

Gaming

Q1 Gaming Earnings Week 2: Strong revenues, no matter the market

Price Objective Change

Revenues (++), EBITDA (+), Online (+), Consumer (=)

Week 2 of gaming earnings saw healthy revenues (+3% ahead of our estimates) with 3 beats, 1 in-line and 2 misses on EBITDA. Main Themes: 1) Consumer and exit rates commentary is still solid, 2) Online revenues were better and confidence in 2H '23 profitability increased, 3) Las Vegas and Locals commentary remains strong.

DKNG: "Holding" on to more customers; Guidance raised

Revenues/EBITDA were +6%/+4% ahead of our estimates and FY '23 guidance was raised (details in our <u>first take, see report)</u>. Shares rallied >15% driven by a combination of estimates & multiple re-rating as 1) growth trajectory remains strong (we est. ~18% revenue CAGR from '23-'25), 2) product enhancements are taking hold, 3) profitability is in sight, 4) risk of capital raise is behind us. Trends continue to exceed our expectation but valuation (~25x/~14x actual & "stabilized" 2025 EBITDA) keep us Neutral.

MGM: Macau, Las Vegas, Regionals solid, offset by online

Revenues were ~2% ahead of our estimates driven by Macau & Regionals while Las Vegas was in-line. Property EBITDA met our estimate as Macau upside was offset by larger losses (timing related) at BetMGM. Maintain our \$50 PO & Neutral on strong operations offset by macro uncertainty. See our first take for more (see report).

CZR: Vegas (+), Online (+), Regionals (=), 2025 Goals

Revenues/EBITDAR were 2%/3% ahead of our est. as Las Vegas was strong, Regionals were mixed, and Online losses improved. 2025 goals of \$5B in EBITDA & \$12+ in free cash flow provide a path for upside. Maintain \$55 PO & Neutral on stable trends offset by macro and higher leverage/beta vs. peers. See our first take (see report).

PENN: Mixed Q1; Barstool headline risk causes pull back

Revenues were ~3% ahead driven by the Northeast and Interactive. Property EBITDAR slightly missed given negative mix shift in regions from the South to the Northeast. 2023 revenue guidance increased by \$225M for Barstool integration & EBITDAR guidance was reiterated. Shares fell ~13.5%, which likely reflected headline risks around Barstool in addition to fundamentals. Reiterate Neutral on a balanced risk-reward but lower PO to \$32 (\$35 prior), on 6.8x '24E EBITDA (7.5x '23E EBITDA prior) with increased headline risk for Barstool.

RRR: Strong quarter as Locals remain strong

Revenues/Adj. EBITDA were 4%/6% ahead of our est. driven by non-gaming (+4% Q/Q) while margins of 49.8% were up sequentially. We raise estimates on better non-gaming revenue and continued healthy margins. Stay at Underperform on relative valuation but raise PO to \$45 (\$42 prior) on ~9x (same multiple) on 2024E new EBITDA (2023E prior).

VICI: Solid Q1 FY '23 guidance reiterated

Revenues were ~2% ahead helped by <u>recent transactions (see report)</u> & AFFO guidance was maintained. Reiterate Buy on VICI's mid-teens (AFFO + dividend) total return this year and low double-digit return over time & our \$50 PO on a 4.8% '24 dividend yield.

Bof A Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Refer to important disclosures on page 7 to 10. Analyst Certification on page 6. Price Objective Basis/Risk on page 5. 12555397

Timestamp: 08 May 2023 05:00AM EDT

08 May 2023

Equity United States Gaming

Shaun C. Kelley Research Analyst **BofAS** +1 646 855 1005 shaun.kelley@bofa.com

Michael Pagliarulo Research Analyst

BofAS +1 646 855 1680 michael.pagliarulo@bofa.com

Dany Asad Research Analyst BofAS +1 646 855 5238 dany.asad@bofa.com

Iulie Hoover Research Analyst BofAS +1 646 855 0674 iulie.hoover@bofa.com

Exhibit 1: Stocks Mentioned

Overview of stocks mentioned in this report

BofA Ticker	Bloomberg Ticker	Price	Rating
CZR	CZR US	\$44.68	C-2-9
DKNG	DKNG US	\$24.58	C-2-9
MGM	MGM US	\$43.14	C-2-9
PENN	PENN US	\$26.44	C-2-9
RRR	RRR US	\$48.38	C-3-8
VICI	VICI US	\$32.81	B-1-7

Source: RofA Global Research

BofA GLOBAL RESEARCH

DKNG = DraftKings

MGM = MGM Resorts

CZR = Caesars Entertainment

PENN = Penn Entertainment

RRR = Red Rock Resorts

VICI = VICI Properties

Q1 Results & Stock Performance

Exhibit 2: Revenue Performance

Revenues were an avg. 3% ahead of our est.

Stock	Revenue	BofA est.	Cons.	Delta (\$) to BofA	Delta (%) to BofA
CZR	\$2,830	\$2,769	\$2,765	\$61	2%
DKNG	\$770	\$724	\$705	\$46	6%
MGM	\$3,873	\$3,809	\$3,614	\$65	2%
PENN	\$1,673	\$1,621	\$1,590	\$53	3%
RRR	\$434	\$418	\$414	\$16	4%
VICI	\$878	\$857	\$819	\$20	2%

Source: BofA Global Research, Bloomberg, Visible Alpha

BofA GLOBAL RESEARCH

Exhibit 3: EBITDA Performance

EBITDA was an average 1% ahead of our est.

Stock	EBITDA	BofA est.	Cons.	Delta (\$) to BofA	Delta (%) to BofA
CZR	\$958	\$934	\$920	\$24	3%
DKNG	(\$222)	(\$232)	(\$255)	\$10	4%
MGM	\$1,130	\$1,135	\$1,059	(\$5)	0%
PENN	\$478	\$495	\$484	(\$16)	-3%
RRR	\$194	\$184	\$183	\$10	6%
VICI	\$710	\$722	\$709	(\$11)	-2%

Source: BofA Global Research, Bloomberg, Visible Alpha

BofA GLOBAL RESEARCH

Exhibit 4: Stock Performance: Absolute & Relative Performance

CHDN & DKNG posted the biggest gains while PENN posted the biggest declines

Stock	1 Day Return	vs. S&P 500	Since Earnings	vs. S&P 500	YTD Return	vs. S&P 500
BYD	1.5%	1.9%	6.6%	5.0%	29.5%	21.7%
CHDN	14.1%	12.1%	17.6%	15.7%	40.1%	32.3%
CZR	-1.3%	-0.6%	0.2%	-0.1%	7.4%	-0.4%
DKNG	16.2%	14.6%	15.3%	13.6%	115.8%	108.0%
GLPI	1.0%	0.2%	-0.8%	-0.8%	-2.0%	-9.8%
LVS	2.0%	2.0%	6.0%	6.4%	28.3%	20.4%
MGM	-0.2%	0.9%	-6.3%	-5.5%	28.7%	20.8%
PENN	-13.6%	-12.9%	-12.2%	-13.2%	-11.0%	-18.8%
RRR	4.3%	2.6%	4.2%	2.4%	20.9%	13.1%
VICI	-3.2%	-2.1%	-2.9%	-2.1%	1.3%	-6.6%

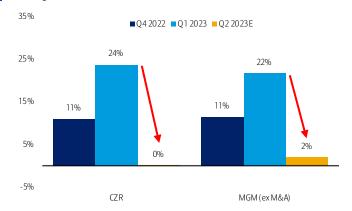
Source: BofA Global Research, Bloomberg, Visible Alpha. BYD = Boyd Gaming, CHDN = Churchill Downs, GLPI = Gaming & Leisure, LVS = Las Vegas Sands

BofA GLOBAL RESEARCH

Las Vegas

Exhibit 5: Strip Y/Y Revenue Growth

Revenue growth was 20%+ in Q1 helped by easy comps, though we expect flattish growth in Q2 $\,$

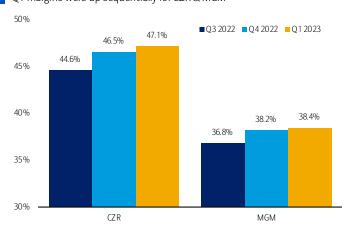


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 6: Strip EBITDA Margins

Q1 margins were up sequentially for CZR & MGM

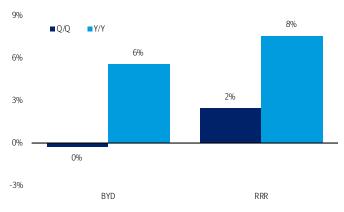


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 7: Locals Revenue Growth

Revenue growth was flattish Q/Q and up HSD% Y/Y

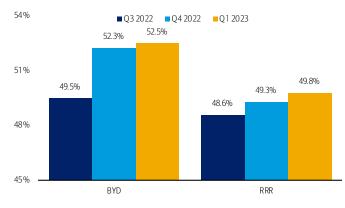


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 8: Locals EBITDA Margins

Margins were up sequentially for BYD & RRR



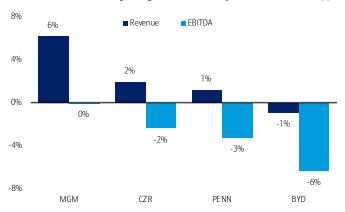
Source: BofA Global Research

BofA GLOBAL RESEARCH

Regionals

Exhibit 9: Y/Y Revenue & EBITDA Growth

MGM posted the best results while CZR was impacted by weather, PENN by the South and Northeast gaming taxes, and BYD by Louisiana & Mississippi

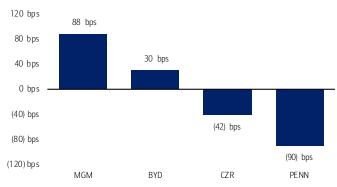


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 10: Q/Q Margin Performance

PENN posted the biggest sequential decline due to the South and Northeast gaming taxes



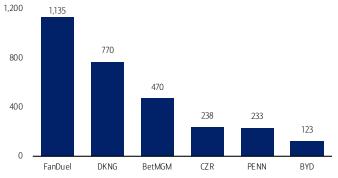
Source: BofA Global Research

BofA GLOBAL RESEARCH

Online

Exhibit 11: Q1 2023 Online Revenue

FanDuel and DKNG posted the highest revenue

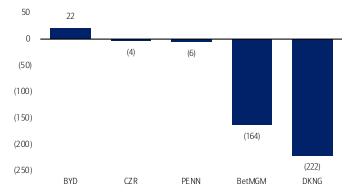


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 12: Q1 2023 Online Adj. EBITDA

DKNG posted the largest loss, though came in better than our estimate



Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 13: DKNG's Top-Down Valuation

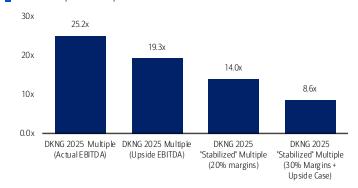
DKNG's actual & "stabilized" EBITDA in our current estimates and our "upside" case"

Top-Down Valuation	Current	Upside Case
Share Price	\$24.58	\$24.58
2025E Diluted Shares	503	503
Net Debt	(36)	(36)
Enterprise Value	12,339	12,339
2025 Revenue	4,408	4,781
Stabilized Margin	20%	30%
Implied Stabilized EBITDA	882	1,434
Actual EBITDA	490	639

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 14: DKNG 2025 "Stabilized" and "Actual" EV/EBITDA Multiples DKNG's implied multiples based on "stabilized" and "actual" EBITDA



Source: BofA Global Research

BofA GLOBAL RESEARCH

Consumer Commentary

MGM: "We're seeing some really strong strength in our database, especially in our Gold Plus customers.... we see not only their trips continuing to increase, but also their play continue to increase. And in most areas of our database, we're seeing increases in both trips and in spend. The one area where we may be seeing a little bit less is the younger customer. They're probably a little bit more impacted than anything we've seen, but nothing materially"

CZR: "What you're seeing through Vegas is not only just extraordinary demand that continues as you look through each month... We're getting Group business that is higher dollar, comes with banquet business attached and replaces our least profitable players... Obviously, second quarter generally is our most difficult comp of the year since that was our all-time record second quarter last year, we did almost \$1.5 billion of brick-and-mortar EBITDA, but we feel very good about business in the April and through the rest of this quarter in Vegas"

PENN: "April really was a story of 2 halves. We started the month off slowly with the Easter weekend, but finished strong in the final 2 weeks, including having our number 1 companywide slot volume weekend of the year so far in the last weekend of April"

RRR: "With regard to our group sales business, we continue to see positive momentum driven by growth in both room nights and ADR as our pipeline continues to grow into 2023. And as we begin the second quarter, our business across both our gaming and non-gaming segments remained stable"

VICI: "You're seeing across so many consumer sectors the strength of luxury based where we are in Midtown Manhattan, our neighborhood effectively feels like it's being taken over by LVMH. And that's simply because there is so much spending happening globally in these luxury categories. And it's one of the reasons our partners like Cabot and Canyon Ranch are doing so well right now"

Exhibit 15: Estimate Changes (\$M)

Overview of BofA's estimate changes

	FY 2023		FY:	FY 2024		FY 2025	
	New	Prior	New	Prior	New	Prior	
PENN	1,955	1,974	2,023	2,032	2,089	2,085	
RRR	737	735	812	800	831	816	
VICI	2,940	2,947	3,077	3,046	3,293	3,266	

Source: BofA Global Research estimates

BofA GLOBAL RESEARCH



Price objective basis & risk

Caesars Entertainment Inc (CZR)

Our \$55 PO is based on approximately 7.7x 2024E EV/EBITDAR. This multiple is in line with CZR's long-term historical average and mid-cycle multiple.

Risks to the upside mainly revolve around management's ability to significantly exceed its forecast which could come from 1) de-levering, 2) late cycle growth in Las Vegas, 4) digital gaming share gains, 5) opportunistic asset sales, land sales, JVs or licensing deals

Risks to the downside stem from 1) high financial and operating leverage, 2) lack of meaningful growth in digital market share 3) potential margin deterioration

DraftKings, Inc. (DKNG)

Our \$25 PO is based on approx. 3.4x 2024E Revenue, in line with a select group of consumer disruptors. We believe this multiple is justified given the early stage enthusiasm for the vertical and the scarcity value associated with DKNG, given it is the only US pure-play for sports betting of meaningful size.

Upside risks to our PO are higher-than-expected growth, faster-than-anticipated state legalizations and quicker and higher profitability than we model to.

Downside risks are lower enthusiasm for growth stocks, slower legalization for sports betting, increased competition, and a slower ramp to profitability.

MGM Resorts International (MGM)

Our \$50 PO is based on approximately 7x our 2024 EBITDAR estimate. This multiple is a discount to MGM's historical average since 2010, due to the the company's evolving corporate structure.

Upside risks are: a stronger than anticipated recovery in Las Vegas, sports betting/iGaming ownership changes and improving consumer sentiment and its majority ownership stake in MGM China.

Downside risks are: execution risks related to sports betting and iGaming, increased Strip promotional competition, and a slower than expected recovery in the Macau market and US.

Penn Entertainment (PENN)

Our \$32 PO is based on approximately 6.8x 2024E EBITDAR. This multiple is in line with PENN's historical multiple, but a discount to other consumer growth stocks with longer track records of growth and greater brand power.

Downside risks are potential margin deterioration, uncertainty on growth projects, and that the sports opportunity is less than we anticipate.

Upside risks are a function of PENN winning additional casino licenses not in our estimates, sports betting ahead of expectations, and stable consumer trends.

Red Rock Resorts, Inc. (RRR)

Our \$45 PO is based on approximately 9x our 2024E EBITDA. We believe this multiple is appropriate given 1) Tough comps, and 2) Labor inflation is also a bigger concern in Las Vegas (LV Locals is RRR's core market) than regionals due to a higher proportion of fixed operating expenses.

Risks to the downside are as follows: 1) Revenue comps are tough as Las Vegas Locals (RRR's core market) meaningfully outperformed the broader US with Gaming revenue +25% above pre-COVID levels. 2) RRR has higher fixed operating leverage than peers



owing to lower gaming tax rate. 3) Following recap/special dividend, incremental cash flow will be targeted at Durango project. 4) Wage and cost inflation as well as competition from the Strip are possible.

Risks to the upside are: 1) Record margins (highest among regionals) and cash flows, 2) RRR's attractive balance sheet and leverage profile, 3) Less of a drag from the Palms and closed properties, and 4) RRR owns 100% of its real estate providing substantial security and flexibility for borrowing

VICI Properties (VICI)

Our \$36 PO is based on an approximate 4.8% 2024E dividend yield. Our dividend yield assumption is closer to other category leading triple-net REITs reflecting VICI's growth prospects following the MGP transaction.

Upside risks to our PO are new accretive M&A both within and outside of the CZR portfolio, as well as non-gaming assets. Downside risks to our PO are inability to execute M&A, overexposure to one operator, and general interest rate risks.

Analyst Certification

I, Shaun C. Kelley, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

Special Disclosures

BofA Securities is currently acting as financial advisor to ORIX Corporation, the core company of the MGM-ORIX Consortium that has been selected as the Prospective IR Operator for the Project for Establishment and Operation of Specified Complex Tourist Facilities in Yumeshima, Osaka (Osaka IR) implemented by Osaka Prefecture and Osaka City, which was announced on September 28, 2021.

BofASecurities is currently acting as financial advisor to ORIX Corporation, thecore company of the MGM-ORIX Consortium that has been selected as the ProspectiveIR Operator for the Project for Establishment and Operation of SpecifiedComplex Tourist Facilities in Yumeshima, Osaka (Osaka IR) implemented by OsakaPrefecture and Osaka City, which was announced on September 28, 2021.



US - Gaming, Lodging and Leisure Coverage Cluster

Investment rating	Company	Bof A Ticker	Bloomberg symbol	Analyst
BUY				
	Apple Hospitality REIT Inc.	APLE	APLE US	Dany Asad
	Boyd Gaming Corp	BYD	BYD US	Shaun C. Kelley
	Choice Hotels International	CHH	CHH US	Dany Asad
	Churchill Downs	CHDN	CHDN US	Shaun C. Kelley
	Hilton Worldwide	HLT	HLT US	Shaun C. Kelley
	Hyatt Hotels	Н	HUS	Shaun C. Kelley
	Marriott International Inc.	MAR	MAR US	Shaun C. Kelley
	Playa Hotels & Resorts	PLYA	PLYA US	Shaun C. Kelley
	Ryman Hospitality Properties	RHP	RHP US	Shaun C. Kelley
	Soho House & Co Inc	SHCO	SHCO US	Shaun C. Kelley
	Vail Resorts, Inc	MTN	MTN US	Shaun C. Kelley
	VICI Properties	VICI	VICI US	Shaun C. Kelley
	Wyndham Hotels & Resorts, Inc.	WH	WH US	Dany Asad
NEUTRAL				
	Caesars Entertainment Inc	CZR	CZR US	Shaun C. Kelley
	DraftKings, Inc.	DKNG	DKNG US	Shaun C. Kelley
	Hilton Grand Vacations Inc	HGV	HGV US	Dany Asad
	Las Vegas Sands	LVS	LVS US	Shaun C. Kelley
	Marriott Vacations Worldwide	VAC	VAC US	Shaun C. Kelley
	MGM Resorts International	MGM	MGM US	Shaun C. Kelley
	Park Hotels & Resorts Inc.	PK	PK US	Dany Asad
	Pebblebrook Hotel Trust	PEB	PEB US	Shaun C. Kelley
	Penn Entertainment	PENN	PENN US	Shaun C. Kelley
	Wynn Resorts Ltd	WYNN	WYNN US	Shaun C. Kelley
UNDERPERFORM	,			,
	DiamondRock Hospitality	DRH	DRH US	Dany Asad
	Gaming & Leisure Properties, Inc.	GLPI	GLPIUS	Shaun C. Kelley
	Hersha Hospitality	HT	HT US	Dany Asad
	Host Hotels & Resorts Inc.	HST	HST US	Shaun C. Kelley
	NeoGames	NGMS	NGMS US	Shaun C. Kelley
	Red Rock Resorts, Inc.	RRR	RRR US	Shaun C. Kelley
	RLJ Lodging Trust	RLJ	RLJ US	Dany Asad
	Sportradar Holding AG	SRAD	SRAD US	Shaun C. Kelley
	Summit Hotel Properties	INN	INN US	Dany Asad
	Sunstone Hotel Investors	SHO	SHO US	Dany Asad
	Travel + Leisure Co	TNL	TNL US	Dany Asad
				-

Disclosures

Important Disclosures

Equity Investment Rating Distribution: Gaming Group (as of 31 Mar 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	24	52.17%	Buy	11	45.83%
Hold	13	28.26%	Hold	6	46.15%
Sell	9	19.57%	Sell	3	33.33%

Equity Investment Rating Distribution: Global Group (as of 31 Mar 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	1869	53.01%	Buy	1030	55.11%
Hold	827	23.45%	Hold	476	57.56%
Sell	830	23.54%	Sell	389	46.87%

⁸⁰ Issuers that were investment banking dients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.



FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. VOLATILITY RISK RATINGS, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. INVESTMENT RATINGS reflect the analyst's assessment of both a stock's: absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). There are three investment ratings: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

Investment rating Total return expectation (within 12-month period of date of initial rating) Ratings dispersion guidelines for coverage cluster⁸²

 Buy
 ≥ 10%
 ≤ 70%

 Neutral
 ≥ 0%
 ≤ 30%

 Underperform
 N/A
 ≥ 20%

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. Coverage Cluster is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

Price Charts for the securities referenced in this research report are available on the Price Charts website, or call 1-800-MERRILL to have them mailed.

BofAS or one of its affiliates acts as a market maker for the equity securities recommended in the report: Caesars Ent, DraftKings, Inc., MGM Resorts, Penn Entertainment, Red Rock Resorts, VICI Properties.

BofAS or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: Caesars, VICI Properties.

The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: Caesars, MGM Resorts, Penn Entertainment, Red Rock Resorts, In, VICI Properties.

BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Caesars, DraftKings, Inc., MGM Resorts, Penn Entertainment, Red Rock Resorts, In, VICI Properties.

The issuer is or was, within the last 12 months, a non-securities business client of BofAS and/or one or more of its affiliates: Caesars, DraftKings, Inc., MGM Resorts, Penn Entertainment, Red Rock Resorts. In. VICI Properties.

BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Caesars, MGM Resorts, Penn Entertainment, Red Rock Resorts, In, VICI Properties.

BofAS or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer or an affiliate of the issuer within the next three months: Caesars, MGM Resorts, Penn Entertainment, Red Rock Resorts, In, VICI Properties.

BofAS together with its affiliates beneficially owns one percent or more of the common stock of this issuer. If this report was issued on or after the 9th day of the month, it reflects the ownership position on the last day of the previous month. Reports issued before the 9th day of a month reflect the ownership position at the end of the second month preceding the date of the report: MGM Resorts, Penn Entertainment, VICI Properties.

BofAS or one of its affiliates is willing to sell to, or buy from, clients the common equity of the issuer on a principal basis: Caesars Ent, DraftKings, Inc., MGM Resorts, Penn Entertainment, Red Rock Resorts, VICI Properties.

The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of BofAS and/or one or more of its affiliates: Caesars, DraftKings, Inc., MGM Resorts, Penn Entertainment, Red Rock Resorts, In, VICI Properties.

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

BofAS together with its affiliates beneficially owns a net short position of 0.5% or more of the total issued share capital of this issuer. Ownership positions speak as of a date no more than three trading days prior to the date of this report: VICI Properties.

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments. Refer to BofA Global Research policies relating to conflicts of interest.

*BofA Securities" includes BofA Securities, Inc. (*BofAS*) and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. *BofA Securities* is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no. 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by the Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch (Hong Kong): Merril



Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

(Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Investment Industry Regulatory Organization of Canada; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Jana Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in Iniquan) in Season and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities enti

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities. This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information. In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

BofA ESGMeter Methodology:

ESGMeter is a proprietary metric based on quantitative analysis and fundamental analyst inputs that reflects our assessment of a company's Environmental, Social and Governance-related attributes. The ESGMeter is intended to indicate a company's likelihood of experiencing stronger financial stability (higher return on equity and lower earnings and price volatility) over the next three years relative to peer group. There are three ESGMeter levels - Low, Medium, and High - which indicate whether a company has attributes most likely to translate into superior financial stability (in the case of a High level) or weaker financial stability (in the case of a Low level) over the next three years relative to its peer group. A Medium level suggests that a company exhibits ESG characteristics that are likely associated with financial stability results in line with its peer group over the next three years. Full details of our methodology, financial stability definition and disclaimers are available at BofA ESGMeter methodology. ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of the BofA Global Research fundamental equity analyst's investment rating, volatility risk rating, income rating or price objective for that company.



Copyright and General Information:

Copyright 2023 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities. Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities as established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public informa

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BofA Securities policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

