non-recurring costs and special project costs	2,489	5,644
Other non-operating costs	(2,521)	566
Adjusted EBITDA	**(78,224)**	**(395,928)**

Balance Sheet	**2020**
Assets	
Current assets:	
Cash and cash equivalents	1,817,258
Cash reserved for users	287,718
Receivables reserved for users	30,249
Accounts receivable	44,522
Prepaid expenses and other current assets	14,558
Total current assets	**2,194,305**
Property and equipment, net	40,827
Intangible assets, net	555,930
Goodwill	569,603
Other assets	78,664
Total assets	**3,439,329**
Liabilities and Stockholders' equity (deficit)	
Current liabilities:	
Accounts payable and accrued expenses	223,633
Liabilities to users	317,942
Other current liabilities	12,837
Total current liabilities	**554,412**
Other liabilities	188,128
Paid-in capital	4,456,309
Accumulated deficit and comprehensive income	(1,759,520)
Total stockholders' equity (deficit)	2,696,789
Total liabilities and stockholders' equity (deficit)	**3,439,329**

Source: Adapted from DraftKings 10-K, 2020, and DraftKings Q4 2020 investor presentation.

Note: The 2019 income statement is pro forma, including the revenue and expenses of SBTech prior to its merger with DraftKings

Exhibit 2 Product Screenshots

Daily Fantasy Sports	Sportsbook	iGaming
		

Source: Company documents.

Exhibit 3 DraftKings States of Operation, March 2021

Indicates states in which DraftKings is currently live, representing 25% of the U.S. population for OSB and 10% for iGaming

State	% of U.S. Population	Legalized Sports Betting[1]	Legalized OSB[2]	Legalized iGaming[3]
1 New Jersey	3%	✓	✓	✓
2 West Virginia	1%	✓	✓	✓
3 Indiana	2%	✓	✓	-
4 Oregon	1%	✓	✓	-
5 Pennsylvania	4%	✓	✓	✓
6 New Hampshire	0%	✓	✓	-
7 Iowa	1%	✓	✓	-
8 Colorado	2%	✓	✓	-
9 Illinois	4%	✓	✓	-
10 Tennessee[4]	2%	✓	✓	-
11 Michigan	3%	✓	✓	✓
12 Virginia	3%	✓	✓	-
13 Nevada	1%	✓	✓	✓
14 Rhode Island	0%	✓	✓	-
15 Washington, DC	0%	✓	✓	-
16 Delaware	0%	✓	-	✓
17 Mississippi	1%	✓	-	-
18 New Mexico[5]	1%	✓	-	-
19 Montana	0%	✓	-	-
20 Arkansas	1%	✓	-	-
21 New York	6%	✓	-	-
22 North Carolina	3%	✓	-	-
23 Washington[5]	2%	✓	-	-
% of U.S. Population		**41%**	**27%**	**11%**

Source: U.S. Census Bureau

Source: DraftKings Investor Deck, March 2021, p. 10, https://draftkings.gcs-web.com/static-files/bf17c9d2-f5a4-4a37-a8f9-00a13234b211, accessed July 2023.

Notes: States within each category sorted by launch date where applicable. Live DraftKings states sorted by DraftKings launch date. Washington D.C. is considered a state for the purposes of this page.

(1) Indicates states that have legalized sports betting in some form.

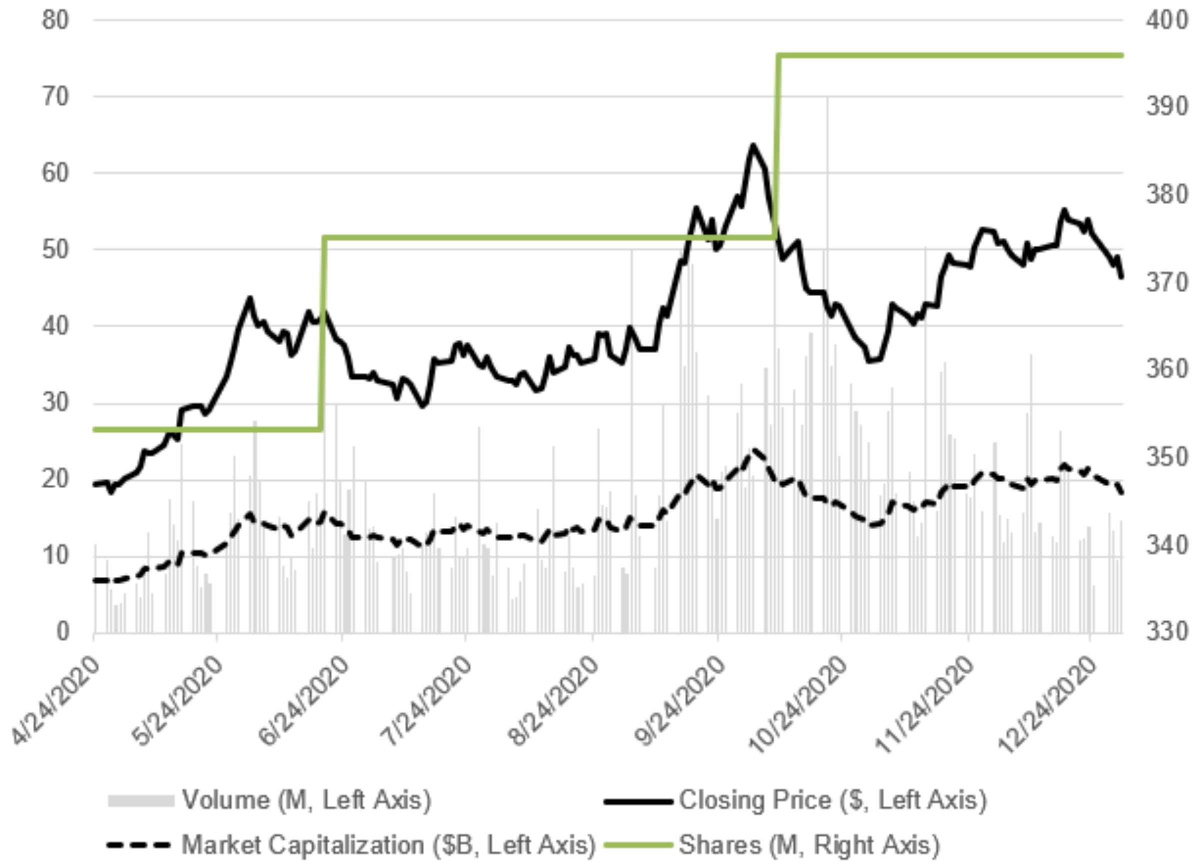
(2) Indicates states with online sportsbooks.

(3) Indicates states with legalized iGaming. Nevada has online poker only.

(4) Tennessee is the only state without retail sportsbooks.

(5) In New Mexico and Washington, sports betting is limited to provision by Native American tribes.

Exhibit 4 DraftKings Stock Price History



Source: Casewriters adapted from Centre for Research on Security Prices, https://wrds-www.wharton.upenn.edu/, May 2023.

Exhibit 5 Treasury Yields

Maturity	December 31, 2020	Average Month End from 2016 – 2020
3 Months	0.1%	1.1%
1 Year	0.1%	1.3%
5 Years	0.4%	1.7%
10 Years	0.9%	2.0%
20 Years	1.5%	2.3%
30 Years	1.7%	2.5%

Source: Casewriters adapted from Federal Reserve Economic Data (FRED), https://fred.stlouisfed.org/, May 2023.

Exhibit 6 Comparable Firms, Business Descriptions

Company	Description
Casinos & Gaming, GICS = 25301010	
Las Vegas Sands	Las Vegas Sands, together with its subsidiaries, develops, owns, and operates integrated resorts in Macao and Singapore.
MGM Resorts	MGM Resorts International, through its subsidiaries, owns and operates casino, hotel, and entertainment resorts in the United States and Macau. The company operates through three segments: Las Vegas Strip Resorts, Regional Operations, and MGM China.
Caesars	Caesars Entertainment operates as a gaming and hospitality company in the United States. The company owns, leases, or manages domestic properties in 16 states with slot machines, video lottery terminals and e-tables, and hotel rooms, as well as table games including poker.
Penn Entertainment	PENN Entertainment together with its subsidiaries, provides integrated entertainment, sports content, and casino gaming experiences in North America. The company operates through five segments: Northeast, South, West, Midwest, and Interactive.
Wynn Resorts	Wynn Resorts, Limited designs, develops, and operates integrated resorts. The company operates through four segments: Wynn Palace, Wynn Macau, Las Vegas Operations, and Encore Boston Harbor.
Churchill Downs	Churchill Down operates as a racing, online wagering, and gaming entertainment company in the United States. It operates through Live and Historical Racing, TwinSpires, and Gaming segments.
Boyd Gaming	Boyd Gaming Corporation, together with its subsidiaries, operates as a multi-jurisdictional gaming company in Nevada, Illinois, Indiana, Iowa, Kansas, Louisiana, Mississippi, Missouri, Ohio, and Pennsylvania.
Monarch	Monarch Casino & Resort, through its subsidiaries, owns and operates the Atlantis Casino Resort Spa, a hotel and casino in Reno, Nevada. It also owns and operates the Monarch Casino Resort Spa Black Hawk in Black Hawk, Colorado. The company was founded in 1972.
Movies & Entertainment, 50202010	
Disney	The Walt Disney Company, together with its subsidiaries, operates as an entertainment company worldwide. It operates through two segments, Disney Media and Entertainment Distribution; and Disney Parks, Experiences and Products.
Netflix	Netflix provides entertainment services. It offers TV series, documentaries, feature films, and mobile games across various genres and languages.
Live Nation	Live Nation Entertainment operates as a live entertainment company. It operates through Concerts, Ticketing, and Sponsorship & Advertising segments.
Warner Brothers	Warner Bros. Discovery operates a media and entertainment company worldwide. It operates through three segments: Studios, Network, and DTC.
Madison Square Garden	Madison Square Garden Sports operates as a professional sports company. The company owns and operates a portfolio of assets that consists of the New York Knickerbockers of the National Basketball Association (NBA) and the New York Rangers of the National Hockey League.
World Wrestling	World Wrestling Entertainment, an integrated media and entertainment company, engages in the sports entertainment business in North America, Europe, the Middle East, Africa, the Asia Pacific, and Latin America. It operates through three segments: Media, Live Events, and Consumer Products.

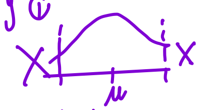
Interactive Home Entertainment, 50202020	
Activision Blizzard	Activision Blizzard, together with its subsidiaries, develops and publishes interactive entertainment content and services in the Americas, Europe, the Middle East, Africa, and the Asia Pacific. The company operates through three segments: Activision, Blizzard, and King.
Electronic Arts	Electronic Arts. develops, markets, publishes, and distributes games, content, and services for game consoles, PCs, mobile phones, and tablets worldwide.
Take-Two Interactive	Take-Two Interactive Software develops, publishes, and markets interactive entertainment solutions for consumers worldwide. The company offers its products under the Rockstar Games, 2K, Private Division, and T2 Mobile Games names.
Interactive Media & Services, 50203010	
Meta Platforms	Meta Platforms engages in the development of products that enable people to connect and share with friends and family through mobile devices, personal computers, virtual reality headsets, and wearables worldwide. It operates in two segments, Family of Apps and Reality Labs.
Twitter	Twitter operates as a platform for public self-expression and conversation. It also allows advertising of products and services. The company was founded in 2006 and is based in San Francisco, California.
Match Group	Match Group provides dating products worldwide. The company's portfolio of brands includes Tinder, Match, The League, Azar, Meetic, OkCupid, Hinge, Pairs, PlentyOfFish, and Hakuna, as well as a various other brands. The company was incorporated in 1986 and is based in Dallas, Texas.

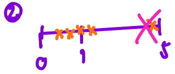
Source: Casewriters compiled from Compustat, May 2023.

Draft kings

• revenue stream
• value mult weighted ; not recommend to average beta

outlier removing ① ②





standardization

→ or take median

* use net debt to calculate β

r_f — duration — should match investment horizon

• long term investment → 10 Y

• can allocate asset frequency → short-term r_f

Exhibit 7 Comparable Firms, Segments

may not appropriate <on-site>

Company	Segment Revenue Share				
	Casino	**Rooms**	**Food & Beverage**	**Racing**	**Other**
Las Vegas Sands	71%	13%	7%		9%
MGM Resorts	52%	19%	17%		12%
Caesars	72%	12%	12%		5%
Penn Entertainment [1]	81%				19%
Wynn Resorts	69%	12%	12%		6%
Churchill Downs	51%			43%	6%
Boyd Gaming	75%	7%	13%		5%
Monarch	51%	14%	29%		5%
	Media Network	**Direct to Consumer**	**Studio**	**Parks, Experiences**	
Disney	35%	13%	16%	37%	
	Streaming	**DVD**			
Netflix	99%	1%			
	Concerts	**Tickets**	**Advertising**		
Live Nation	82%	13%	5%		
	Studio				
Warner Brothers	100%				
	Entertainment	**Sports**			
Madison Square Garden	50%	50%			
	Media	**Live Event**	**Merchandise**		
World Wrestling	77%	13%	10%		
	Games				
Activision Blizzard	100%				
Electronic Arts	100%				
Take-Two Interactive	100%				
	Advertising	**Subscription**	**Other**		
Meta Platforms	84%	0%	16%		
Twitter	87%	0%	13%		
Match Group	1%	99%			

entertaining

Source: Casewriters adapted from Compustat, Statista, and Company 10-Ks, May 2023.

[1] Penn Entertainment does not divide Rooms from Food & Beverage, so both are listed in "Other."

Exhibit 8 Comparable Firms, Leverage

Company	2016-2020 Average Quarter-End Book Leverage (%) [1]	Market Leverage (%) [2]	Credit Rating	Year-End 2020 Cash and Equivalents	Debt [3]	Book Equity [4]	Market Equity
Las Vegas Sands	59%	16%	BBB	2,121	14,225	2,973	45,525
MGM Resorts	66%	47%	BB	5,102	20,901	6,505	15,576
Caesars	74%	53%	B	1,758	26,813	5,016	15,452
Penn Entertainment	97%	71%	B	1,854	10,906	2,633	13,448
Wynn Resorts	91%	40%	BB	3,482	12,647	-352	12,173
Churchill Downs	66%	22%	BB	67	1,643	367	7,694
Boyd Gaming	77%	55%	B	519	4,716	1,124	4,800
Monarch	13%	7%	A	28	181	368	1,128
Disney	24%	9%	BBB	17,068	52,878	84,071	328,661
Netflix	48%	4%	BB	8,206	17,755	11,065	239,487
Live Nation	42%	9%	B	2,538	6,301	-472	16,020
Warner Brothers	61%	48%	BBB	2,091	15,845	10,464	14,804
Madison Square Garden	-45%	-20%	A	71	1,068	-268	4,439
World Wrestling	-4%	1%	A	462	411	389	3,738
Activision Blizzard	-9%	-1%	A	8,647	3,829	15,037	71,887
Electronic Arts	-83%	-8%	BBB	4,772	606	7,963	41,420
Take-Two Interactive	-185%	-8%	BBB	1,650	157	3,155	23,913
Meta Platforms	-12%	-2%	A	17,576	10,100	128,290	778,233
Twitter	6%	2%	BB	1,988	3,389	7,970	43,103
Match Group	38%	4%	BB	739	3,618	-1,178	40,417

Source: Compiled by casewriters from Compustat and Refinitiv, May 2023.

[1] Book Leverage = (Debt – Cash and Equivalents) / (Debt – Cash and Equivalents + Book Equity).

[2] Market Leverage = (Debt – Cash and Equivalents) / (Debt – Cash and Equivalents + Market Equity).

[3] Debt = [Total Long-Term Debt from Compustat].

[4] Book Equity = [Total Common/Ordinary Equity from Compustat].

[5] Market Equity = [Common Shares Outstanding * Share Price from Compustat].

Exhibit 9 Comparable Firms and the S&P 500, Stock Return Data, 2016-2020

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Source: Casewriters adapted from the Center for Research on Security Prices (CRSP), May 2023.

Exhibit 10 Debt Betas by Credit Rating Index, 2016-2020

Rating	Beta [1]
AAA	0.04
AA	0.08
A	0.13
BBB	0.27
BB	0.35
B	0.41
CCC	0.62

Source: Compiled by casewriters from Federal Reserve Economic Data (FRED), https://fred.stlouisfed.org/, Bank of America Center for Research on Security Prices (CRSP), https://wrds-www.wharton.upenn.edu/, May 2023.

[1] Betas are computed as the slope in a regression of monthly returns on ratings-based corporate bond indices on the monthly return on the S&P 500, using data from 2016 through 2020.

Endnotes

[1] The revenue figures of $432 and $644 million are pro forma and include the 2019 revenue of SBTech, a company that completed a business combination with DraftKings in 2020.

[2] crunchbase, DraftKings, Financials, https://tinyurl.com/2kyupt9e, accessed May 2023.

[3] crunchbase, DraftKings, Financials, https://tinyurl.com/2kyupt9e, accessed May 2023.

[4] History of DraftKings, playma.com, https://bit.ly/3HGMVY0, accessed April 2023.

[5] Steve O'Hear, "Fantasy Sports Company FanDuel Raises $275M Series E, Confirms $1B Valuation," Tech Crunch, July 14, 2015, https://tcrn.ch/3BcW3jp, accessed May 2023.

[6] "Accelerated acquisition of 37.2% of the issued and outstanding units of FanDuel Group Parent LLC ("FanDuel") from Fastball Holdings LLC ("Fastball")," press release, December 3, 2020, on Flutter website, https://tinyurl.com/yvnf7wx8, accessed May 2023.

[7] Ilan Mochari, "Why DraftKings and FanDuel Spent $206 Million on Ads This Year," *Inc.*, October 9, 2015, https://bit.ly/428Ibma, accessed May 2023.

[8] History of DraftKings, playma.com, https://bit.ly/3HGMVY0, accessed April 2023.

[9] History of DraftKings, playma.com, https://bit.ly/3HGMVY0, accessed April 2023.

[10] DraftKings Inc., December 31, 2020 Form 10-K, p. F-14, accessed April 2023.

[11] DraftKings Investor Deck, March 2021, page 5, https://draftkings.gcs-web.com/static-files/bf17c9d2-f5a4-4a37-a8f9-00a13234b211, accessed July 2023.

[12] A special purpose acquisition company (SPAC) is created, or sponsored, by a group of investors. The SPAC then raises money in an initial public offering, typically at $10 per share. Those "buying shares do not know what the eventual acquisition target company will be... That's also why a SPAC is also often called a 'blank check company.'" The SPAC sponsors typically have two years to find a suitable deal. When they do, the SPAC's shareholders vote to approve or reject the deal. If the deal is approved, they can either "swap their shares for shares of the merged company or redeem their SPAC shares to get back their original investment, plus the interest accrued while that money was in trust." The sponsors in turn typically get a share of the new company's equity. See Tom Huddleston, Jr., "What is a SPAC? Explaining one of Wall Street's hottest trends," CNBC.com, January 30, 2021.

[13] "DraftKings to Become Public Company, Creating the Only Vertically-Integrated U.S.-based Sports Betting and Online Gaming Company," press release, on December 23, 2019, on businesswire website, https://bwnews.pr/3LXcA1a, accessed April 2023.

[14] Returns on Treasury Bills are obtained from Measuring Worth, Ibbotson, and Fred. Returns on the S&P 500 Index are obtained from Robert Shiller's website, http://www.econ.yale.edu/~shiller/data.htm, accessed May 2023.

[15] 2022 Survey of Capital Markets Assumptions by Horizon Actuarial Services LLC, surveyed professional investment advisors for their return expectations for (i) US Equity – Large Cap and for (ii) US Treasuries over the next 10 years, https://www.horizonactuarial.com/uploads/3/0/4/9/30499196/rpt_cma_survey_2022_v0824.pdf, accessed May 2023. The CFO Survey 2022, surveyed CFOs for their expectations for the average annual S&P500 return over the next 10 years, equity risk premium is computed as the survey average minus the 10-year Treasury yield obtained from FRED, https://www.richmondfed.org/cfosurvey/, accessed May 2023.

[16] For more information on the estimation of the equity risk premium, see: Samuel Hanson, Robin Greenwood, and David Biery, "Estimating the Equity Risk Premium," HBS No. 216-074 (Boston: Harvard Business School Publishing, 2016).