

Financial Competitiveness of Macau in Comparison with Other Gaming Destinations

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Abstract

This paper analyzes the financial competitiveness of the Macau gaming industry vis-à-vis its counterparts in North America and Europe. The analysis covers casino product structure, revenue composition, assets productivity and financial returns of Macau versus those of gaming destinations in North America and Europe. The findings reveal that while Macau is advantageously positioned in terms of assets productivity and financial returns, its casino product structure and revenue composition seem at odds with today's gaming trend. Macau is facing challenges from emerging competitors in Asia. To maintain a stable gaming revenue growth and retain its competitiveness, Macau must modify its casino product structure and revenue composition. Pursuing a more diversified market is a critical step towards the goal.

Key Words: Macao, casino, productivity, financial return, structure, diversification

Introduction

Velotta (2005) recently projected that Macau would soon become the No.1 casino destination in the world. According to the projection, Macau, about one fourth of Las Vegas in size, is likely to replace Las Vegas as the world's top gaming market in 2005 and its annual gaming revenue could grow to \$12 billion by 2010. Indeed, Macau, which generated about half of Las Vegas' gaming revenue just a few years ago, is making a big leap forward in the world's gaming market. A comparison between Macau and gaming destinations in North America and Europe shows that the phenomenal growth of Macau's gaming revenue is turning the destination into the world's hottest gaming market. Table 1 below provides most recent gaming revenue statistics of Macau versus six other destinations in North America and Europe. Various currencies were converted to US dollars using the average exchange rates of relevant years, or the averages of the beginning and ending rates of those years. In terms of gaming revenue growth from 2003 to 2004, Macau far exceeded other destinations, of which some experienced declines. Switzerland also witnessed substantial gaming growth in 2004. However, as Switzerland's gaming growth rate was based on much smaller gaming revenue in 2003, its achievement was incomparable to Macau's.

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Table 1.
Casino Gaming Revenue Growth: Macau versus Other Destinations (2003-2004)

	Gaming Revenue 2003	Gaming Revenue 2004	% Change
Macau	US\$3,481,125,000	US\$5,023,250,000	44.30%
Las Vegas Strip	4,759,607,000	5,333,508,000	12.06%
Atlantic City	4,424,994,000	4,738,177,000	7.08%
Ontario	1,284,586,923	1,197,985,600	-6.74%
The Netherlands	678,777,778	684,318,182	0.82%
Switzerland	415,555,556	582,575,758	40.19%
Austria	344,444,444	331,818,182	-3.67%
United Kingdom	1,173,684,211	1,225,454,545	4.41%

Sources: Statistics (2005) by Macau Gaming Inspection and Coordination Bureau, *Nevada Gaming Abstract and (2004 & 2003)* by Nevada Gaming Control Board, *2004 Annual Report* by New Jersey Casino Control Commission, *Consolidated Income Statement (2004)* of Ontario Lottery and Gaming Corporation, Holland Casino's *Financial Annual Report 2004*, *Memorandum 2003* of National Gaming Commission of Spain, *Annual Report 2004* by Federal Commission of Casino Gaming of Switzerland, Casino Austria Group's *Annual Report 2004*, and *Report of the Gaming Board for Great Britain 2003-2004*.

To provide a comparison over a relatively longer timeframe, Table 2 lists the annualized gaming revenue growth of Macau versus those of US and European destinations with data available at least since 2000. Again, different currencies were converted into US dollars using average exchange rates of relevant years. The table shows that Macau ranks at the top among the eight destinations including the Las Vegas Strip and Atlantic City. As the table shows, Las Vegas, NV and Atlantic City, NJ have experienced slow growth in recent years, a sign that the two largest gaming destinations in North America are approaching market saturation. In contrast, the highest annualized growth of Macau, which was about 10 times that of the Las Vegas Strip, demonstrates that Macau, though having reached the Las Vegas gaming revenue level, is still full of growth momentum.

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Table 2.
Gaming Revenue Growth since 2000: Macau versus Other Destinations

	2000 Gaming Revenue	2004 Gaming Revenue	Annualized Growth Rate
Macau	US\$1,984,750,000	US\$5,023,250,000	26.13%
Las Vegas Strip	4,805,059,000	5,333,508,000	2.64%
Atlantic City	4,220,000,000	4,738,177,000	2.94%
The Netherlands	425,600,000	684,318,182	12.61%
Switzerland*	228,000,000	437,580,000	13.93%
Austria	207,385,000	331,818,182	12.47%
United Kingdom	900,900,000	1,199,720,000	7.42%
France**	1,861,050,000	3,657,600,000	25.26%

*Switzerland's 2000 figure was not available. Its annual rate was based on 1999-2004 gaming revenues.

**France's 2004 gaming revenue was not available. Its annualized rate was computed from 2000 to 2003 gaming revenues.

Sources: Statistics (2005) by Macau Gaming Inspection and Coordination Bureau, *Nevada Gaming Abstract (2004 & 2003)* by Nevada Gaming Control Board, *2004 Annual Report* by New Jersey Casino Control Commission, Holland Casino's *Financial Annual Report 2004*, *Memorandum 2003* of National Gaming Commission of Spain, *Annual Report 2004* by Federal Commission of Casino Gaming of Switzerland, Casino Austria Group's *Annual Report 2004*, *Report of the Gaming Board for Great Britain 2003-2004* and *Facts & Figures (2005)* by Think & Do International

There are two major reasons behind the exceptional gaming growth in Macau. First, the continuous and rapid economic growth of China, which has been the No. 1 tourist-feeder market for Macau since 2002 (Macau Tourism Bureau, 2002-2004), has created a rising demand for Macau casinos. Especially, the Individual Visit Scheme implemented by the Chinese government in July 2003 has further facilitated Chinese mainlanders' travels to Macau ("Individual Visit", 2004). As the only jurisdiction with legalized casino gaming in China, Macau is the most convenient outlet for Chinese mainlanders to satisfy their gaming demand. Second, Macau Government's new policy of encouraging competition by issuing gaming concessions to outside gaming operators has facilitated the transformation of Macau's casino industry. Competition helps modernize the industry and is changing Macau's image in the world's gaming arena, making Macau a more attractive destination.

The exceptional growth of the Macau casino industry, however, is not without challenges. Emerging new gaming destinations in Asia are posing a threat to the stable growth of Macau's gaming revenue. It has been expected that the competitive advantage enjoyed by Macau may last for 10 to 20 years (Yu, 2004). However, as Singapore has recently passed a law to legalize casino gaming and is making an open bid for two giant casino projects (Stutz, 2005), Macau's competitive advantage may disappear sooner and maintaining its market competitiveness will become tougher. An analysis of Macau's gaming competitiveness from a finance perspective in comparison to other gaming destinations is necessary for Macau to identify its strengths and weaknesses. The purpose of this study is to perform such a comparative analysis of Macau versus other gaming destinations. The findings and conclusions derived from the study should help the Macau gaming industry and policy makers develop strategies to cope with the challenges, thus sustaining and enhancing a stable growth of Macau as a gaming destination.

Literature Review

Comparing casino operations across continents can provide insights into the different legal, social and economic environments of various destinations in which casinos operate, thus helping gaming researchers and practitioners better understand gaming markets from a worldwide perspective. Thompson (1998) conducted a comprehensive study on worldwide casino gaming with a focus on European casinos in contrast to US casinos. He found that European casino gaming substantially differed from US casino gaming in terms of legal environment, organizational structure, clientele, operation style, and operation results. From a legal perspective, Cabot et al. (1999) examined the legislative status of casino gaming in different jurisdictions in the world and discussed various legality issues faced by the gaming industry in those gaming destinations. With an emphasis on North America and Europe markets, Ader, Falcone, and Steinberg (1999) analyzed the organizational and operational features of casinos in different parts of the global gaming market. In particular, they found that the casino industry in Europe was dominated by small venues tightly regulated and/or owned by the state, with restrictions on marketing, accessibility, and competition.

More recently, Gu (2002) compared the financial performance of U.S. casinos in Las Vegas and Atlantic City with their European counterparts and found that Dutch and French casinos significantly outperformed U.S. casinos in both revenue efficiency and profitability. The study attributed European casinos' better performance to the lack of competition in European markets.

Previous comparative studies on casino gaming have focused on North America and Europe. Relatively less attention has been devoted to gaming developments in the Far East. By analyzing the financial competitiveness of Macau, a rising star among world gaming markets, in comparison with North America and Europe, the current study should help gaming researchers, analysts and practitioners better understand the great potential of the Asian gaming market.

Data and Methodology

The casino financial data of Macau in 2004, along with those of North American and European destinations were used for this comparative study. The net income, assets and equity information of the Macau gaming industry were consolidated from the 2004 income statements and balance sheets of all the three Macau casino companies that had operations in 2004, namely Sociedade de Jogos de Macau, S. A., Venetian Macau, S.A., and Galaxy Casino, S.A., as published by Macau Government Printing Bureau (2005). The gaming revenue and gaming device information of Macau was derived from the *Statistics* published by Macau Gaming Inspection and Coordination Bureau (2005).

The Las Vegas Strip casino data were obtained from *Nevada Gaming Abstract (2004 & 2003)* and Nevada's *Gaming Revenue Report (December, 2004 & December 2003)* published by Nevada State Gaming Control Board (2005 & 2004). For Atlantic City, the casino data were derived from the *2004 Annual Report* published by State of New Jersey Casino Control Commission (2005). The casino operation statistics of Ontario, Canada came from the *Consolidated Income Statement (2004)* of Ontario Lottery and Gaming Corporation (2005). Casino operation results of European destinations were derived from the following sources: Holland Casino's (2005) *Financial Annual Report 2004, Memorandum 2003* of National Gaming Commission of Spain (2005), *Annual Report 2004* by Federal Commission of Casino Gaming of Switzerland (2005), Casino Austria Group's (2005) *Annual Report 2004, Report of the Gaming Board for Great Britain 2003-2004* by Gaming Board for Great Britain (2005) and *Facts & Figures* published by Think & Do International (2005).

The financial competitiveness of the gaming industry of a destination is reflected not only in its revenue growth momentum but also in its casino assets productivity, gaming product structure, revenue composition, financial benefits accrued to the local government in terms of gaming levies, and returns to the investors. To analyze the financial competitiveness of Macau, this study first derived the daily per unit wins of slots and tables in Macau versus those in other destinations to measure the productivity of gaming devices. Gu (2002) used the two measures to compare gaming equipment productivity of the Las Vegas Strip versus Holland and France. While the Strip's daily win per table was found comparable to those of Holland and France, its daily win per slot was significantly lower than the European rivals. Further, the study computed the assets turnover ratio, which is total revenue divided by total assets, to measure the overall productivity of casino assets. According to Schmidgall (2002), this ratio measures the efficiency of management's use of assets in revenue generation. Taking its cue from *Nevada Gaming Abstract (2004)*, this study used the averages of relevant assets items, namely the averages of their end-of-year numbers in 2004 and 2003, to derive the above productivity ratios. To examine the product structure and revenue composition, the study compared Macau's ratios of slots to tables and gaming revenue to total casino revenue with those of other gaming destinations.

According to Schmidgall (2002), profit margin evaluates hospitality enterprises in terms of their ability to generate profits on sales revenue. On the other hand, return on assets serves as an overall indicator of the profitability of hospitality enterprise's assets and return on equity compares the profits to the owner's investment. Gu (2002) used the three ratios to compare the profitability between US casinos and European casinos and found that the latter were much more profitable than their US competitors. To assess the financial returns relative to casino revenue, casino assets and equity investment, our study adopted the same three ratios.

In this study, profit margin was calculated as the ratio of net income to total revenue, measuring how much net profit derived from every dollar of casino revenue after subtracting all expenses. Return on assets, computed as a ratio of net income to total assets, indicates how much net profit was generated from every dollar invested by creditors and shareholders jointly in casino assets. Return on equity is obtained by dividing the net income by the owner's equity, showing how much net income is

produced for every dollar of equity invested by shareholders in the casino industry. The three ratios serve as bottom-line profit indicators for casino investors, including both creditors and shareholders. A comparison of the three ratios of Macau with those of other destinations will tell how competitive Macau is from the perspective of investors. The net income figures used in this study were all before income taxes because of two reasons. First, income taxes differ across countries. Using after-tax net income would make the ratios less comparable. Second, many data sources used in this study, such as those for Las Vegas and Atlantic City, only had net income before income taxes as the bottom-line profit.

Bybee (1998) pointed out that gaming tax collected by the local government constituted a big part of the economic benefits to the gaming destination. For investigating the financial benefits accrued to the government, the study compared the government gaming levy relative to gaming revenue and gaming assets in Macau versus those in North America and Europe. The gaming levy is broader than the gaming tax because the former includes the latter plus various forms of mandatory contributions from a casino's gaming revenue.

Considering the fact that gaming levies exert a great impact on the net income received by the investor, this study further created two ratios that combined financial returns to the government and the investor. One was the ratio of government levy plus net income to casino total revenue, indicating financial benefits generated for the government and investors jointly due to the casino industry's operation. The other was government levy plus net income to casino total assets, showing financial benefits accrued to the government and investor jointly due to casino industry investment.

Some of the tables in this study compare gaming revenues across countries. Here, to make gaming revenues readily comparable, various currencies were converted to US dollars using the average exchange rates of relevant years, or the averages of the beginning and ending rates of those years. The major findings from the comparisons and their implications for the Macau gaming industry are presented in the sections to follow.

Gaming Assets Productivity

Table 3 compares assets productivity between Macau and other destinations. Evidently, Macau was superior in terms of table productivity. Although by the end of 2004 game tables in Macau more than doubled due to the openings of new casinos including Sands Macau, Macau's daily per table win was about 7 times that of Las Vegas, the second in the table. Table games, especially those in VIP rooms, are the most lucrative market segment for Macau casinos (Zheng, 2004). Macau should do its utmost to retain its customer loyalty so as to maintain its dominance in this market segment. A side effect of the opening of casinos operated by Las Vegas-based companies is that some of Macau's traditional VIP room players could be seduced to Las Vegas. Las Vegas-based casino operators may use their Macau casinos as a window to promote their Las Vegas properties and send Macau players to Las Vegas. The Macau gaming industry should be aware of the risk of market erosion by Las Vegas and take preventive measures to strengthen its dominance in this market segment.

By the end of 2004 Macau's daily per table win was about seven times that of Las Vegas.

Table 3.
Casino Assets Productivity: Macau versus Other Destinations

	Daily Slot Revenue per Unit (US\$)	Daily Table Revenue per Unit (US\$)	Assets Turnover Ratio
Macau	139	17,876	2.78
Las Vegas Strip	138	2,537	0.54
Atlantic City	232	2,469	0.64
The Netherlands	171	2,398	2.29
Switzerland	211	NA	1.27
Austria*	248	2,256	2.42

* Derived from Casino Austria Group consolidated income statement including some operations in other European countries, Middle East and Africa.

Sources: *Statistics* (2005) by Macau Gaming Inspection and Coordination Bureau, *Gaming Revenue Report (2004)* by Nevada Gaming Control Board, *2004 Annual Report* by New Jersey Casino Control Commission, Holland Casino's *Financial Annual Report 2004, Annual Report 2004* by Federal Commission of Casino Gaming of Switzerland, and Casino Austria Group's *Annual Report 2004*.

As shown in Table 3, Macau casinos' slot productivity was about the same as that of Las Vegas but far below their counterparts in Atlantic City and Europe. Slots are a great potential area for Macau to derive additional gaming revenue as the rising popularity of slots over tables is a trend in the world's gaming market nowadays. According to the *Statistics* published by Macau Gaming Inspection and Coordination Bureau (2005), the slot-to-table ratio in 2004 rose from 1.91 in 2003 to 2.06 in 2004 due to a faster increase in slots. While the average daily revenue per table decreased from \$24,793 to \$17,876, or a 28-percent decline, over the two years, the daily revenue per slot increased from \$98 to \$139, or a 42-percent rise over the same period, indicating a great growth potential for slots in Macau. To achieve higher slot productivity, a good strategy for Macau to pursue is to diversify its customer base into slot-loving players. The higher slot productivity in Atlantic City and Europe suggests that east-coast Americans and Europeans may be more interested in slot playing. Macau could tap into those markets to further improve its slot performance when pursuing market diversification. Macau's newly obtained World Cultural Heritage status ("Macau People", 2005) should help the destination to achieve this goal.

To achieve higher slot productivity, a good strategy for Macau to pursue is to diversify its customer base into slot-loving players.

As Table 3 shows, Macau's assets turnover ratio, at 2.78, was significantly higher than the numbers of other destinations. In 2004, for every dollar invested in the casino industry, Macau was able to generate US\$2.78, or about five times that of Las Vegas. Macau's high assets turnover suggests that the payback period, a common measure used in capital budgeting indicating time needed to recoup initial investment, of investing in Macau casinos should be quite short. Short payback period implies quick return and lower risk. The Macau Government should emphasize this competitive advantage when attracting international capital for its tourism and gaming development.

Product Structure and Revenue Composition

Table 4 compares the gaming product structure of the Macao gaming industry at the end of 2004 with its North American and European counterparts. Macau's extremely low slot to table ratio and slot revenue to table revenue ratio seem inconsistent with the trend of rising popularity of slots in today's gaming market. A slot machine can generate daily revenue similar to that of an upscale hotel room but with much lower investment and labor cost. The substantially low ratios of Macau indicate that the destination has been neglecting a lucrative market segment in casino gaming.

To make itself a world destination rather than a regional one, Macau definitely needs to strengthen its weak link—the slots operation. Merely installing more slots will raise the slot to table ratio but may not improve the slot to table revenue ratio if efforts are not made to bring in more slot players. Therefore, product diversification should be carried out together with market diversification. The sharp contrast between Macau and France in terms of slot to table revenue ratio shown in Table 4 suggests that the French people love slots the most. When pursuing market diversification, Macau may first target France before exploring other European markets. Gu (2002) noticed European’s particular fondness for slots and suggested that US casinos should diversify into slot-loving European markets for more gaming revenue. The same diversification strategy should work for Macau as well.

Table 4.
Gaming Product Structure: Macau versus other Destinations

	No. of Slots	No. of Tables	No. of Other Devices	Slots/Tables Ratio	Slot/Table Revenues Ratio
Macau	2254	1092	188	2.06	0.02
Las Vegas Strip	56035	2620	173	21.39	1.19
Atlantic City	41605	1427	16	29.64	2.84
Ontario	NA	NA	NA	NA	2.76
France*	17000	NA	NA	NA	12.71
Spain*	1712	NA	NA	NA	0.39
The Netherlands	6278	379	0	16.56	1.18
Switzerland	6000	NA	0	NA	3.03
Austria	1841	223	0	8.26	0.91

* Numbers of France and Spain are for 2003.

Sources: *Statistics* (2005) by Macau Gaming Inspection and Coordination Bureau, *Nevada Gaming Abstract* (2004) by Nevada Gaming Control Board, *2004 Annual Report* by New Jersey Casino Control Commission, *Consolidated Income Statement (2004)* of Ontario Lottery and Gaming Corporation, *Facis & Figures* (2005) by Think & Do International, *Memorandum 2003* of National Gaming Commission of Spain, *Holland Casino’s Financial Annual Report 2004*, *Annual Report 2004* by Federal Commission of Casino Gaming of Switzerland, and *Casino Austria Group’s Annual Report 2004*

Table 5 presents gaming revenue, slot and table revenues to total gaming revenue ratios and gaming revenue to total casino revenue ratios for Macau in comparison with those of other destinations. Macau’s extremely low slot revenue ratio, merely 1.55% of total gaming revenue, reinforces the point made based on Table 3—slots operation has been neglected and should be strengthened. Table 5 also shows a predominance of gaming revenue in Macau’s casino revenue composition, implying that Macau casinos overly rely on gaming for revenue generation. Such an over-reliance on gaming may be detrimental to Macau’s casino industry growth in the long run. The same table indicates that Austrian casinos derived revenues exclusively from gaming. In 2004, Austrian casinos experienced a revenue decline of 5.8 percent (see Table 1), suggesting that gaming-only operation may easily lead to market saturation and eventually cause casino revenue decreases. To maintain its viability as a modern gaming destination, Macau casinos need to tap into various revenue sources.

Table 5.
Casino Revenue Composition: Macau versus Other Destinations

	Gaming Revenue (US\$)	Slots Revenue %	Table Revenue %	Other Revenue %	Gaming to Casino Revenue %
Macau	5,023,250,000	1.55	98.43	0.02	96.66
Las Vegas Strip	5,333,508,000	53.71	45.27	1.03	41.90
Atlantic City	4,806,701,000	73.99	26.01	0.00	80.68
Ontario	1,150,121,250	73.38	26.62	0.00	89.90
The Netherlands	722,640,000	54.10	45.90	0.00	88.34
Switzerland	591,538,462	75.10	24.90	0.00	67.52
Austria*	350,400,000	47.60	52.40	0.00	100.00

*For Casino Austria Group's operations within Austria only

Sources: Statistics (2005) by Macau Gaming Inspection and Coordination Bureau, Nevada Gaming Abstract (2004) by Nevada Gaming Control Board, 2004 Annual Report by New Jersey Casino Control Commission, Consolidated Income Statement (2004) of Ontario Lottery and Gaming Corporation, Holland Casino's Financial Annual Report 2004, Annual Report 2004 by Federal Commission of Casino Gaming of Switzerland, and Casino Austria Group's Annual Report 2004

Financial Benefits

While Table 6 shows financial return to the investor in its various forms in Macau versus in other destinations, Table 7 compares government levies and the combined benefits accrued to the government and investor across markets. In Table 6, the profit margin, which is net income to casino revenue, indicates that Macau performed better than Las Vegas, Atlantic City and Austria but was inferior to Ontario, Canada, the Netherlands, and Switzerland. The mediocre profit margin was very likely due to Macau's high government levy on gaming revenue, at about 40 percent (see Table 7). Macau's low cost advantage for its casino operations, if any, may have been offset by the relatively higher government levy. On the other hand, the weakest performance of Las Vegas and Atlantic City measured by all ratios in Table 6 conforms with Gu's (2002) finding that the two destinations consistently underperformed their European rivals, indicating the two traditional gaming destinations' market saturation or near market saturation.

Table 6.
Return to the Investor: Macau versus Other Destinations

	Profit Margin	Return on Assets	Return on Equity
Macau	0.12	0.35	0.65
Las Vegas Strip	0.09	0.05	0.09
Atlantic City	0.03	0.02	NA
Ontario	0.15	NA	NA
The Netherlands	0.18	0.42	2.73
Switzerland	0.13	0.14	0.26
Austria*	0.03	0.08	0.22

* Derived from Casino Austria Group's consolidated income statement that includes operations in other European countries, Middle East and Africa

Sources: Income statements and balance sheets (2004) of Sociedade de Jogos de Macau, S. A., Venetian Macau, S.A., and Galaxy Casino, S.A., Nevada Gaming Abstract (2004) by Nevada Gaming Control Board, 2004 Annual Report by New Jersey Casino Control Commission, Consolidated Income Statement (2004) of Ontario Lottery and Gaming Corporation, Holland Casino's Financial Annual Report 2004, Annual Report 2004 by Federal Commission of Casino Gaming of Switzerland, and Casino Austria Group's Annual Report 2004

Table 7.

Government Levy and Combined Financial Benefits accrued to the Investor and Government: Macau versus Other Destinations

	Gaming Levy to Gaming Revenue Ratio	Gaming Levy to Total Assets Ratio	Gaming Levy & Net Income to Gaming Revenue Ratio	Gaming Levy & Net Income to Total Assets Ratio
Macau	0.40	1.10	0.52	1.45
Las Vegas Strip	0.08	0.02	0.17	0.07
Atlantic City	0.09	0.05	0.12	0.07
Ontario	0.20	NA	0.35	NA
The Netherlands	0.15	0.31	0.33	0.73
Switzerland	0.48	0.61	0.61	0.75
Austria*	0.26	0.63	0.29	0.70

* Derived from Casino Austria Group consolidated income statement including some operations in other European countries, Middle East and Africa.

Data Sources: Income statements and balance sheets (2004) of Sociedade de Jogos de Macau, S. A., Venetian Macau, S.A., and Galaxy Casino, S.A., Nevada Gaming Abstract (2004) by Nevada Gaming Control Board, 2004 Annual Report by New Jersey Casino Control Commission, Consolidated Income Statement (2004) of Ontario Lottery and Gaming Corporation, Holland Casino's Financial Annual Report 2004, Annual Report 2004 by Federal Commission of Casino Gaming of Switzerland, and Casino Austria Group's Annual Report 2004

Macau, however, as shown in Table 6, outperformed most of other destinations in terms of return on assets and return on equity and was second only to the Netherlands. It should be pointed out that the extremely high return on equity of the Netherlands was due to not only its relatively low government levy, at 15 percent versus Macau's 40 percent, but also its casinos' heavy debt financing. In 2004 the debt to assets ratio of all casinos in the Netherlands was 0.81 (Holland Casino, 2005) compared with Macau's three casino firms' combined debt to assets ratio of 0.72 (Macau Government Printing Bureau, 2005). The Netherlands casinos' higher debt to assets ratio may have led to smaller equity base and thus substantially higher return on equity.

Nevertheless, Macau's return on assets and return on equity ratios exceeded most of those of other destinations, demonstrating that Macau should still be a desirable place for gaming investors, even though it has quite high government levy on gaming revenue. High gaming tax is unlikely to deter gaming investors from investing in Macau at least at present, since the investors can still derive more decent return on their gaming equity in Macau than in most of other destinations. However, with new gaming destinations to appear in Singapore and possibly other countries in Asia, Macau will need to closely reevaluate the impact of its high gaming levy on Macau's attractiveness to investors in the wake of casino openings in rival destinations.

As the gaming levy to total assets ratio in Table 7 shows, the gaming industry was a heavy revenue generator for the Macau Government in 2004, with each US dollar invested in the industry generating US\$1.1 revenue for the government. In terms of government levy, Macau did exceed most of the other destinations. Indeed, the gaming industry is benefiting the Macau people in terms of gaming levies in a big way. The last two columns in Table 7 show financial benefits accrued to the government and investor jointly. From the perspective of joint benefits relative to every dollar of gaming revenue, Macau ranked second only to Switzerland. However, by the ratio of joint financial benefits to casino assets, Macau overshadowed all other destinations, about twice the ratios of European destinations and 20 times those of the US competitors', most likely due to Macau's superior assets productivity as demonstrated by its highest assets turnover ratio in Table 3.

Conclusions

The great growth momentum of the Macau gaming industry is likely to enable the destination to surpass Las Vegas as the world's No.1 gaming market in 2005. Macau's casino industry, in comparison with its counterparts in other gaming destinations, does enjoy many competitive advantages. This study has analyzed the financial competitiveness of Macau vis-à-vis gaming destinations in North America and Europe. Based on the analysis, several conclusions, along with implications for Macau's gaming industry leaders and decision makers, can be drawn.

First of all, the exceptional gaming revenue growth itself is a manifestation of the destination's financial competitiveness. This competitive market advantage, however, has its embedded risk, because the growth has been mainly fueled by one single market segment, the Chinese mainland. According to Macau Tourism Bureau (2005), mainland Chinese tourists constituted 57.16 percent of visitors to Macau in 2004 and were the fastest growing group among all Macau visitors. Any disrupt in visitors flow or tourist dollars flow from the segment caused by economic, social and political turbulences or policy changes may bring a disaster to the Macau gaming industry. As a British financial consulting firm pointed out, over-reliance on the Chinese mainland market is the greatest risk for Macau due to many uncertainties associated with the Chinese mainland market ("High Risk", 2005). Therefore, the Macau gaming industry should seriously consider market diversification as a strategy for long-term success.

Second, Macau's financial competitiveness is also embodied in its high gaming device productivity and assets efficiency. Relatively small amount invested in casino assets can generate great volume of casino revenue, making the payback period short and projects attractive to gaming investors. This competitive advantage, however, is accompanied by an imbalance in Macau casinos' product structure and revenue composition. Macau is overly relying on tables to generate gaming win and on gaming to produce casino revenue. While this feature is at odds with the world's gaming trend today, the lack of balanced product structure and diversified revenue sources implies high risk in the long run. The table-oriented product structure and gaming-concentrated operation may suit well the Chinese mainland market whose players are highly risk-taking. Siu and Cheng (2003) observed Chinese players' preference for table games over slots and their strong gaming propensity at gaming tables, a manifestation of their desire for big win at great risk. Such product structure and revenue composition, however, may subject Macau to great revenue volatility when something goes wrong with the particular market segment. Therefore, Macau needs to adjust its current product structure and revenue composition. This adjustment should be carried out hand-in-hand with its market diversification endeavor. Tapping into slot-loving markets such as Europe, and especially France, can achieve the effect of killing two birds with one stone: diversifying Macau's market and improving its casino product structure as well. In the mean time, Macau casinos should take full advantage of their recently approved World Cultural Heritage status ("Macau People", 2005) to promote Macau as a multi-purpose destination. Attracting tourists with multiple trip purposes will facilitate Macau's adjustment of its casino revenue composition.

Finally, Macau's financial competitiveness is reflected in the decent financial return to investors even though its government levy on gaming revenue is among the highest. The Macau casino industry's combined financial benefits for the government and the investor measured as a ratio to the assets investment in the industry were at the top when compared with other gaming destinations. Here, Macau's high assets efficiency should have played a positive role. Such a win-win situation for both the government and the investor can help create a harmonious investment environment. Macau, however, needs to closely watch the emerging gaming resorts in its neighboring countries, especially in Singapore. When rivals in the same region use lower gaming levy to attract investors,

Macau is overly relying on tables to generate gaming win and on gaming to produce casino revenue.

Macau may have to adjust its levy policy accordingly so as to maintain its attractiveness for new casino investors and operators.

For Macau, becoming the world's No. 1 gaming market seems a goal easily reachable. Maintaining Macau's status as the world's top gaming destination, however, will not be an easy task. In expanding its gaming industry, Macau has its competitive advantages but also faces serious shortcomings and daunting challenges. To ensure a fast but stable growth of its gaming industry, Macau must develop right strategies to overcome its weaknesses and enhance its strengths, thus sustaining the prosperity of its gaming industry in the long run.

It must be pointed out that a major limitation of this study is that some important variables impacting the end results were not analyzed. Those variables were not examined because two of the three gaming companies, namely Sociedade de Jogos de Macau, S. A. and Galaxy Casino, S.A. are private companies and the data contained in their financial statements were very limited. Due to this limitation, comparison of simple financial ratios could be misleading. Therefore, the conclusions drawn above should be interpreted with caution. Future studies on the Macau gaming industry should make efforts to investigate more variables, if possible, to make the financial analysis more thorough and comprehensive. Especially, Stanley Ho's Sociedade de Jogos de Macau, S. A., the biggest player in the Macau gaming industry, is planning to go public in 2006 ("SDJ Going", 2005) and Las Vegas-based Wynn Resorts, Ltd. and MGM Mirage, Inc., which are public companies, will open their casinos in Macau soon (Velotta, 2005). The presence of increasing public gaming firms in the Macau gaming market will make financial data of Macau casinos more publicly available. A new study with more financial variables analyzed should give a more accurate revelation of the financial competitiveness of Macau as a prospering gaming destination.

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