A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the NOVA – School of Business and Economics.

BETWEEN A CALL AND A FOLD

FRANCISCO MENDONÇA
26009

MIGUEL REALISTA
25872

A Project carried out on the Master in Finance Program, under the supervision of:

Francisco Antunes da Cunha Martins

3rd January, 2020

Abstract

The paper includes an in-depth analysis of MGM Resorts International stock and provides information reasonably sufficient upon which to base an investment decision. The analysts intend to add value to a potential MGM Resorts International investor by including a price target as a result of the company's detailed valuation, full and comprehensive analysis of the company, its sector and competitors and a clear analysis of the main parameters driving the company's value and risks.

Keywords

Gambling, Lodging, Tourism and Resorts

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

NOVA SCHOOL OF BUSINESS & ECONOMICS

MASTER IN FINANCE

MGM RESORTS INTERNATIONAL

COMPANY REPORT

TOURISM & GAMBLING

3 JANUARY 2020

FRANCISCO MENDONÇA AND MIGUEL REALISTA

Between a Call and a Fold

A cautious stand on MGM Resorts International

Neutral Rating: Our coverage of MGM Resorts International converges to a **Hold** rating, as we estimate a price target of $34.77 (implicit 4.4% upside). The valuation implies an EV/EBITDA multiple of 11.4x, ranking MGM below industry averages. Despite recognizing the growth potential of MGM, the current level of uncertainty leads us to recommend investors to wait and see how the company and industry perform in the next few months.

• As economic growth appears to slow down, the gambling sector demonstrated a poor performance in Las Vegas and Macau, hurting MGM's L4L growth in 2019, compensated by the successful ramp-up of new resorts and casinos.

• We recognize the potential of entering the Japanese gambling market and the promising JV with GVC on the online gambling front, but both opportunities seem to be in too early of a development stage to accurately incorporate in the valuation.

• Despite confidence of the management in fully executing MGM2020, we are reticent of a full target meeting.

• We estimate revenue to grow at 3.5% CAGR 2019-2027 - boosted by the growth of the Macanese segment MGM Cotai ramps-up – converging to a 28.1% EBITDA margin. After the recent strong investment, we expect Capex to shrink and tending to stabilize at c.8% revenue, improving CF generation. LT ROIC is expected to reach 10.9% in run-rate.

Recommendation:	**HOLD**
Vs Previous Recommendation	-
Price Target FY20:	**$34.77**
Vs Previous Price Target	-
Price (as of 3-Jan20)	**$33.27**

Reuters: MGM.N, Bloomberg: MGM:US

52-week range ($)	33.30-23.87
Market Cap ($m)	16,374.48
Outstanding Shares (m)	519
Dividend yield	1.64%

Source: Bloomberg

MGM vs S&P500

Source: Bloomberg, ER Analysis

(Values in $ millions)	2018	2019E	2020F
Revenue	11,763	12,467	13,261
Adjusted EBITDA	2,660	3,058	3,456
Adj. EBIDTA margin %	22.6%	24.5%	26.1
Net Income Attributable	377	349	794
ROIC	5.6%	5.7%	6.7%
Core FCF	(230)	846	1,230
P/E	47.6	51.5	22.6
EPS ($/share)	0.73	0.68	1.54

Source: Company Filings, ER Analysis

Company description

MGM Resorts International owns and operates a portfolio of casino resorts, offering gambling amenities, hotel services, food and beverage, entertainment and other related services. The company is present internationally - in the United States of America and Macau.

Table of Contents

Company Overview

Company description

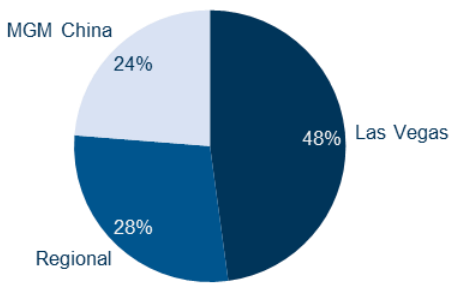
MGM Resorts International, or simply MGM, is a Delaware based company, established in 1986, that owns and operates a portfolio of casino resorts, offering gambling amenities, hotel services, food and beverage, entertainment and other related services. In 2009, MGM was not far from bankruptcy but has since deleveraged considerably through a mixture of recapitalization, earnings growth in the U.S and Macau (Special Administrative Region of the People's Republic of China) and refinancing as rates fell.

The company is present internationally - in the United States of America and Macau. MGM set foot in the Asian market in 2007, with an 50% stake in joint venture that originated MGM China Holdings Limited. MGM China reached the public markets in June 2011, and the holding has, since then, increased its position to c.56%. All in all, MGM Resorts International actively manages 16 resorts within the U.S. and 2 resorts in Macau.

Figure 1: MGM Structure – Consolidated and Unconsolidated Affiliates
Source: Company Filings, ER Analysis

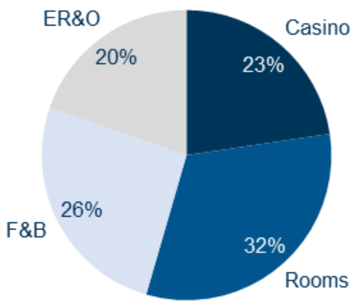
Owned by MGM	MGM Growth Properties ("MGP") (67% ownership)	MGM China Holdings Limited (56% ownership)	Other Key Ventures
Las Vegas: Bellagio, MGM Grand, Circus Circus **Regional:** MGM Springfield	NYSE: MGP	HKSE: 2282 HK	**CityCenter Holdings (50%)** Aria, Vdara
Owned by MGP	Triple Net Lease Partnership Real Estate Investment Trust ("UPREIT")	MGM Macau MGM Cotai	**Roar Digital (50%)** Sports Betting Venture with GVC
Las Vegas: Mandalay Bay, Luxor,Mirage, Excalibur, The Park, New York-New York, Park MGM **Regional:** MGM Grand Detroit, Beau Rivage, Gold Strike Tunica, Borgata, MGM National Harbor, Empire City Casino, MGM Northfield Park			**LV Arena (42.5%)** Venture with AEG and Athena Arena, LLC **Diayutai MGM Hospitality (49%)** **Sydell Group (50%)**

Figure 2: Revenue breakdown by Operation LTM
Source: Company Filings



MGM can be further segmented geographically, reporting three main channels of operation: Las Vegas, Regional (all other domestic operations) and MGM China. The differentiation within American territory arises from the special gaming environment and context of the state of Nevada compared to the other forty-nine states. Despite the U.S casino operations featuring a similar structure (with an identical mix of slots and table games), the particularity and magnitude of the Las Vegas gambling industry, as well as the different weight of non-casino operations in the overall turnover, justify the distinction. MGM China's operations consist on the MGM Macau resort and casino, and on the recently launched integrated casino, hotel and entertainment resort on the Cotai Strip in Macau – MGM Cotai.

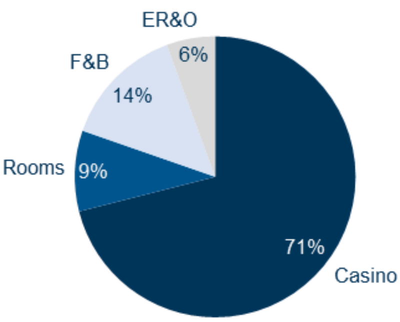
Figure 3: Las Vegas Revenues LTM
Source: Company Filings



The Las Vegas segment contributes the most to adjusted EBITDA…

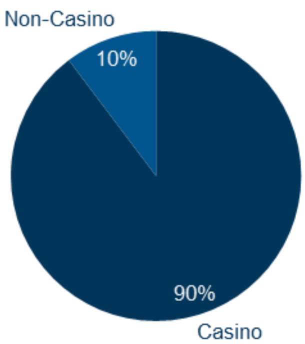
Las Vegas – c.50% of Adjusted EBITDA[1]: MGM is the largest employer in the state of Nevada, employing more than 55.000 people, and the most dominant gaming operator on the Las Vegas Strip, by number of real estate assets. The LV landscape results from strategic mergers in the 2000s – with Mirage Resorts and with Mandalay Bay Group. The asset portfolio currently accounts for eight casinos and resorts owned and operated by the group, after the announcement of the sale-leaseback of the iconic Bellagio Resort & Casino to Blackstone. Furthermore, in 2009, MGM has started CityCenter Holdings – a 50% Joint-Venture with Dubai World – which assets currently consist on Aria and Vdara (both unconsolidated affiliates) and has recently developed the LV Arena (or T-Mobile Arena), a multi-purpose indoor arena.

Figure 4: Regional Revenues LTM
Source: Company Filings



Regional – c.28% of Adjusted EBITDA: Regional portfolio has considerably grown over the past years. Most of its assets are leaders in each market. For example, the Borgata Hotel Casino & Spa has a very strong presence in Atlantic City; MGM National Harbour is a top-notch asset in Maryland and MGM Detroit is the leader in the Detroit market. Similarly to Las Vegas, the Regional operations offer various non-casino amenities, instead of pure gambling centers, but with a much smaller weight. Furthermore, MGM announced a joint venture with GVC to pursue sports betting opportunities in the US.

Figure 5: Macau Revenues LTM
Source: Company Filings



Macau – c.22% of Adjusted EBITDA: MGM holds a c.56% stake of MGM China Holdings Limited (therefore consolidated in MGM's accounts). MGM China rose as a 50% joint-venture with Pansy Ho and Stanley Ho, bringing up to life the MGM Grand Paradise, also referred to as MGM Macau. In 2018, the company launched its second integrated resort in Macau, located in the Cotai Strip – MGM Cotai – after an investment of over $3B. The Macanese segment is significantly more driven by gambling revenues, having 90% of its LTM revenue from this business line.

MGP: MGM Growth Properties (MGP) is MGM's umbrella partnership real estate investment trust (UPREIT). It had its IPO in 2016, currently having c.67% of its shares owned by the holding company. Due to the nature of the subsidiary, MGM has a separate board from MGM (although several of its board members are senior MGM executives). The UPREIT owns the majority of the group's properties, having its cash-flow generated from the rental payments from the holding.

…although the Regional and Macau segments have the most promising short/medium term growth potential.

In simple terms, MGM's lease with MGP consists on a master lease under a triple-net structure, with MGM being responsible for paying all the operational expenses, insurance and property taxes. Hence, the main triple-net lease

[1]Adjusted EBITDA: EBITDA before property transactions, preopening and start-up expenses and other non-recurring items

structure achievement is that it shifts the inherent obligations of MGP to MGM. For example, for an increase of property taxes on a certain year, MGP's cash flow will be secured since it will be MGM the responsible for carrying the unexpected taxes increase.

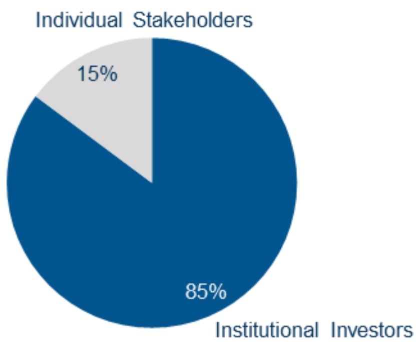
The UPREIT allows the company to hold a more liquid asset…

By creating the UPREIT, MGM managed to (i.) find easier access to capital (with a more liquid asset) and (ii.) create two separate financial assets for investors to choose from. Directly owning properties definitely has advantages to it, namely not depending on other parties, having no interest (lease) obligations, losing the ability to use the asset as collateral for financing and potentially selling the assets to increase liquidity, either in times of financial struggle, new opportunities to invest in or simply for a shift in strategy. The problem arises from the liquidity of real estate, considering it may take time and effort to perform a sale-lease back and, if the circumstances pressure the company, may lead to a poor valuation of the asset. By creating a REIT, after the IPO, the company owns, not the properties directly, but stocks of a company whose whole business is having the properties. This way, if it intends to, it can find liquidity through the sale of part of its shares, making the process quicker and more adaptable to the company's needs. Additionally, the desegregation of different segments of a company (in this case hotel and casino management vs real estate ownership) allows for each segment's value to be unlocked, by presenting the market with two companies with different cores to invest in. An investor that is bullish on Las Vegas real estate, but wants not to invest in casinos, can now long the REIT. Considering the triple-net-lease structure, the cash-flow is fairly predictable, making it resemble a bond, even.

…and unlock each segment's value for investors.

Shareholder structure

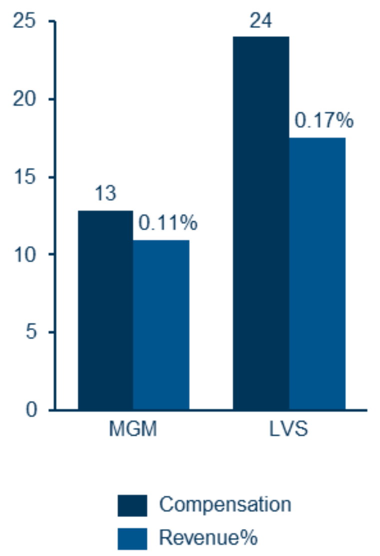
Figure 6: MGM Shareholder Structure
Source: Nasdaq



Roughly 85% of MGM's outstanding shares are currently held by institutional investors. This is the highest % of ownership held by institutional investors in any major firm in the Gaming and Casinos industry. At the end of 2019, the three largest shareholders were asset manager groups - T. Rowe Price Associates (10.6% of total outstanding shares), Vanguard Group (9.7%) and Capital Research & Management Co (6.3%).

The presence of this type of investors may positively be contributing to MGM's low stock volatility. On one hand, (1.) the efficient monitoring conducted by institutional investors results in less information asymmetry between managers and shareholders and (2.) institutions such as mutual or pension funds will both seek low volatility assets and engage trading in a more long-term perspective, reducing short-term speculation. On the other hand, the positive feedback caused by the large trading volumes may lead to market overreaction and impact volatility, but to a lesser degree.

Figure 7: 2018 Board Compensation ($M) and as % of Total Revenue
Source: Company Filings, ER Analysis



Corporate Governance

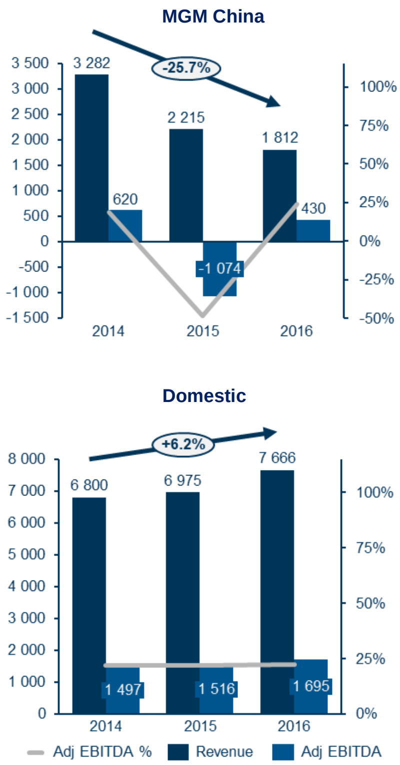
Every year, Corporate Governance metrics on the sector are analysed in-depth. Aethos Consulting Group, for example, conducts a study including 27 companies in the gaming industry, analysing 5 key areas: size & independence of the Board; committee structure & effectiveness; transactions with related parties; evaluation & communication; and finally, and not less important, pay Board compensation for performance. From a Corporate Governance perspective, MGM has been considerably consistent since has been leading the sector for the third year in a row (2015-2018) in board diversity, performance evaluations, committee activism, communication to shareholders and pay-for-performance. Regarding Board compensation, MGM Chief Executive Officer, James Murren received $12.85m in total compensation, barely half of the amount made by Sheldon Adelson, Las Vegas Sands Corp CEO (biggest casino player in terms of market capitalization), $24.01m.

Technical Performance

Looking within a 52-week timespan, MGM's stock has been recently traded on average at $28.07. The highest and lowest value traded were $33.30 and $23.87, respectively, which means average stock price was c.-15% off the highest value traded and c.19% above lowest one.

Furthermore, MGM has overperformed the benchmark selected - S&P 500 – given the rise of 34.5% in the last 52-week trading span (+16.14% tracking last 6 months and +20.2% over last 3 months). It has been relatively stable volatility-wise, displaying a 30-day volatility of just 1.05%.

Figure 8 and 9: Revenues, Adj. EBITDA, Adj. EBITDA % 2014-2016 ($M)
Source: Company Filings, ER Analysis



MGM's Positioning – Financial Analysis

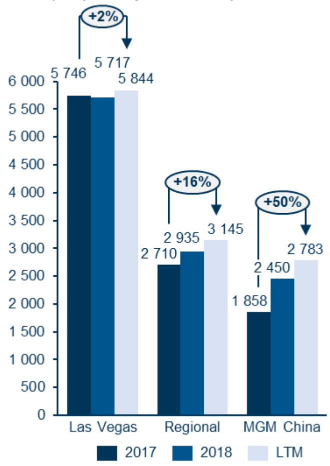
Top Line Analysis

- ### Bad Fortune of 2015

The first focal point of the analysis is on the company's performance in 2015, as it is the obvious exception to the steady revenue growth pattern in recent years. The sharp fall of 8.8% in revenues consisted in the roughly $1B decrease in turnover in MGM Macau (c.-33%). The landmark of MGM's presence overseas had its reputation challenged with the anticorruption campaign introduced in the end of 2014, with the introduction of smoking restrictions and the reduction in the duration of allowed stay in mainland China for travellers. The campaign executed by Chinese authorities consisted in an increased effort in corruption investigations, with a strong focus on casino activity. The VIP segment was naturally the most affected, although not quantifiable with the company's filings. The unfortunate time for the games of fortune sector exposed the sector's fragility; with some of its stars, such as Wynn Macau and SJM Holdings, falling as much as c.-35% and c.-39% in 2015, resulting in a decline in the total Macanese gaming revenue of c.-34% (source: DSEC).

- ### Recovery after the fall

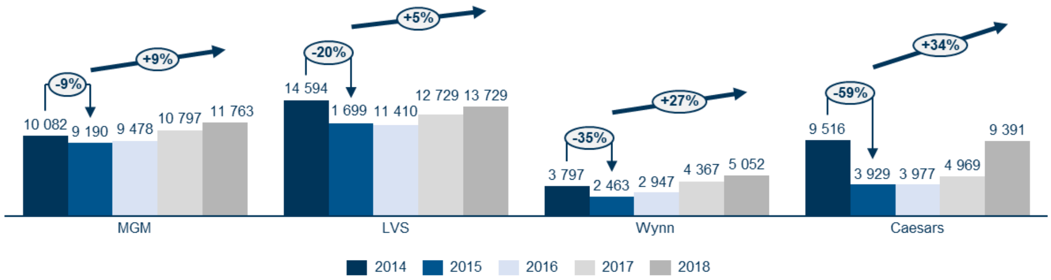
Figure 10: Revenues by Operation 17, 18 and LTM ($M)
Source: Company Filings, ER Analysis



After the forgettable performance of 2015, MGM's revenues have grown steadily at 8.6% per year; carried by the growth in domestic operations (10.1% CAGR 2015-2018) that compare to a lukewarm growth of 3.4% in the Chinese segment in the same period.

The North American operations outgrew the US gambling and lodging industries (both expressing close to c.5% CAGR 2015-2018). The operations in Macau have lagged behind with a c.3% CAGR in the analysed period, with 2016 still being a year on the negative (decrease of 18% vs 2015), but with a complete inversion in 2018, registering a revenue growth of c.32% over the previous year. This trend was in line with the industry evolution overall, except for 2018, when the launch of MGM Cotai propelled its growth beyond its peers'.

Figure 11: Revenues 2014-2018 for MGM, Las Vegas Sands (LVS), Wynn and Caesars ($M)
Source: Company Filings, ER Analysis

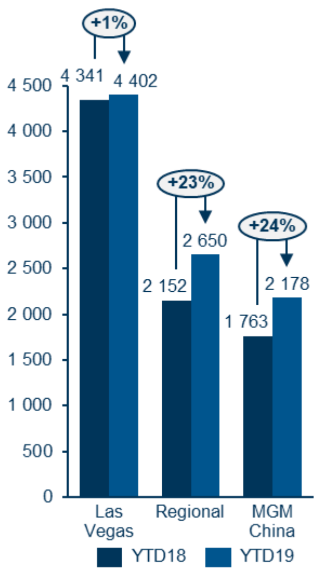


Although the company has outgrown the market, it has lagged behind some of the most direct competition - three competitors have been the focal point of a comparative analysis of the performance of the company – namely Wynn Resorts, Caesars Entertainment Corp and Las Vegas Sands Corp - for having a very similar business model, with properties in domestic grounds (with a focus in Las Vegas) as well as overseas (including Macau). It lagged behind Wynn and Caesars that have respectively grown c.27% and c.34% CAGR 2015-2018, consequence of the strong investment in new properties and ventures. It has outgrown the industry giant Las Vegas Sands, with a CAGR of c.5%, that is yet to fully recover from the fall in 2015.

▪ Acceleration in 2019, as recent projects ramp-up

The double-digit growth was focused in the Regional and Macanese operations…

Figure 12: Revenues by Operation YTD18 and YTD19 ($M)
Source: Company Filings, ER Analysis



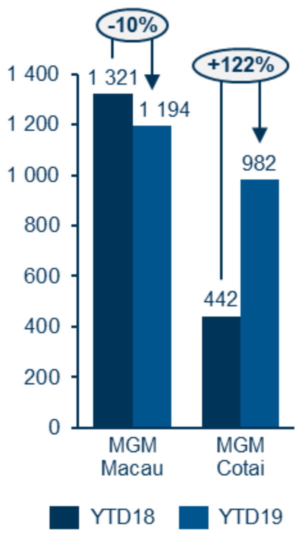
2019 has been a year of acceleration for the company, with a YoY growth of accumulated YTD figures of 10.6%. The double-digit growth was mainly focused in the Macanese operations (c.24% YoY), with a less intense evolution in the domestic sector of 7.3%.

The notable growth of the Regional segment of c.23% YoY - mostly explained by the performance of newly acquired Empire City and Northfield Park casinos as well as the opening of MGM Springfield, boosting casino revenue growth to c.28% and non-casino to c.13% - was not enough to offset the poor performance of the Las Vegas properties, with a mere 1.4% growth YoY. Behind these unsavoury 2019 results is a fall of over c.9% YoY in the Las Vegas casino turnover. The main culprit is the baccarat table game (the main attraction for Asian players), with an estimated c.15% decrease YoY. This decline was compensated in part by the non-casino segment growing c.5% YoY.

… with unsavoury industry-wide results in Las Vegas.

The Sin City had unsatisfactory results all around, with its Gambling/Lodging revenue growing a mere 1.6% YoY (source: Las Vegas Convention and Visitors Authority). The reason for the deceleration is not clear, but it correlates to an overall decrease in expenditure per tourist. A stronger competition in other North American or foreign destinations and a growing demand for online gambling are commonly used by the companies in the sector to explain these results. Nonetheless, the Las Vegas gambling industry results in 2019 were far below expectations and the trend is not expected to extend to 2020.

Figure 13: Revenues by MGM China Hotel YTD18 and YTD19 ($M)
Source: Company Filings, ER Analysis



The company proudly displays the recent growth in the Macau segment as one of the main levers for growth in the upcoming periods, with a 24% growth YoY. The ramp up of newly opened MGM Cotai - with 2.3x as many rooms and 1.5x as many slot machines as the already considerably large MGM Macau - has had an undeniable impact on the company, contributing to an increase of c.31% in revenues, which sustained the growth in the far east segment in 2019. What the company does not shed too much light on is on how MGM Macau, on the other hand, has fallen almost 10% YoY. The shortfall is not specific to MGM Macau, but to the gambling industry as a whole, with a 2.4% decline in revenue YoY (source: DSEC), associated to the slowdown in the Chinese economy, as well as the disruption caused by the recent Hong Kong anti-government protests. This decline was mostly felt in the VIP Baccarat table game, falling 17.4% YoY, accounting for c.47% of the total 2019 gross gambling in Macau, vs. a crushing c.55% in 2018. The decline in VIP table games was slightly compensated by the mass-market play, that grew c.15% YoY. Other majors in Macau have also suffered a decline, namely Galaxy Entertainment at c.-6% and SJM Holdings at c.-2%. Melco and MGM China stand out in 2019, with the new resorts compensating for the L4L shortfall. In the case of Melco, with the opening of the Morpheus Resort, revenues are up c.13% YoY, still significantly behind MGM's growth.

Figure 14, 15, and 16: Revenues, Adj. EBITDA, Adj. EBITDA % 2017, 2018 and LTM ($M)
Source: Company Filings, ER Analysis

Profitability

The company generated an EBITDAR of $2.7B (c.23% margin) in 2018, ranking it above Wynn (c.20%) and Caesars (c.21%) and significantly below Sands (c.36%). Its margin depends mostly on (i.) the state of development of the resorts/casinos, (ii.) the actual turnover generated in a period, through economies of scale and (iii.) the overall cost management of the different establishments. Therefore, Las Vegas Sands seems to benefit from more intense economies of scale, whereas MGM and Wynn, not only having a smaller scale, have new projects on ramp-up (in the case of MGM and Wynn). Caesars appears to lag behind in overall cost efficiency.

The Regional segment has reported a decline in margin in 2018, combining the recent launch of MGM Springfield with a decrease in total turnover. The Regional segment was, in fact, affected by the launch of a new establishment (MGM Springfield) in 2018, with a decline in the adj. EBITDA margin to 25.9% (vs. 27.0% 2017). The ramp-up of the hotel has brought the LTM figures up to 26.8%.

In the Las Vegas resorts, on the other hand, it was the decrease in the turnover that caused a decline in the adj. EBITDA margin to 29.8% (vs. 31.0% 2017). The decrease in the casino segment of 9.3%, the most profitable business line (with a direct margin of c.47% vs. non-casino c.41%) was behind the profitability decline. This is definitely more worrying, considering it may be a structural problem, rather than a temporary condition of development, like the case of the Regional and Chinese segments.

Considering this risk of a potential structural problem materializing in the following years in terms of profitability, the MGM2020 program is somewhat soothing for investors. The development program (now in a cost reduction phase), if executed as management predicts, is estimated to have an impact of $75M on the 2020 domestic EBITDA (c.74 bps on margin). The MGM2020 program is further developed in the Strategy section.

The launch of MGM Cotai has affected the Chinese segment's adj. EBITDA margin in 2018 (c.23% vs c.29% in 2017). The LTM figures demonstrate a clear improvement, as the resort is picking up on volume, with an LTM EBITDA margin of c.25%.

Figure 17: 2018 ROIC % - MGM, Wynn, LVS, Penn, Boyd and Caesars
Source: Company Filings, ER Analysis

Figure 18: Capex ($M) and Capex/Revenues 2014-2018
Source: Company Filings, ER Analysis

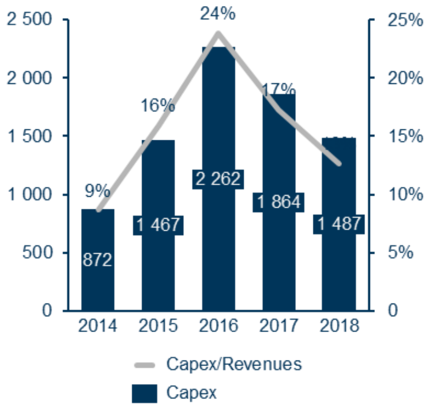
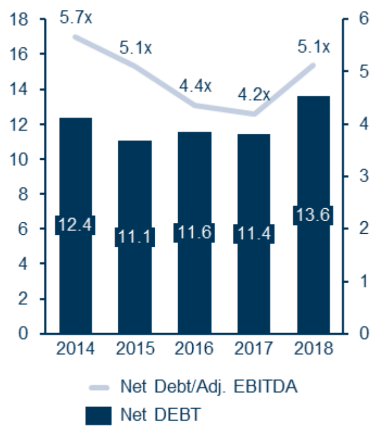


Figure 19: Capital Structure – Net Debt ($B) and Net Debt/EBITDA 2014-2018
Source: Company Filings, ER Analysis



ROIC and Investment

MGM reported a ROIC of 4.8% in 2018, in line with the majority of the direct competitors (Figure 17). It is significantly below Las Vegas Sands (12.4%), caused by the lower EBITDA margin %, lower depreciation (relative to revenues) and a higher revenue to invested capital multiple. Wynn's 12.5% ROIC should not be taken at face value, considering the company reported a significant tax benefit in 2018, without which its ROIC would total c.5%. ROIC has slowly fallen since 2016, given the new investments propelling invested capital, and still not generating NOPLAT accordingly. The ROIC is expected to increase with time, as the new hotels ramp-up, and economies of scale allow for better margins. This tendency is expected to be seen in the industry overall, as it consolidates.

The company has undergone massive investments in the past few years, with the launch and acquisition of different resorts. A total of $2B of capital expenditures in 2018 place the company's Capex/revenue ratio at c.13% (Figure 18). Industry averages c.8% of revenue, which is a more reasonable maintenance level for the company going forward. As expected, Wynn and MGM stand out with the investment undergone.

Capital Structure

The company currently has $13.6B of net debt, representing 5.1x EBITDA or 0.8x D/E. It has increased leverage in the recent years, with the investment round undergone. These levels of indebtness are not unusual among the peers, but the company claims it intends to decrease the net debt to c.3-4x EBITDA in the medium term. It currently pays c.5% interest on debt but has recently incurred in new credit facilities in the US of LIBOR + 2.00% and in Macao of HIBOR + 1.63%.

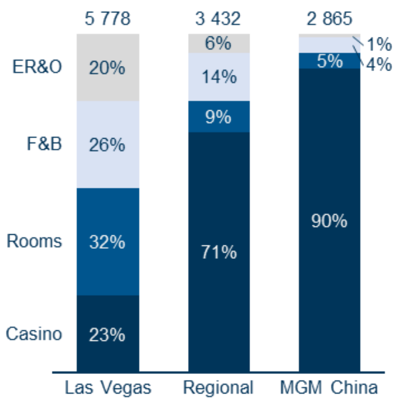
Business Model

MGM's business model relies on 4 main activities:

- Gambling;
- Rooms (and other related hotel services);
- Food & Beverage (F&B);
- Entertainment, Retail and Other (ER&O).

Even though the 4 activities are transversal, the relevance of each activity varies from geography to geography. From the three operations, Las Vegas shows the most diversified revenue source – LTM mix consisting in c.32% from Rooms,

Figure 20: Revenue mix by operation LTM
Source: Company Filings, ER Analysis



c.26% from F&B, c.23% from Casino and c.19% from Entertainment – whilst Regional and Macau display a strong dependence of gambling activities, with c.71% and c.90% respectively. Diversification of sources of revenues in LV allows MGM to pull diverse operational levers at different points in the economic cycle, offering a more integrated experience to its customers in the Gambling Capital of the world.

However, in the past two decades, despite still being the dominant segment, there has been a decrease on the weight of the casino business line in the revenue mix, as the company evolved into a more integrated service. This was mainly seen in Las Vegas, where the casino segment represented the majority of revenue in the beginning of the century, shifting to a much more even mix in current times.

Gambling drivers

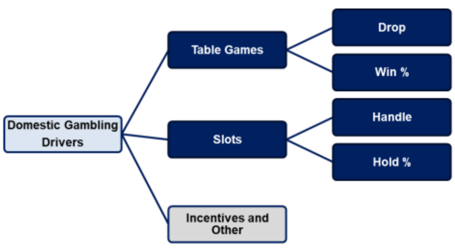
MGM reports the gaming drivers differently for each country's operations. This happens due to the different culture of the clients in each segment, ultimately leading to different needs and desires of its gamblers.

In the U.S, the gaming activity is seen as a recreational activity, where the client's profile is not just a gambler but someone that seeks for an integrated experience (as depicted on the sources of revenue in the U.S and specially in LV). In contrast, the Macanese gambler (classified as a *mass* or *VIP* player) has one intention when visiting a casino: gambling. Nevertheless, upon the launch of MGM Cotai in 2018, the company aimed to provide a more complete experience to its customers, accommodating also for the demand of non-gaming amenities – as suites, VIP luxury villas and thematic hotspots were built.

▪ Domestic drivers

For both U.S operations, Las Vegas and Regional, the gaming activity relies on 4 main drivers:

Figure 21: Domestic Gambling Drivers
Source: ER Analysis



- **Table Games Drop**: Total amount gambled at blackjack, baccarat, roulette and other related table games;
- **Table Games Win %**: Percentage of the table games that is won by MGM and which flows to the Casino revenue;
- **Slots Handle**: Total amount gambled at slots machines;
- **Slots Hold %**: Percentage of the slot handle that is won by MGM and which flows to the Casino revenue.

Las Vegas: The segment displayed a significant YoY decrease in casino revenue of 9.3%, largely explained by table games volatility: table games drop fell 6.6% YoY but also table games win % fell 2.7 p.p. Contrarily, slots revenue shields

Figure 22: Breakdown of YoY evolution of YTD Casino revenue – Las Vegas ($M)
Source: Company Filings, ER Analysis

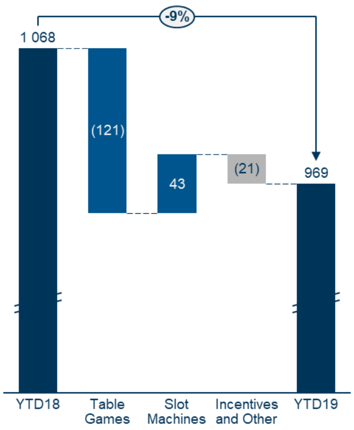


Figure 23: Breakdown of YoY evolution of YTD Casino revenue – Regional ($M)
Source: Company Filings, ER Analysis

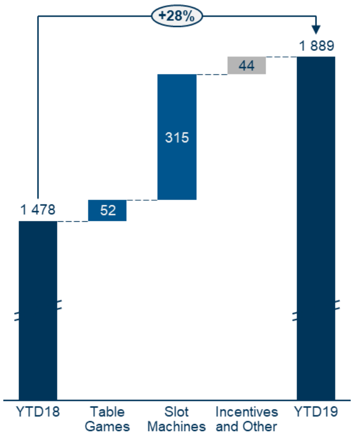
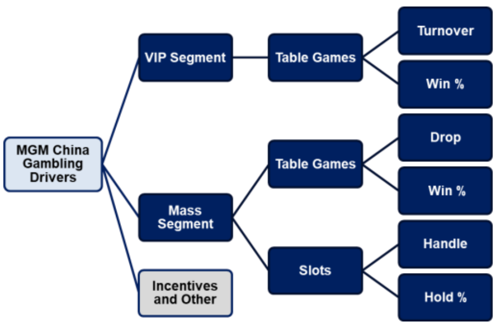


Figure 24: MGM China Gambling Drivers
Source: ER Analysis



MGM from that volatility: slots handle and slots hold % increased respectively 5.1% and 2.5 p.p. The slots have proven to be a more stable revenue source. Additionally, LV performance becomes even less optimistic when we look to MGM's gaming revenue growth in comparison against the benchmark (Las Vegas Strip). According to LVCVA Research Center (Las Vegas Convention and Visitors Authority), LV Strip displayed a (low but) positive growth of gaming revenues of 0.9% YoY.

The LV operation's turnover volatility benefits from a higher share of the slots' revenue in the mix, compared to rivals' operations that rely more on table games (baccarat and other Asian-sourced table games). In 2018, MGM's slots machines contributed for c.55% of LV gaming revenue (and c.59% LTM). In the case of Wynn Resorts, for example, slot machines accounted for a mere c.32% in 2018.

Regional: The gaming revenue in the Regional segment has increased c.28% YoY, mainly due to the acquisition of Empire City, Northfield Park and a MGM Springfield's full quarter of operations, resulting in an increase in the slots hold of 17.4% (which was already the most significant source) and table games drop of 7.2%. Additionally, there was also an increase of slots hold % and table games win % (contrarily to LV) of 0.3 p.p and 0.4 p.p respectively.

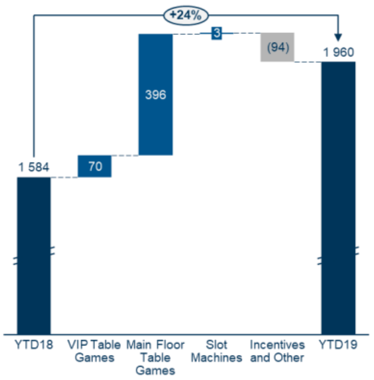
The reported revenues for both segments are net of incentives – marketing strategy of the company to attract more gamblers.

- ## Macau drivers

As previously stated, in the Macanese market, MGM (and other gaming operators) segment the table games' revenue between VIP players and Mass players. Henceforth, MGM China relies on 6 gaming drivers:

- **VIP Table Games Turnover**: Total amount gambled at the VIP table games;
- **VIP Table Games Win %**: Percentage of the VIP table games that is won by MGM and which flows to the Casino revenue.
- **Main Floor Table Games Drop**: Total amount gambled at the main floor table games;
- **Main Floor Table Games Win %**: Percentage of the mass table games that is won by MGM and which flows to the Casino revenue.
- **Slots Handle**: Total amount gambled at slots machines;
- **Slots Hold %**: Percentage of the slot handle that is won by MGM and which flows to the Casino revenue.

Figure 25: Breakdown of YoY evolution of YTD Casino revenue – MGM China ($M)
Source: Company Filings, ER Analysis



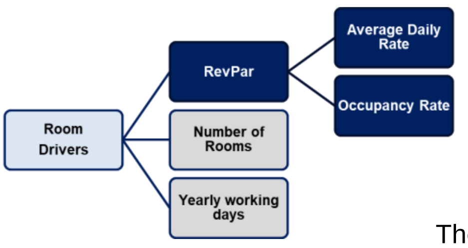
MGM China: The gaming revenue result was strongly driven by the MGM Cotai launch on Feb'2018, reporting a c.24% growth YoY. When comparing 2017 vs 2018, VIP table games revenue increased c.13%, due primarily to an increase in turnover of c.18%, which includes the ramp-up of MGM Cotai, partially offset by a fall in VIP table games win % at MGM Macau.

Following the tendency of the previous years, mass table games continues to be the most profitable segment for MGM China (as well for the Macau gambling market), since unlike VIP segment, mass players do not receive commissions and thus lead to a higher profit margin. All in all, in 2018 mass table games win increased c.33% YoY, with MGM Cotai contributed with an YoY increase in the drop of c.48%. Following this reasoning, MGM China has already started to reallocate tables from VIP to the main floor in order to maximize the yield. Furthermore, the ramp-up of MGM Cotai allowed slot machine revenue to increase c.58% YoY in 2018.

Room drivers

In contrast to the gaming activity, Room drivers are transversal to the three types of MGM's operation. In simple terms, the economics of rooms consists on the following drivers:

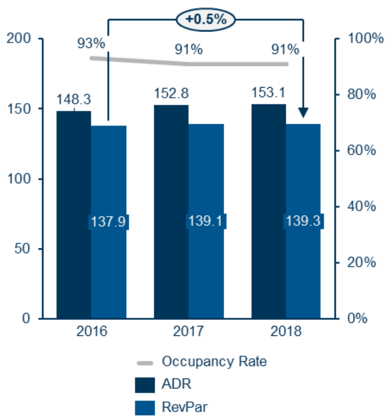
Figure 26: Room Drivers
Source: Company Filings, ER Analysis



- **Occupancy rate**;
- **Average daily rate (ADR)**: Division between the average revenue earned from rooms and the number of rooms booked.
- **RevPar**: The product of the ADR and the occupancy rate.

The number of rooms is approximately fixed, unless the company acquires other establishments or decides to expand one of its own. Therefore, the RevPar stands as the Rooms segment's main driver (and a decent proxy of the performance of the industry). As it is a daily indicator, it is applied on the total yearly working days, fixed ad 365.

Figure 27: RevPar ($), ADR ($) and Occupancy Rate (%) 2016-2018 – Las Vegas
Source: Company Filings, ER Analysis

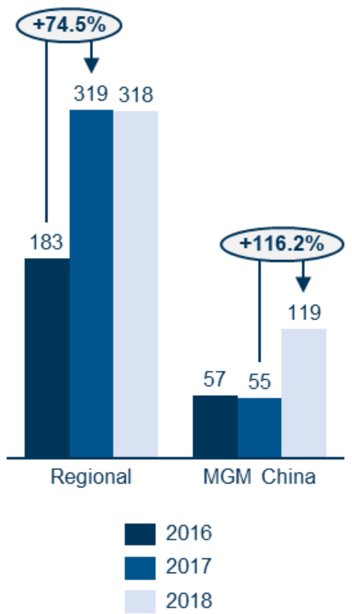


Las Vegas: For all main US gateway and convention locations, Las Vegas has the largest number of total hotel rooms, which is supported by strong infrastructure. For 2016-2018[1], the rooms revenue growth has been relatively slow, displaying a CAGR of 0.7%. The 2019 YTD figures have grown 4.8% YoY, aligned with the benchmark (LV Strip) that has also displayed an increase of 4.8% YoY.

Going into detail for 2016-2018 period, RevPar slightly increased from $137.9 to $139.3 (c.1%), product of an increase in ADR from $148.3 to $153.3 and a fall in the Occupancy Rate of 2 p.p. (93.0% to c.91.0%).

[1]The 2016-2018 period is analysed for this segment, as no information was made available for the YTD evolution of the drivers.

Figure 28: Rooms Revenue 2016-2018 – Las Vegas and MGM China
Source: Company Filings, ER Analysis



Regional: The Regional operations have grown significantly in 2017, with the full year contribution of Borgata and MGM National Harbour. In 2018, the segment reported a RevPar of $132.0, combining an ADR of $145.0 with an occupancy rate of 91.1%. Despite the launch of MGM Springfield, the decrease in RevPar of 4.1% kept the segment's revenue at roughly the same level.

MGM China: Contrarily to the American based operation, the room revenue is still a trivial share of revenue in Macau (c.5% in 2018).

Nevertheless, the segment has recently registered significant grown, more than doubling in 2016-2018. The reason for the segment's expansion was the launch of MGM Cotai (February 2018), as the number of rooms increased by from 580 to almost 2,000. With an ADR of $172.5 and high occupancy rates of almost 97%, the Macanese operations reported a RevPar of $166.8.

F&B and ER&O drivers

Similar to the Rooms activity, these activities drivers are transversal to the three types of MGM's operation. Their performance is strongly correlated to the performance of the other activities, Gambling and Rooms, as they can be considered as valuable add-ons. Essentially, food and beverage, and retail arrangements are the net amount gathered from the client for such goods and services. The transaction price for those contracts is recorded as revenue when the good/service is transferred to the client over their stay at the hotel or when the transfer is made for the F&B and retail & other contracts.

Trends (opportunities and risks)

Macroeconomic and Sector Outlook

MGM and its peers are highly exposed to economic cycles and, subsequently, to the travel and tourism and gambling trends in the market

The entire business model of the company revolves around the ability to draw customers to its resorts and find the most efficient and recurring ways to profit from their visit. All segments are linked and depend on the actual flow of people to the facilities, as well as their willingness to expend on non-essential products and services. Naturally, MGM and its peers are highly exposed to economic cycles and, subsequently, to (i.) the travel and tourism and (ii.) gambling trends in the market.

- United States

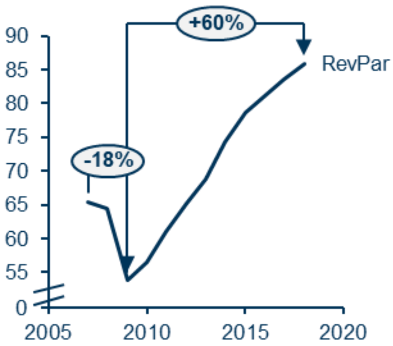
After record-long expansion, the economy appears to be slowing down

As we currently sit late on the economic cycle, fears of an economic downturn loom investors' minds. After record-long expansion, the economy appears to be slowing down (LTM c.2% real GDP growth rate – the slowest 12m decrease in the past three years). However, the labour market remains strong (3.6%

unemployment rate, a 50-year low), wage has steadily grown (latest figures point to c.3% YoY increase of on average hourly earnings – source: US Bureau of Labour Statistics) and inflation is below c.2%, keeping momentum on consumer spending, which accounts for roughly two thirds of the American economy. The Consumer Confidence Index remains high (at 125.9x), although starting to show signs of falling expectations by consumers, with growing concerns on business conditions and job prospects (source: Conference Board). Consumer Sentiment (by University of Michigan Survey of Consumers) remains relatively stable at 95.7x (comparing to a 2019 average of 95.6x). Rising geopolitical tensions have increased uncertainty about future global trading, affecting business confidence and investment, although Beijing and Washington have reached common grounds with a preliminary deal (*Phase-1 deal*). Nonetheless, the tension is still present and affects consumers' confidence (source: University of Michigan Survey of Consumers). There have been red flags all around, with record high transaction multiples and S&P quotes, a case of yield curve inversion, a surge in gold prices, record funds' dry powder and a low interest/easy credit environment – with clear resemblances to pre-recession times.

The Consumer Confidence Index remains high although starting to show signs of falling expectations by consumers, with growing concerns on business conditions and job prospects

Figure 29: U.S Lodging $ RevPar
Source: Cushman & Wakefield



The US hotel market has strived with the post-recession recovery, with a total US Hotel revenue growing 5.5% CAGR since 2010 (STR Global), beating the US GDP growth (4.1% CAGR). It has benefited from the positive economic cycle and the increased accessibility of travel. RevPAR has grown steadily for the past 8 years (5.4% CAGR), after the decline in '09, with recent signs of deceleration (source: Cushman & Wakefield). Expectations on the industry are not consensual, depending on the expectation for the timing of a macroeconomy downturn, but the number of visitors to the US and the total travel spending are expected to growth at 2.7% and 4.0% respectively, until 2023 (source: US Department of Commerce). The gambling sector has grown at sub-economy levels, with a 3.3% CAGR since 2010. Despite the cyclicality of the sector and its correlation with tourism, it failed to grow at the same pace. Part of the reason is demographics, as younger audiences are less reluctant to traditional casino gambling. The recognition of the importance of changing the appeal of the gaming experience is a common theme in MGM and its peers' announcements, as a large part of revenue could be jeopardized.

Nonetheless, with the sector's KPIs at record levels, the question about the sector having reached its inflection point looms investors' minds. Its correlation with discretionary spending is undeniable and, when the cycle inverts, MGM (and its peers) will take a hit to the hotel profitability, subsequently affecting all other business segments.

- Macau

Travel and tourism accounted for over 70% of the 2018 Macanese GDP

The economy of Macau largely depends on tourism sector and gambling industry – travel and tourism accounted for over 70% of the 2018 Macanese GDP. After suffering in the financial crisis of 2007-2008, the local economy has become healthier growing along with the tourism and gambling industries. Following the years of contraction, especially due to Chinese influence over foreign exchange and visa policies (the Anti-Corruption Campaign and visa restrictions) and the slowdown of Chinese economy, the economy of Macau is growing again, reaching 6.3% real GDP growth rate in 2018. Furthermore, the IMF forecasts the economy to continue to growth in 2019 and 2020, 6.3% and 5.8%, respectively.

IMF forecasts the economy to continue to growth in 2019 and 2020, 6.3% and 5.8%, respectively

After overcoming the recession, the fiscal surplus increased – leading the fiscal stimulus to reduce – and is expected follow the same path in the short-medium term. Macau benefits from policies that aim at financial stability and fiscal discipline, with the Region showing no public debt and a rising current account surplus – accounting 35.9% of GDP in 2018. Despite showing optimistic results in different activities (such as banking and communications), the economy continues to be highly dependent on the gambling industry as it represents c.70% of Macau's tax income. Henceforth, the gaming operators are huge contributors for the low unemployment rate – c.2.0% in 2018 (with IMF expecting it to decrease even more in 2019 and 2020) – as they employ 1/5 of the active workforce.

The opening in late 2018 of the HKZM (Hong Kong-Zhuhai-Macau) Bridge provided more robust economic dynamics within Hong Kong, leading to a not so symbolical increase in visitors: comparing the 1st half of 2018 vs 2019, visitors by land rose by 25.6% (2.5m people), leading the Macau tourism industry to be better than ever.

The number of tourists has grown at 4.6% CAGR 2010-18, reaching 35.8 million in 2018

Apart from 2015 and 2016 values (marked by the Anti-Corruption Campaign), since 2010, Macau is progressively rising the number of tourists, reaching 35.8 million in 2018, resulting on a CAGR of 4.6%. However, the increase in visitors is viewed with caution by the Macau administration as the increase does not appear to be 100% manageable - leading to talks of a controversial (and still hypothetical) tourist tax.

As mentioned previously, the Anti-Corruption Campaign led by Chinese President Xi Jinping and his remaining team shocked Macau's gambling revenue in 2015 and 2016 and bouncing back afterwards, displaying a CAGR of 7.3% when we compare 2015 vs. 2018 values. Nonetheless, it's not all perfect, considering the region suffered a loss of upper/elite visitors since the Anti-Corruption Campaign took place (Macau's tax haven status faded away) and now due to U.S-China trade tensions. All in all, the number of visitors may not compensate for the loss of VIP revenue.

Macau generated a yearly gross revenue of $37.6B in 2018 from the gambling industry

Accounting 41 casinos in operation, Macau generated a yearly gross revenue of $37.6B in 2018 from the gambling industry (source: DSEC). Concerning 2019 data, the city of Macau has registered in November 28 consecutive months of gambling revenue growth. According to the GICB (Gaming Inspection and Coordination Bureau), the Gross Gaming Revenue has increased 2.6% YoY when comparing with the homologous period of 2018. Nevertheless, the revenue has slowed down to a single-digit growth for the second time. The single-digit growth is a clear sign of the combination of a Chinese economy slowing down and trade war tensions between Beijing and Washington affecting too.

Digitization and disruption

The process of digitization in its disruptive nature may shift the tables, creating room for growth of the most versatile players and putting those that cannot keep up with the evolution at risk. Adding to the cyclical risk of the industry, is the underlying shift in the sector's foundation, with digitization and the entrance of new platforms in the lodging equation as well as new gambling preferences by consumers.

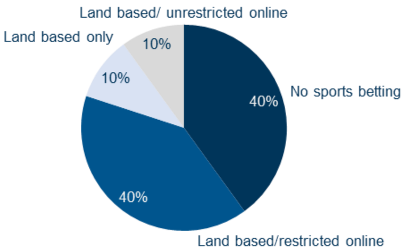
- ### Airbnb

Airbnb and other platforms of the same nature have been adopted by users on a global scale, considerably boosting the market supply for rooms – estimated over 5 million listings worldwide. Despite offering a different value proposition than most hotels, the impact on the industry is obvious, as consumers are presented with a large variety of options at very competitive prices, through a user-friendly platform that allows for instant comparison. The impact of the increased supply is logical, but, considering Airbnb listings account to less than 2% of the total Las Vegas supply, it is limited for now. Adding to the supply effect, Airbnb and the digital movement have forced hotel chains to invest in their online platforms, which, arguably, forced hotels to increase maintenance and refurbishment efforts, in the sense that consumers can much easily compare conditions of different resorts online. Overall, consumers had much to gain from the presence of Airbnb and hotels cannot disregard the shift in consumer behaviour, especially when the most affected demographics consist on the relatively more tech savvy generations, progressively worsening the situation with time.

- ### Online Gambling and Sports Betting

Online gambling is currently an over $50B market (source: Bloomberg) with momentum sustaining expectations to beat $100B by 2025. It allows gamblers to play from their own homes, with an increasingly realistic experience, enabled by real table dealers and the evolution of virtual reality. These platforms allow for a more recurring gambling activity (as players do not have to physically move to the facilities), easier consumer conversion (for the same reason) and eliminates the physical space constraint that casinos could traditionally face. Additionally, the product offering in online gambling is, in its nature, more versatile than traditional casinos, regarding the adaptability of the pool of games offered to gamblers. It's logically easier to implement a new game in an online platform than in a physical casino, a factor that gains relevance considering the fact that the sector is far from mature and consumer preferences may not be stable or, at least, fully recognized by companies.

Figure 30: U.S. Regulation on Gambling per State
Source: ER Analysis



In May 2018, the US Supreme Court lifted the ban on online sports betting. Since then, a total of 10 states have legalized the activity and 24 others are pending legislation, comparing to a pre-2018 regulatory landscape where Nevada was the only pro-sports betting state. The illegal sports betting market was estimated to total $150B betting handle, comparing to a current $10B handle in legal online sports betting platforms, demonstrating the room for further growth of the current players in the market.

The versatility of online gambling platforms previously mentioned, allows companies to combine the offer of the typical games of luck the users desire, as well these other kinds of betting, such as sports betting, all in one platform for fully integrated product. The evolution of the industry, combined with the transition of the consumer mix to generations more captivated by online activities, justify the companies' interest in the segment.

New Entrants

The casino and lodging industries are highly competitive, considering the low switching costs for consumers and the easy comparability of the experiences. The launch of new hotels and casinos is a major threat to existing casino resorts, as the visitor attention and demand is naturally limited.

- ### Las Vegas

Two massive integrated casino are planned to open in 2021 and 2022 in Las Vegas

Two major casino-resorts stand out in the Las Vegas landscape - Resorts World Las Vegas and The Drew – with respective planned openings for 2021 and 2022. The former, a $4B, 59-story megaresort, will add 3 400 rooms to the Strip supply. It is part of the Genting Group's expansion program and the project will be monitored by former MGM Grand president Scott Sibella. The latter will incorporate Marriot's *next-gen* brand Edition, with over 3 700 new rooms announced in the Strip. The last casino of this magnitude to be launched in Las Vegas was Marriot's The Cosmopolitan Las Vegas, launched back in 2010.

Other, less significant resorts, are also planned to launch in Las Vegas, namely Circa Resort & Casino in 2020 (with close to 800 rooms downtown and a strong focus on sports betting) and Majestic Las Vegas (a promising non-gaming hotel, with close to 700 rooms that will be focused on conventions and events). These examples demonstrate the liveliness of the industry in Las Vegas, with new and exciting projects announced in a segment that could already seem saturated.

- Regional

Less intense increase in competition is expected for the other domestic operations, considering the lack of relevant projects planned in the cities where MGM operates.

- Macau

SJM's $5B investment Grand Lisboa Palace is to launch in 2020

SJM Holdings Limited is the largest player in the industry in Macau. It operates roughly 20 casinos in Macau, including the iconic Casino Grand Lisboa. In late 2020, it will launch Grand Lisboa Palace, a 2 000-room luxury hotel and casino in the Cotai Strip, resulting in an investment rounding $5B.

Other

- Japan

The Japanese government bets on privately owned integrated casinos to boost economic growth

The Japanese market is one of the hottest topics in the gambling industry. After the Integrated Resorts Promotion Act was completed in 2018, the Japanese market will be managed by private operators as well and casino activities will become legal. With tourism as the cornerstone of Japanese economic growth - in 2018 surpassed for the first time by the target of 30M incoming tourists, spending more than $ 41.5B in goods and services - the Japanese government intends to continue promoting a strategy of sustained tourism growth. In other words, Prime Minister Shinzo Abe and his government estimate that in the future tourism will involve promoting integrated resorts (such as MGM Cotai or Marine Bay Sands in Singapore). Although still difficult to estimate, the gambling pattern in Japan seems to make this growth opportunity very attractive to MGM. Nevertheless, the upcoming times will be crucial to the unfolding of the history. Further analysis can be found in one of the analyst's individual reports.

Lighter Strategy

Lighter Structure - MGM2020

MGM2020 aims at increasing Adjusted EBITDA by $300M by 2021

The company is in the middle of the MGM2020 growth program – a plan designed to further reduce costs, improve efficiencies and position MGM for growth. Its predecessor, the Profit Growth Plan, was successfully met by the end of 2017, resulting in a margin increase through a larger scale. The main goal of MGM2020 passes by achieving an annualized adjusted EBITDA increase of $300 million, consisting on two phases: $200 million by the end of 2020 and an additional $100 million by the end of 2021. The program consists on a centralization of company-wide functions, staff reduction and digital integration in the experience, in an attempt to improve efficiency, as well as the ramp-up of newly launched properties. So far, the company has proven the ability to follow through, and the 2019 targets are expected to be met. Most of the investment is expected to have already been done for this phase, totalling c.$40M to date. The company has laid off almost one thousand employees so far (mostly in Las Vegas) and has announced it intends no further job cutting, following the natural backlash. Despite the results demonstrated so far, we are reticent of a full target meeting for 2020, considering constraint for further staff reduction.

After strong results thus far, management is confident on a full target meeting

Asset-light

MGM has changed its view on asset ownership. Prior to the launch of its UPREIT and the master-lease program, it owned all the properties in which it operated. Now, not only has it transferred the ownership of many of its assets to MGP, but it has recently also incurred in the sale-leaseback and sale of some of its properties with other unrelated parties. Through a sale-leaseback deal, the company finds a liquidity injection, in return for a long-term lease plan. The conversion of an otherwise illiquid asset into cash allows the company to (i.) improve its leverage ratios, (ii.) incur in new investment opportunities or (iii.) benefit from an appreciation of the value of the asset. In practical terms, the structure is similar to that of a loan with the asset under question as collateral, with the benefit that the lender, unlike financial players, values the property at market value and imposes less-constraining covenants. The downside, like that of a loan, is the recurring payment obligation in which the company incurs, increasing the risk in case of underperformance.

In a sale-leaseback, the company trades asset ownership for short-term capital injection and rent obligations

Considering highly leveraged financial structure of the company, the sale-leaseback of real estate may relieve investors concerned about the ability of the company to endure turmoil, especially considering the uncertainty in the short to medium-term prospects for the industry. Another event, of non-recurring nature, that affected the company's liquidity, was the litigation regarding the Las Vegas massacre of 2017 – with 58 mortal victims of a mass shooting in MGM Mandalay Bay property – that ended this year, settling a compensation $800M to the victims and their families.

MGM announced its first sale-leaseback with a party external to the group

In mid-October 2019, MGM issued a statement revealing the sale of two real-estate assets from its portfolio, Bellagio and Circus-Circus, both located on the Las Vegas Strip. The sale of Bellagio brought up to life a joint venture with Blackstone Real Estate Income Trust (BREIT), resulting in a cash infusion of $4.25 billion. Under the contract, MGM holds a 5% stake through the partnership and will pay an annual rent of $245 million, which amounts around for half of the resort 2018 EBITDA. Similarly to the MGP master lease, MGM will continue to manage and be responsible for the operational expenses, insurance and property taxes. The transaction has an implied price multiple of 17.3x annual rent, considerably higher than the combined price-to-rent multiple of 12.4x associated with the transfer of ownership of the resorts Borgata, Empire City, National Harbour and Northfield Park to MGP. Concerning Circus-Circus deal, MGM is selling directly to Phil Ruffin. Ruffin will pay $662.5 million in cash up front, plus a $162.5 million note due in 2024 for the property (which generated $62 million in adjusted EBITDA over the past 12 months). The sale of Circus Circus is far less surprising compared to the Bellagio one, especially given the price that Mr. Ruffin was willing to pay and since the resort can be integrated in a downmarket segment relative to the company's higher-end resorts, although proceeds from the transaction will be used towards enhancing the company's capital allocation strategy and complement its strategic and operational flexibility.

The Bellagio transaction has an implied price multiple of 17.3x annual rent, significantly above the prices previously paid by MGP

- Eyes on Osaka: Genting rivalry

The increased liquidity allows the company to consider new investment opportunities, namely the integrated resort in Osaka

The cash raised from the transactions mentioned above will give MGM the ability to cut a significant share of debt, distribute dividends to shareholders and invest in new opportunities, such as the new resort project in Osaka, Japan, soon-to-be-opened gambling market, or some combination of the three. Entering in the Japanese market is considered to be one of the company's best growth opportunities, and given that, establishing a casino resort there could cost $10 billion (or more[1]).

MGM and Genting are likely to go toe-to-toe for a casino license in Osaka, based on their main strengths in building casino resorts in Las Vegas and Singapore.

[1] Investment amount that Las Vegas Sands' Managing Director, George Tanasijevich, referred that is expected to spend if the project in Yokohama (similar to the one that MGM projects in Osaka) goes live.

Both companies are used to mix entertainment and attractions – something that the soon-to-be winner of the Osaka license has to have. The Osaka integrated resort is projected to be closed city attractions such as the Osaka Aquarium and the Universal Studios. Yet, it is expected that the number of attractions and demand-drivers increase in the area. It is forecasted that mass-market segment will account for a significant share of gaming revenue, which augurs a positive scenario for the contest winner, in terms of profit gains.

In this corporate race, the company Genting Singapore threatens MGM: Genting owns the Universal Studios on Sentosa Island and Marina Bay Sands Integrated Resort (both in Singapore), which may give it an edge given a similar setup in Osaka. At the same time, MGM accounts with Las Vegas expertise (largest arena, hosting large-scale events in Las Vegas that generate demand for their resorts) and higher brand recognition.

- Eyes on Sports Betting and Interactive

MGM partners with GVC Holdings to form Roar Digital

The "asset-light" business model is also aligned with MGM's expansion into sports betting. Sports betting does not depend nor require an expensive portfolio of resorts, requires instead technological infrastructure and the right marketing to get exposure. In the light of this, MGM has formed a strategic partnership - so called Roar Digital - with GVC Holdings PLC, one of the world's largest sports betting and gambling groups and constituent of the FTSE 250 Index, with $6.6 billion market cap.

The collaboration will combine GVC's proprietary technology and operating expertise with MGM's brand and customer data

The collaboration will exploit GVC's proprietary technology and operating expertise to offer market leading and UK experience to build a US sports betting business on MGM's brand and customer data. Through this joint-venture, attractive deals were already made with the NBA (National Basketball Association), NHL (National Hockey League) and MLB (Major League Baseball) leagues to be their official sports betting partner. If these sponsorships succeed, MGM will have another business to leverage with little assets invested. Not less important, Roar Digital has launched in the 3Q19, the BetMGM online gambling app which gives market access opportunities in 15 states (and still pursuing opportunities to gain market access in an additional 9 states).

In addition to the partnership with GVC, MGM continues to reinforce its sports betting strategy by diversifying its opportunity growth options. In October, MGM established an online betting partnership with Yahoo Sports to integrate its BetMGM application into Yahoo Sports mobile app. Due to this partnership, from

November onwards, MGM will have access to the country's largest fantasy sports platform[2].

Not so long before, in September, the Company announced an agreement with Buffalo Wild Wings, which holds and runs more than 1200 sports bars across the U.S. As part of the arrangement, BetMGM customers who access the app in a New Jersey Buffalo Wild Wings can take part in exclusive promotions. Moreover, MGM also worked with Taco Bell on a World Series promotion.

- Investor Returns

MGM's DPS is expected to keep steadily increasing

Prior to 2017, MGM would not pay dividends to its shareholders. In late 2016, it announced the plans payback investors with dividends every quarter; a structure it has kept and plans to keep, according to the CEO. It paid \$0.11, \$0.12 and \$0.13 per quarter in 2017, 2018 and 2019, respectively. It resulted in a payback ratio of back 40% of its earnings in 2018, with a payback ratio of 52% expected for 2019 (assuming a \$0.13 dividend per share in 4Q19). The company announced its plans to keep gradually increasing the absolute dividend payment, although, considering the EPS expectations, will result in a lower payout ratio for future periods.

It has also recently completed a \$2.25B share repurchase, phased throughout 2017, 2018 and 2019, signalling the management's strong conviction in the value of the company. No intentions of further buybacks have been made public.

The Debate

Bull's Arguments

Bulls point to strong profitability enhancement potential, as new resorts ramp up and the company is under a cost reduction program – with 2027e 28.8% EBITDA margin. Solid free cash-flow generation is expected, combining strong revenue growth (mainly with ramp-up of the new hotels and casinos), strong margin improvement and the end of the capex intensive investment round of 2017-2018; allowing for a deleverage of the current financial structure. Strong margins and expected FCF generation mitigate the exposure of the company to potential macroeconomic deterioration, as the company can more smoothly face turbulence. Despite the dividend yield of 1.6%, a sustained dividend growth is expected, comparing to industry peers that have paid dividends for longer and offer higher yields, but with no prospects of increase. The Travel and Tourism

[2] A Statista study indicated that 39 percent of US fantasy sports players in 2017 played at least in one league run by Yahoo! Sports. That equals the total for DraftKings and FanDuel combined.

industry, both in the US and Macau, show a strong momentum and further growth is expected, from which MGM will likely benefit considering the strong competitive positioning and brand recognition, especially in Las Vegas and Macau. The company seems well positioned regarding the growth of the online gambling market - with the GVC partnership – to benefit from the growing demand for online products combined with the more lenient regulatory landscape, demonstrating its adaptability to industry transformations in a structural long-term perspective. The launch of an integrated resort in Osaka also poses as a strong opportunity for growth, considering some of the most obvious competition has backed down from possibility of entering the Osaka market, therefore creating a softer competitive environment at entrance, combined with a political plan focused on the promotion the tourism industry.

Bears' Arguments

Bears point to the recent deceleration of economic growth and potential collapse of the current state of economy, considering the observed similarities with pre-recession conditions. The macroeconomic slowdown has been more visible in the Chinese economy, contributing to the YoY decline of the VIP gambling revenue in Macau in 2019. Although the decline was compensated, in part, by the non-VIP segment, the company is more exposed to the VIP table games than the industry average, which has already impacted the profitability of MGM Macau. The ramp-up of MGM Cotai has helped sweep this slowdown under the rug, as it allows the Macanese segment to beat its previous results quarter after quarter. The tourism and gambling industries are highly cyclical and, considering the current leverage level of the company, a dip in the short-term, despite unlikely, could be critical. The Las Vegas industry-wide deceleration in casino revenue may also prove to be structural, with the increased popularity of casinos in other geographies. The Q3 results indicated the company will meet the earnings expectations and MGM2020 targets for 2019. Despite the good news, we believe the market has overreacted to the earnings release, as the stock surged 10.2% that week. On the topic, is our expectation that the positive results so far do ensure the company will meet the MGM2020 targets for next year, as the cost reduction was mostly seen in the staff costs, a lever that will not be used in the same magnitude in 2020, as the company has publicly announced it will not repeat staff reduction seen in 2019. New entrants are bound to shake up Las Vegas and Macanese gambling industries, with major integrated resorts planned for next couple of years in both geographies.

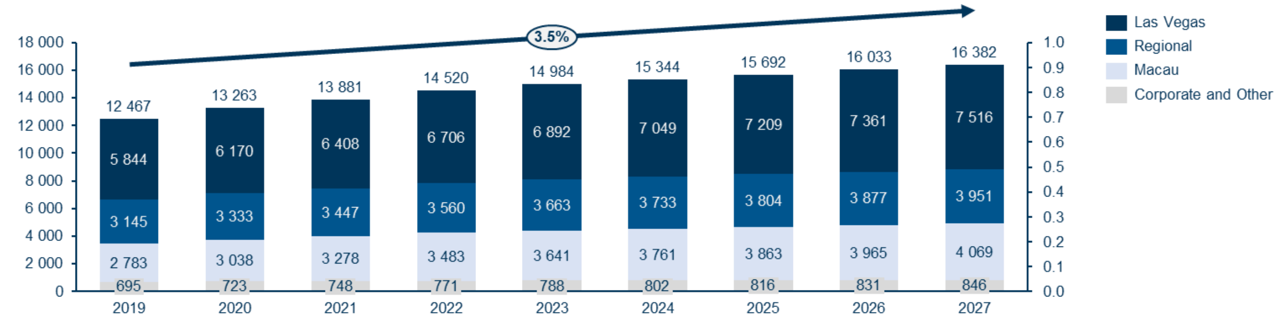
Note: The threat of Airbnb is not yet considered a material argument against the company, considering the tier of MGM's resorts and different value proposition.

Methodology and Valuation

Forecasts

Considering MGM's positioning relative to its peers, the current macroeconomic outlook, industry trends and opportunities and the company's strategic outline, we have forecasted the main drivers previously discussed, and the resulting financial performance expected. We expect revenues to grow at a 3.5% CAGR 2019-2027, boosted by the growth of the Macanese segment with the ramp-up of MGM Cotai (4.9% CAGR, with an 8.5% in the next two years). We expect EBITDA margins to converge to 28.1% by 2027e, considering the scale improvement and the partially successful MGM2020 implementation. We forecast Capex to converge to ~8% of revenues.

Figure 31: Revenue Forecasts 2019-2027. Breakdown by Operation
Source: ER Analysis



More specifically, the main drivers are estimated as follows:

Table 1: Main Domestic Revenue Drivers Assumptions 2019-2027
Source: ER Analysis

		CAGR			
	Main Drivers	19-21	21-24	24-27	Comments
LV	Table Games Drop	-1,0%	1,9%	1,8%	After significant underperformance in 2019, we expect 2020 to still be on the red, with 2021 finally returning to positive growth, converging to long-term growth of 1.8%.
	Slots Handle	2,5%	2,1%	1,8%	Slots handle is expected to grow at higher rates in the short/medium term, considering current momentum.
	ADR	2,2%	1,8%	1,8%	ADR is expected to converge to the expcected inflation levels in the long-term, with stronger evolution in the short-term considering current momentum.
	Occupancy Rate	0,6%	0,3%	0,0%	Occupancy rate is expected to slightly increase in the short-term, stabilizing at run-rate expected levels by 2024.
	ER&O	11,0%	4,0%	3,0%	ER&O is expected to increase more intensely in the short-term, in line with the market expectations for the convention demand
Regional	Table Games Drop	2,7%	2,0%	1,8%	Table games drop is expected to grow at higher rates in the short/medium term, considering current momentum.
	Slots Handle	5,0%	2,5%	2,0%	Slots handle is expected to grow at higher rates in the short/medium term, considering current momentum.
	ADR	1,8%	1,8%	1,8%	ADRis expected to grow at inflation expectations.
	Occupancy Rate	0,4%	0,1%	0,1%	Occupancy rate is expected to remain fairly constant at current levels.
	ER&O	5,5%	2,5%	1,5%	ER&O is expected to increase more intensely in the short-term, in line with the market expectations for the convention demand

Table 2: Main MGM China Revenue Drivers Assumptions 2019-2027
Source: ER Analysis

	Main Drivers	CAGR 19-21	CAGR 21-24	CAGR 24-27	Comments
MGM China	VIP Table Games Turnover	7,1%	5,0%	2,6%	VIP table games turnover is expected to grow at a strong pace in the short-term, with the ramp-up of MGM Cotai.
	Mass Table Games Drop	9,5%	4,3%	2,6%	Mass table games dropis expected to grow at a strong pace in the short-term, with the ramp-up of MGM Cotai.
	Slots Handle	11,2%	3,2%	2,6%	Slots handle is expected to grow at a higher pace in the short-term, as it is combines growth throught the ramp-up of MGM Cotai with postive expectations for MGM Macau.
	ADR	2,0%	1,4%	1,0%	ADR is espected to grow below inflation, as MGM Cotai gains relevance (lower ADR than MGM Macau).
	Occupancy Rate	0,0%	0,0%	0,0%	Expected to remain constant (currently at 97% already).
	ER&O	42,5%	24,9%	8,0%	Very small business line in terms of turnover translates into more bullish looking rates than the absolute estimations. Expected to grow with MGM Cotai.

Given the unpredictability of certain drivers and the respective impact on the valuation, a sensitivity to different driver assumptions for specific drivers was conducted and is presented in the end of the valuation conclusions section. Two additional scenarios were also modeled, respectively with an overall more optimistic and pessimistic view of the what the future lies for MGM. They are referred to as Bull and Bear scenario, comparing to the Base case of the analysis.

The expected margin of the company reflects both the gains in efficiency from economies of scale (therefore resulting in better margins as sales increase) and the impact of MGM2020. A sensitivity to the degree to which MGM will achieve the MGM2020 targets was conducted – the methodology and results are presented in one of the analysts' individual reports.

Considerations

Table 3: Peers by Operation (and respective Bloomberg Tickers)
Source: ER Analysis, Bloomberg

Domestic Operations	
CZR US Equity	Caesars Entertainment Corp
BYD US Equity	Boyd Gaming Corp
LVS US Equity	Las Vegas Sands Corp
PENN US Equity	Penn National Gaming Inc
WYNN US Equity	Wynn Resorts Ltd
RRR US Equity	Red Rock Resorts Inc
MGM China	
1128 HK Equity	Wynn Macau Ltd
035250 KS Equity	Kangwon Land Inc
GENS SP Equity	Genting Singapore Ltd
SKC NZ Equity	SKYCITY Entertainment Group Lt
MLCO US Equity	Melco Resorts & Entertainment
880 HK Equity	SJM Holdings Ltd
TAH AU Equity	Tabcorp Holdings Ltd
CWN AU Equity	Crown Resorts Ltd

An individual valuation was performed for the domestic and the Macanese segments, allowing for a sum of parts valuation of the group. The UPREIT was considered with the implied non-controlling interest, estimated through its market capitalization:

Valuation = (US Operations – 0.33% MGP MktCap) + 0.56% China Operations

A set of comparables was selected for each geography, for the WACC estimation and multiples analysis.

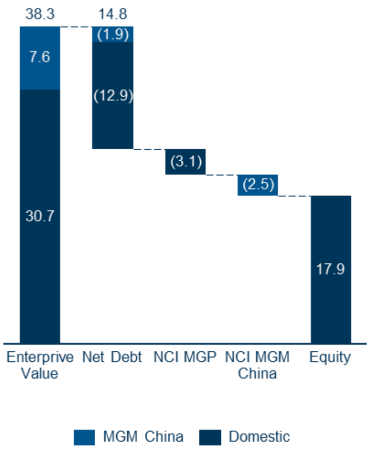
For the DCF valuation of the domestic section, a WACC of 7.25% was considered, with a cost of debt and cost of equity of 3.95% and 10.01%, respectively. The cost of debt mirrors the cost of the latest financing of the company, at LIBOR + 2.00%. The cost of equity combines a relevered beta of 1.45 (from the peer average unlevered beta of 0.86) with a MRP of 5.67% and a risk-free rate of 1.77%. The financial structure considered a D/EV of 40%, aligned with the medium-term target consolidated Net Debt at 3-4x Adjusted EBITDA (company standards). For the Chinese segment, a WACC of 9.80% was applied. Despite the lower cost of debt - assumed at 3.82% (HIBOR + 1.63%) based on the credit facility incurred in 3Q19 – the reduced level of indebtness of MGM China (25% D/EV) and the higher cost of equity (11.93%) result in a higher cost of capital of the Asian segment. The more intense correlation to the respective relevant market - resulting in an average unlevered beta of 1.25 - combines with a higher risk-free rate (3.23% Chinese 10y Govt Bond Yield + 0.79% CRP) and MRP (6.31%) for the significantly larger cost of equity.

The forecasted period was 2019-2027, in which both segments are assumed to reach steady state. By 2027, the domestic segment is estimated to have FCFs growing at 3.4%, with a ROIC of 11.04% - a LT growth of 2.00% was assumed, combining inflation expectations with the growth momentum at 2027. The Macanese segment is expected to have FCFs growing at 3.1% with a ROIC of 10.52% - a LT growth rate of 2.70% was assumed, for similar reason as the domestic segment. The implications for the consolidated valuation are a WACC of 7.58%, LT ROIC of 10.96% and a LT growth rate of 2.09%.

Regarding multiples, the analysis considered 2020e: (i.) EV/EBITDAR, (ii.) EV/EBITDA, (iii.) EV/EBIT and (iv.) P/E ratio. The ranges for each multiple present the 25 and 75 percentiles of the multiples of selected comparables, and can be analyzed in Figure 25: Multiples Valuation – Football Field

Conclusions

Figure 32: Valuation Waterfall ($B)
Source: ER Analysis



The Base Case scenario indicates a 6.9% upside in the domestic operations and a -5.7% downside in the Chinese segment, resulting in an overall upside of 4.4%, with an implicit EV/EBITDA of 11.4x. The combinations of the different scenarios on top line assumptions can be seen in Table 5.

Table 4: DCFs Scenario Analysis for Domestic Operations and MGM China (Valuation in $M)
Source: ER Analysis

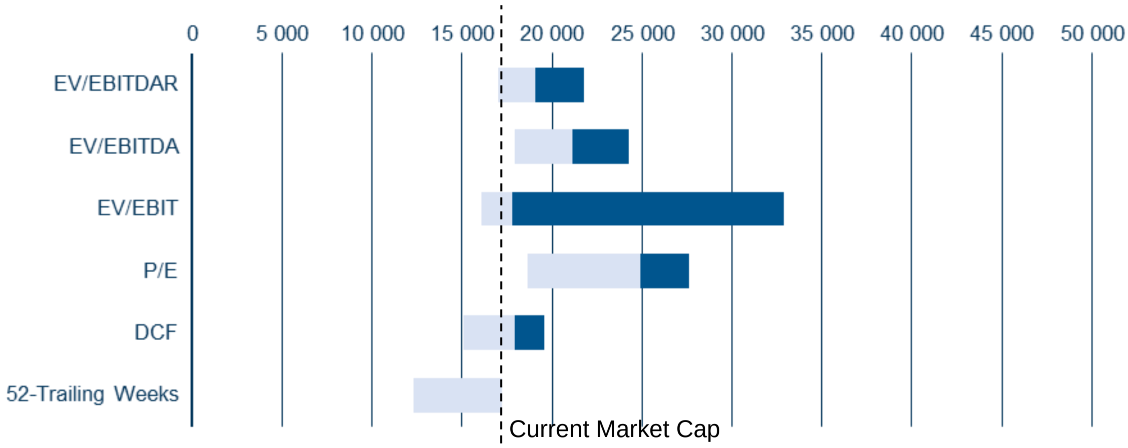
Scenario	Domestic Operations			MGM China		
	Valuation	Upside	EV/EBITDA	Valuation	Upside	EV/EBITDA
2. Bull	*16 066*	*16,2%*	*11,9x*	*6 206*	*3,6%*	*10,7x*
1. Base	*14 775*	*6,9%*	*11,6x*	*5 650*	*(5,7%)*	*10,2x*
3. Bear	*12 251*	*(11,4%)*	*10,9x*	*4 988*	*(16,8%)*	*9,5x*

Table 5: Scenario Combinations - Consolidated Market Cap ($M) and Upside
Source: ER Analysis

		Scenarios Domestic			Scenarios Domestic		
		2. Bull	*1. Base*	*3. Bear*	*2. Bull*	*1. Base*	*3. Bear*
Scenarios MGM China	*2. Bull*	19 538	18 247	15 723	13,7%	6,2%	(8,5%)
	1. Base	19 227	17 936	15 412	11,9%	4,4%	(10,3%)
	3. Bear	18 857	17 566	15 042	9,8%	2,2%	(12,4%)

The company has historically traded at the bottom of the transaction multiples' ranges, as can been seen in Figure 33. For the domestic segment, the EV/EBIT and P/E ratios demonstrate too large of a range, for which they were not the focus of the analysis. Nonetheless, this segment trades in the bottom half of all multiples. The Chinese segment trades at low EV/EBITDA and EV/EBITDAR multiples. The EV/EBIT and P/E multiples are clearly distorted for this segment, considering the magnitude of the MGM Cotai PP&E that generates considerable depreciation and low maintenance capex in the next few years, considering the assets are practically brand new.

Figure 33: Valuation Football Field – Market Capitalization Ranges ($M)
Source: ER Analysis



Besides the scenario analysis, a specific sensitivity analysis was conducted for the overall Win % at all gambling activities. The variable displayed is the incremental impact on the win%, applied on the base case assumptions. As expected, a minor impact has tremendous impact on the valuation, although deviations of such sort are highly unlikely:

Similarly, a sensitivity analysis was conducted on the overall occupancy rate in the company hotels and resorts:

A sensitivity analysis to LT growth expectations and WACC was also conducted for the consolidated company, as follows:

Table 6: Sensitivity Analysis - Overall Win % at Gambling Operations
Source: ER Analysis

	(0.25%)	(0.10%)	+0.00%	+0.10%	+0.25%
Upside	-3,3%	1,5%	4,4%	7,7%	12,5%

Table 7: Sensitivity Analysis - Overall Occupancy Rate %
Source: ER Analysis

	(2.0%)	(1.0%)	+0.00%	+1.0%	+2.0%
Upside	-0,1%	2,2%	4,4%	6,8%	8,7%

Table 8: Sensitivity Analysis on LT growth expectations and WACC – Consolidated Market Cap ($M) and Upside
Source: ER Analysis

		WACC					WACC				
		7,08%	7,33%	7,58%	7,83%	8,08%	7,08%	7,33%	7,58%	7,83%	8,08%
Growth rate %	2,29%	22 625	20 670	18 899	17 288	15 817	31,7%	20,3%	10,0%	,6%	(7,9%)
	2,19%	22 012	20 122	18 409	16 847	15 419	28,1%	17,1%	7,2%	(1,9%)	(10,3%)
	2,09%	21 422	19 596	17 936	16 421	15 033	24,7%	14,1%	4,4%	(4,4%)	(12,5%)
	1,99%	20 856	19 089	17 481	16 010	14 660	21,4%	11,1%	1,8%	(6,8%)	(14,7%)
	1,89%	20 312	18 601	17 041	15 612	14 300	18,2%	8,3%	(,8%)	(9,1%)	(16,8%)

All in all, our investment recommendation is a **Hold** for MGM Resorts International, with an expected 4.4% upside. The profitability enhancement potential with strong organic growth expected for current casinos is not enough to compensate the number of factors that seem too unpredictable (such as the value of the potential Osaka IR and the future of the GVC partnership) combined with a possibly concerning macroeconomic outlook for a highly cyclical industry, leading us to conclude it is better not to “call” or “fold”, but rather “check” MGM’s stock.

Appendix: Financial Statements

Income Statement	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Revenue	**11 763**	**12 467**	**13 261**	**13 876**	**14 513**	**14 975**	**15 334**	**15 681**	**16 020**	**16 368**
Casino	5 630	6 040	6 466	6 805	7 181	7 432	7 616	7 793	7 965	8 142
Non-casino	5 471	5 732	6 072	6 323	6 561	6 755	6 916	7 072	7 224	7 381
Corporate and Other	662	695	723	748	771	788	802	816	831	846
(-) Direct Costs	**(6 913)**	**(7 122)**	**(7 450)**	**(7 684)**	**(7 925)**	**(8 144)**	**(8 329)**	**(8 508)**	**(8 684)**	**(8 872)**
(-) Casino	(3 200)	(3 343)	(3 509)	(3 634)	(3 749)	(3 860)	(3 949)	(4 037)	(4 122)	(4 214)
(-) Non-casino	(3 294)	(3 356)	(3 510)	(3 613)	(3 731)	(3 831)	(3 919)	(4 002)	(4 085)	(4 171)
(-) Corporate expense	(419)	(423)	(431)	(436)	(445)	(453)	(461)	(469)	(478)	(486)
Direct Margin	**4 851**	**5 345**	**5 811**	**6 193**	**6 588**	**6 831**	**7 005**	**7 173**	**7 336**	**7 496**
Direct Margin %	*41%*	*43%*	*44%*	*45%*	*45%*	*46%*	*46%*	*46%*	*46%*	*46%*
(-) Reimbursed costs	(425)	(496)	(527)	(549)	(578)	(597)	(611)	(624)	(637)	(650)
(-) General & adminstrative	(1 765)	(1 791)	(1 829)	(1 865)	(1 907)	(1 940)	(1 984)	(2 017)	(2 061)	(2 106)
Adjusted EBITDA	**2 660**	**3 058**	**3 456**	**3 778**	**4 102**	**4 294**	**4 411**	**4 531**	**4 638**	**4 740**
Adjusted EBITDA %	*22,6%*	*24,5%*	*26,1%*	*27,2%*	*28,3%*	*28,7%*	*28,8%*	*28,9%*	*28,9%*	*29,0%*
(-) Preopening and start-up expenses	(151)	(137)	(135)	(141)	(138)	(138)	(139)	(138)	(138)	(139)
(-) Non-Core expenses	(57)	(305)	(86)	(86)	(86)	(86)	(86)	(86)	(86)	(86)
(+) Income from unconsolidated affiliates	**148**	**151**	**159**	**164**	**172**	**176**	**180**	**184**	**187**	**191**
EBITDA	**2 600**	**2 767**	**3 393**	**3 716**	**4 051**	**4 246**	**4 366**	**4 491**	**4 601**	**4 707**
EBITDA %	*22%*	*22%*	*26%*	*27%*	*28%*	*28%*	*28%*	*29%*	*29%*	*29%*
(-) Depreciation and Amortization	(1 178)	(1 326)	(1 381)	(1 436)	(1 491)	(1 546)	(1 602)	(1 602)	(1 602)	(1 602)
EBIT	**1 422**	**1 441**	**2 012**	**2 280**	**2 560**	**2 700**	**2 764**	**2 889**	**2 999**	**3 106**
(-) Interests	(770)	(759)	(719)	(675)	(614)	(539)	(495)	(431)	(343)	(303)
(-) Other non-operating expenses	(28)	(95)	(95)	(95)	(95)	(95)	(95)	(95)	(95)	(95)
EBT	**625**	**587**	**1 198**	**1 510**	**1 851**	**2 066**	**2 174**	**2 363**	**2 562**	**2 708**
(-) Taxes	(135)	(125)	(292)	(364)	(441)	(490)	(493)	(534)	(577)	(610)
Net Income	**489**	**461**	**906**	**1 147**	**1 410**	**1 576**	**1 681**	**1 829**	**1 984**	**2 098**
(-) Comprehensive income attributable to non-controlling interests	(113)	(113)	(113)	(113)	(113)	(113)	(113)	(113)	(113)	(113)
Net Income attributable to MGM	**377**	**349**	**794**	**1 034**	**1 297**	**1 463**	**1 569**	**1 716**	**1 872**	**1 985**

Balance Sheet	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Cash and equivalents	1 527	685	663	694	726	750	768	785	898	1 283
Accounts receivable	657	655	690	715	746	768	785	802	818	835
Inventories	111	110	116	115	118	122	123	125	128	131
Income tax receivable	28	0	0	0	0	0	0	0	0	0
Prepaid expenses and other	204	200	209	215	221	227	232	237	242	247
Property and equipment	20 730	20 726	20 672	20 568	20 414	20 210	19 955	19 704	19 458	19 215
Goodwill	1 821	1 821	1 821	1 821	1 821	1 821	1 821	1 821	1 821	1 821
Other intangible assets, net	3 507	3 507	3 507	3 507	3 507	3 507	3 507	3 507	3 507	3 507
Other long-term assets	455	453	453	453	453	453	453	453	453	453
Operating deferred tax asset	104	31	31	31	31	31	31	31	31	31
Investments in and advances to unconsolidated affiliates	816	816	816	816	816	816	816	816	816	816
Assets	**29 961**	**29 005**	**28 979**	**28 936**	**28 856**	**28 705**	**28 492**	**28 283**	**28 174**	**28 340**
Accounts payable	303	298	311	319	328	336	343	349	356	363
Construction payable	312	312	312	312	312	312	312	312	312	312
Other accrued liabilities	2 151	2 411	2 596	2 745	2 899	3 006	3 084	3 162	3 237	3 314
Operating deferred tax liabilities	1 114	1 179	1 238	1 291	1 340	1 383	1 421	1 459	1 497	1 534
Other long-term obligations	259	259	259	259	259	259	259	259	259	259
New Debt	0	1 381	2 904	3 984	5 416	7 253	9 019	9 886	8 670	7 655
Accrued interest on long-term debt	140	140	140	140	140	140	140	140	140	140
Long-term debt net	15 110	13 837	11 871	10 155	7 849	4 964	2 079	0	0	0
Noncontrolling interests	4 060	4 060	4 060	4 060	4 060	4 060	4 060	4 060	4 060	4 060
Liabilites	**23 448**	**23 876**	**23 690**	**23 265**	**22 602**	**21 712**	**20 717**	**19 628**	**18 531**	**17 637**
Net Assets	**6 512**	**5 129**	**5 289**	**5 671**	**6 253**	**6 993**	**7 775**	**8 656**	**9 643**	**10 703**
Equity	**6 512**	**5 129**	**5 289**	**5 671**	**6 253**	**6 993**	**7 775**	**8 656**	**9 643**	**10 703**

Disclosures and Disclaimers

Report Recommendations

Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

This report was prepared by [*insert student's name*], a Master in Finance student of Nova School of Business and Economics ("Nova SBE"), within the context of the Field Lab – Equity Research.

This report is issued and published exclusively for academic purposes, namely for academic evaluation and master graduation purposes, within the context of said Field Lab – Equity Research. It is not to be construed as an offer or a solicitation of an offer to buy or sell any security or financial instrument.

This report was supervised by a Nova SBE faculty member, acting merely in an academic capacity, who revised the valuation methodology and the financial model.

Given the exclusive academic purpose of the reports produced by Nova SBE students, it is Nova SBE understanding that Nova SBE, the author, the present report and its publishing, are excluded from the persons and activities requiring previous registration from local regulatory authorities. As such, Nova SBE, its faculty and the author of this report have not sought or obtained registration with or certification as financial analyst by any local regulator, in any jurisdiction. In Portugal, neither the author of this report nor his/her academic supervisor is registered with or qualified under COMISSÃO DO MERCADO DE VALORES MOBILIÁRIOS ("CMVM", the Portuguese Securities Market Authority) as a financial analyst. No approval for publication or distribution of this report was required and/or obtained from any local authority, given the exclusive academic nature of the report.

The additional disclaimers also apply:

USA: Pursuant to Section 202 (a) (11) of the Investment Advisers Act of 1940, neither Nova SBE nor the author of this report are to be qualified as an investment adviser and, thus, registration with the Securities and Exchange Commission ("SEC", United States of America's securities market authority) is not necessary. Neither the author nor Nova SBE receive any compensation of any kind for the preparation of the reports.

Germany: Pursuant to §34c of the WpHG (*Wertpapierhandelsgesetz*, i.e., the German Securities Trading Act), this entity is not required to register with or otherwise notify the *Bundesanstalt für*

Finanzdienstleistungsaufsicht ("BaFin", the German Federal Financial Supervisory Authority). It should be noted that Nova SBE is a fully-owned state university and there is no relation between the student's equity reports and any fund raising programme.

UK: Pursuant to section 22 of the Financial Services and Markets Act 2000 (the "FSMA"), for an activity to be a regulated activity, it must be carried on "by way of business". All regulated activities are subject to prior authorization by the Financial Conduct Authority ("FCA"). However, this report serves an exclusively academic purpose and, as such, was not prepared by way of business. The author - a Master's student - is the **sole and exclusive responsible** for the information, estimates and forecasts contained herein, and for the opinions expressed, which exclusively reflect his/her own judgment at the date of the report. Nova SBE and its faculty have no single and formal position in relation to the most appropriate valuation method, estimates or projections used in the report and may not be held liable by the author's choice of the latter.

The information contained in this report was compiled by students from public sources believed to be reliable, but Nova SBE, its faculty, or the students make no representation that it is accurate or complete, and accept no liability whatsoever for any direct or indirect loss resulting from the use of this report or of its content.

Students are free to choose the target companies of the reports. Therefore, Nova SBE may start covering and/or suspend the coverage of any listed company, at any time, without prior notice. The students or Nova SBE are not responsible for updating this report, and the opinions and recommendations expressed herein may change without further notice.

The target company or security of this report may be simultaneously covered by more than one student. Because each student is free to choose the valuation method, and make his/her own assumptions and estimates, the resulting projections, price target and recommendations may differ widely, even when referring to the same security. Moreover, changing market conditions and/or changing subjective opinions may lead to significantly different valuation results. Other students' opinions, estimates and recommendations, as well as the advisor and other faculty members' opinions may be inconsistent with the views expressed in this report. Any recipient of this report should understand that statements regarding future prospects and performance are, by nature, subjective, and may be fallible.

This report does not necessarily mention and/or analyze all possible risks arising from the investment in the target company and/or security, namely the possible exchange rate risk resulting from the security being denominated in a currency either than the investor's currency, among many other risks.

The purpose of publishing this report is merely academic and it is not intended for distribution among private investors. The information and opinions expressed in this report are not intended to be available to any person other than Portuguese natural or legal persons or persons domiciled in Portugal. While preparing this report, students did not have in consideration the specific investment objectives, financial situation or particular needs of any specific person. Investors should seek financial advice regarding the appropriateness of investing in any security, namely in the security covered by this report.

The author hereby certifies that the views expressed in this report accurately reflect his/her personal opinion about the target company and its securities. He/ She has not received or been promised any direct or indirect compensation for expressing the opinions or recommendation included in this report.

[If applicable, it shall be added: *"While preparing the report, the author may have performed an internship (remunerated or not) in* [insert the Company's name]. *This Company may have or have had an interest in the covered company or security"* and/ or *"A draft of the reports have been shown to the covered company's officials (Investors Relations Officer or other), mainly for the purpose of correcting inaccuracies, and later modified, prior to its publication."]*

The content of each report has been shown or made public to restricted parties prior to its publication in Nova SBE's website or in Bloomberg Professional, for academic purposes such as its distribution among faculty members for students' academic evaluation.

Nova SBE is a state-owned university, mainly financed by state subsidies, students tuition fees and companies, through donations, or indirectly by hiring educational programs, among other possibilities. Thus, Nova SBE may have received compensation from the target company during the last 12 months, related to its fundraising programs, or indirectly through the sale of educational, consulting or research services. Nevertheless, no compensation eventually received by Nova SBE is in any way related to or dependent on the opinions expressed in this report. The Nova School of Business and Economics does not deal for or otherwise offer any investment or intermediation services to market counterparties, private or intermediate customers.

A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the NOVA – School of Business and Economics.

DEBATE ON THE JAPANESE GAMBLING MARKET ATTRACTIVENESS FOR MGM RESORTS INTERNATIONAL

FRANCISCO MENDONÇA
26009

A Project carried out on the Master in Finance Program, under the supervision of:

Francisco Antunes da Cunha Martins

3rd January, 2020

Abstract

The purpose of the paper is to examine the potential value of the recent legalized Japanese gambling market for MGM Resorts International. The macroeconomic and political implications surrounding the topic were addressed and how the same implications may influence the attractiveness of the expected market. Additionally, the difficultness in quantifying the same market was also discussed, as well as the risks and concerns around the topic.

Keywords

MGM, Integrated Resort, Gambling, Japan

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

Introduction and Motivation

MGM Resorts International [MGM] is on the race for a Japan casino license, following the Integrated Resort Promotion Act [IRPA] of 2018, in which the Japanese government legalized privately run gambling/casino operations. It was previously forbidden under the Japanese Criminal Code. The IRPA's motivations are associated with the Prime Minister Shinzo Abe's government strategy to boost economic growth through the Japanese tourism sector.

Diverse initiatives have already taken place to fulfill the requirements of foreign visitors coming into the Japanese territory. One of these initiatives is the Japan's bet on 3 large-scale Integrated Resorts [IRs] to be developed in the following decade and to be owned by private entities. The IR refers to an entertainment complex that incorporates malls, theme parks, hotels, alongside casinos. Despite not being completely consensual under Japanese politicians, the government insists that IRs will increase the number of tourists, bring additional income to regional government and will also create new jobs. And this is where MGM comes in. The gambling company is betting on a deleveraging approach (after several decades of being a highly leveraged) in order to raise money for potential key growth opportunities, such as the IR license to operate in Japan.

James Murren, Chief Executive Officer of MGM Resorts International, has already shown full commitment to acquire the Japanese license. More specifically, MGM's strategy "Osaka First", as the name indicates, displays MGM's total interest to develop a unique Integrated Resort in the city of Osaka, spending upward of $10B in its process. After the signature of the so-called IR Promotion Act, MGM counted with the competition of all its main peers: Las Vegas Sands, Wynn Resorts, Melco Resorts & Entertainment, Caesars Entertainment, Galaxy Entertainment, and Genting Group. Nevertheless, only the last one stays on the race for the Osaka spot. Las Vegas Sands and Wynn consider Osaka the least desirable spot of all potential locations -

Osaka, Tokyo and Yokohama - given the heavy restrictions proposed by local Japanese lawmakers, while Caesars withdrew completely for a license in Japan to focus on its merger with Eldorado Resorts. If MGM wins, the (optimistic) plan passes by meeting the March 2025 opening date, just a couple of months before the opening of Expo '25 in Osaka. Furthermore, MGM has constituted a partnership with Orix Corporation (Japanese diversified financial services group that reached the $2.4B net income mark in 2018) in its bid to be selected by the city of Osaka.

Macro and Tourism Trends

Within Bank of Japan projections[1], the Japanese economy is expected to continue the expansionary trend at least until 2021. As previously mentioned, the Japanese government has been boosting the tourism industry given the confidence it has in its potential impact on GDP. According to the Japan Tourism Agency[2], in 2018, Japan surpassed the target of 30M incoming tourists for the first time, with tourists spending more than $41.5B in goods and services (foreign visitors' spending increased for the seventh consecutive year). And it does not end here for the Japanese Government: by the year 2030 the goal was set to reach 60M incoming tourists and an inherent spending of $141B. However, when comparing the values for the first half of 2019 with the values for the previous year period, tourist growth slowed to the single-digit figure of +4.2% YoY.

The main slowdown factors are the fall of the advantage of a weaker yen and the deteriorating economic environment of some of the countries that most contribute to Japan's tourist base (South Korea, Taiwan and Hong Kong). According to a study published by KPMG[2] in 2019, c.60% or more tourists concentrate their visit on the golden route that connects the three largest metropolitan areas of the country, leaving out many remote locations to be seen. Moreover, according to what has been the position of the Japanese government, the objective now passes

1. Bank of Japan. 2019. "Outlook for Economic Activity and Prices". Accessed January 2, 2020. https://www.boj.or.jp/en/mopo/outlook/gor1907b.pdf
2. The Japan Times. 2019. "Foreign Tourists Spent Record ¥4.5 Trillion in Japan in 2018". Accessed January 2, 2020. https://www.japantimes.co.jp/news/2019/01/16/national/foreign-tourists-spent-record-¥4-5-trillion-japan-2018/.
3. KPMG. 2019. "Challenges in Making Japan a Tourism-Oriented Country". Accessed January 2, 2020. https://home.kpmg/jp/en/home/insights/2019/08/hospitality-ir-sector.html

mainly through the reduction of this structural inequality and thus to allow such remote locations to start prospering and taking advantage of Japanese tourism growth. For that very reason, the following decade will be marked by major boost events: Japan will host the Olympic Games'20 and the already mentioned Expo'25, in Osaka. In order to continue the tourism growth path after 2025, IR development rises as one the most important sources of growth. The fact the Government of Japan is hardly pursuing a status of globally competitive tourist destination combining with the economic (and tourism) outlook may help MGM to see its desire turn into reality.

Gambling Framework: Past, Present and Future

Nowadays, the gambling sector is yet fully controlled by the state and consists only in few allowed gambling activities (namely pachinko, horse, motorcycle and motorboat races) that met in the past certain criteria to be considered legal. Despite the restricted scenario of gambling games, Japan is seen as a country with a high propensity to gambling addiction: a 2017 health ministry survey[4] estimates 3.6% (3.2M citizens) of the Japanese population suffer or have already suffered from gambling addiction. The percentage stands out when compared, for example, with the French (1.2%) or Swiss (1.1%) reality. An argument used and reused by the opposition to Abe's government, the Japanese Communist Party, to justify concerns expressed about gambling addiction. Something that is "ignored" by the current government, arguing that integrated resorts provide an unquestionable set of benefits to the central and local economy.

The legalization of casinos also marked the ban lifting on the private gambling sector. From a political perspective the Japanese government decided that MGM (or any other operator) must reinvest 30% of its annual gross profits[5] in the IR, promoting a principle of sustained growth: continuous investment in IR will lead to continuous increase of the tourist base in a long-term basis while serving public purposes through private entities like MGM.

4. The Japan Times. 2017. "An estimated 3.2 million Japanese addicted to gambling". Accessed January 2, 2020. https://www.japantimes.co.jp/news/2017/09/30/national/social-issues/estimated-3-2-million-japanese-addicted-gambling/#.Xg3ODXd2vVh.
5. The Japan Times. 2018. "Casinos in Japan: Tourist attractions or hotbeds of gambling addiction?". Accessed January 2, 2020. https://www.japantimes.co.jp/news/2018/07/16/national/casinos-japan-tourist-attractions-hotbeds-gambling-addiction/#.Xg3PN3d2t3e

Thesis

Regulators have not yet finalized the set of rules, but it is already consensual for MGM and the other operators that the investment will be considerably high; MGM[6] has publicly reiterated that it expects to invest $10B (or more) based on an expected multibillion-dollar market - an official study conducted by the Osaka city government[7] estimates that per year 13M new tourists will appear and generate figures around $50B for the economy.

Given the latest regulatory developments, it appears that licenses will be issued on a 10-year basis. Compared to the initial 20-year basis licenses in Macau, it seems short to recoup an investment as large as $10B. However, Fitch[8] expects the investment to be even larger – rounding the $15B mark – given the necessary infrastructure (the Osaka IR is expected to be on Yumeshima man-made island), amenities and other regulatory needs. However, Fitch agrees with MGM's view regarding the potential of the Japanese gambling market: the rating agency estimates the Japanese market to exceed the $10B annual revenue threshold. These are exciting expectations for MGM, especially when compared to the Las Vegas Strip market generating $6.6B[9] annually. Fitch follows this market size assessment with the estimation that the Osaka IR will be able to generate nearly $1B of EBITDA annually, in run-rate. The already publicly announced partnership with Orix may facilitate the credit line negotiations with local financial institutions, as well as with the contact with future service providers or business partners, considering its network and simply for the fact that is also local. All things considered, it is not expected that the referred reinvestment constraint (30% of EBITDA) to be an active constraint, considering an industry average EBITDA margin of c.20%, meaning a required investment of 30% * 20% = 6% of revenues, vs. an average capex/revenues industry ratio of 8-9%. Despite affecting management teams' ability to make decisions freely in prone of its investors, therefore reducing interest of potential operators, the 6% mark is close to the industry minimums.

6. MGM Resorts International. 2019. "MGM Resorts Reaffirms Commitment To Pursuing Integrated Resort In Osaka, Japan". Accessed January 2, 2020. https://investors.mgmresorts.com/investors/news-releases/press-release-details/2019/MGM-Resorts-Reaffirms-Commitment-To-Pursuing-Integrated-Resort-In-Osaka-Japan/default.aspx
7. NHK World-Japan. 2019. "NRT Focus: Japan's Controversial Casino Plan". Accessed January 2, 2020. https://www3.nhk.or.jp/nhkworld/en/news/editors/3/japanscontroversialcasinoplan/index.html
8. GGR Asia. 2019. "Japan 10 yr casino permit obstacle for bank finance: Fitch". Accessed January 2, 2020. https://www.ggrasia.com/japan-10-yr-casino-permit-obstacle-for-bank-financing-fitch/
9. Nevada Gaming Control Board. 2019. "2018 Monthly Revenue Report". Accessed January 2, 2020. https://gaming.nv.gov/modules/showdocument.aspx?documentid=14325

Risks and Concerns

Given Japan's geographical position relative to Macau, it is normal that the subject of possible revenue cannibalism in Macau must be addressed by MGM: Japan does not have casinos yet but 2018 gross gambling revenue almost equals Macau gaming revenue ($37.5B), with almost $30B coming from pachinko[10] – another proxy for a strong gambling culture. According to industry forecasts[11], the Japanese market may not be a big threat for Macau but instead it is expected to absorb some market share from South Korea and Russia. This perspective is based on the familiarity of Chinese tourist culture and the proximity of Macau's border to the mainland. However, IGamiX Consulting[12] makes a more conservative reading: the consulting group considers the Japanese market must be tracked closely given the Japanese culture of high quality of service.

The other risk is the motivation of Japanese regulators to provide a not-so-long license and make it more complicated to get a return on an investment like $10/$15B. The fact that it is still a market in regulatory design phase and the market size relies yet in a lot of unknowns, there is some rational concern regarding the possibility of the cost not offset the substantial investment.

Final remarks

Lastly, with some constraints still unpredictable, the Japanese market is still difficult to quantify for its investors. However, given the macroeconomic and political factors as well as the potential gambling behavior of the Japanese player, the entry of MGM Resorts International can be understood as a wise step for its investors. At first glance, these factors seem to be in line for the potential company's success in the Japanese market, but some reserves will always exist as long as there are no regulatory conclusions, especially until we can better understand the unknowns and, hence, quantify how much the return on investment will likely be. The upcoming times will be crucial to the unfolding of the history.

10. South China Morning Post. 2018. "Are Macau casinos playing a losing hand in Japan?". Accessed January 2, 2020. https://www.scmp.com/week-asia/business/article/2149491/are-macau-casinos-playing-losing-hand-japan
11. Casino Review. 2018. "Fitch: Japan, a threat to Korea and Russia, but not Macau". Accessed January 2, 2020. https://www.casino-review.co/fitch-japan-threat/
12. Macau Daily Times. 2018. "Japan may be a threat to Macau gaming lifeblood". Accessed January 2, 2020. https://macaudailytimes.com.mo/japan-may-be-a-threat-to-macau-gaming-lifeblood.html