Mary Chia Holdings Limited: Sell or Hold?

Part 1: Analysis of MCH's Key Financial Ratios

1. We can first assess whether investors should accept Suki Sushi's acquisition offer of $0.111 per share by analysing Mary Chia Holding Limited's (MCH) financial ratios.

Short-Term Liquidity Ratios

2. Computation of Current and Quick Ratios. MCH's Current and Quick Ratios from 2013 to 2017 are as shown in **Table 1**, with the changes in both ratios over the years as shown in **Table 2**.

Table 1: MCH's Current and Quick Ratios from 2013 to 2017

Ratios	2013	2014	2015	2016	2017	Remarks
Current Ratio	0.30	0.29	0.56	0.33	0.18	Current Ratio = Current Assets / Current Liabilities
Quick Ratio	0.25	0.24	0.51	0.25	0.15	Quick Ratio = (Current Assets – Inventory) / Current Liabilities

Table 2: Changes in MCH's Current and Quick Ratios

Ratios	2013-2014	2014-2015	2015-2016	2016-2017
Change in Current Ratio	0.00	0.26	-0.23	-0.15
Change in Quick Ratio	-0.01	0.27	-0.26	-0.10

3. Analysis of Current and Quick Ratios. **MCH's Current and Quick Ratios indicate that its short-term liquidity position is weak**, as both ratios remained consistently and significantly below one from 2013 to 2017. The difference between MCH's Current and Quick Ratios by about five percentage points further indicates that about a quarter of MCH's current assets is relatively illiquid inventory. **MCH's decline in its Current and Quick Ratios also indicate that its short-term liquidity position is worsening**, with both ratios falling throughout the period from 2013 to 2017 by about 10 percentage points. As of 2017, MCH's current assets are only at 18% of its current liabilities, or 15% if we exclude its inventory. **Collectively, these suggest that MCH's short-term liquidity is dependent on the availability of external short-term financing to fulfil about 80% of its current liabilities**, with this expected to increase. This implies that investors can expect that **MCH: (a) will have to continue to bear the cost of this external financing in the immediate term; and (b) may default on its liabilities or be forced to quickly liquidate fixed assets should it no longer have access to external financing**.

Long-Term Solvency Ratios

4. Computation of Total Debt to Asset and Times Interest Earned Ratios. MCH's Total Debt to Asset and Times Interest Earned Ratios from 2013 to 2017 are as shown in **Table 3**, with the changes in both ratios over the years as shown in **Table 4**.

Table 3: MCH's Total Debt to Asset and Times Interest Earned Ratio from 2013 to 2017

Ratios	2013	2014	2015	2016	2017	Remarks
Total Debt/Asset Ratio	0.38	0.37	0.42	0.41	0.46	Total Debt Ratio = Total Debt / Total Assets
Times Interest Earned Ratio	43.98	6.54	-3.45	-3.30	-5.98	Times Interest Earned = EBIT / Interest

Table 4: Changes in MCH's Total Debt to Asset and Times Interest Earned Ratios

Ratios	2013-2014	2014-2015	2015-2016	2016-2017
Change in Total Debt/Asset Ratio	-0.01	0.05	-0.01	0.05
Change in Times Interest Earned Ratio	-37.44	-9.99	0.15	-2.67

5. Analysis of Total Debt to Asset and Times Interest Earned Ratios. **MCH's Total Debt to Asset and Times Interest Earned Ratios indicates that its long-term solvency position is worsening**. First, its Total Debt to Asset Ratio has increased by eight percentage points over the period from 2013 to 2017 and is relatively high at 0.46. A high Total Debt to Asset Ratio may be a positive development if a company is borrowing to invest in productive assets. However, in MCH's case, the increase in its Total Debt to Asset Ratio is primarily driven by an increase in its borrowings and a rundown of its total assets. This implies that **MCH has a greater risk of long-term insolvency because: (a) it is more vulnerable to financial shocks or downturns which may result in a sharp fall in the value of its assets; and (b) higher borrowing incurs additional borrowing costs, while running down assets reduces future cashflows**. Second, MCH's Times Interest Earned Ratio has also worsened considerably, from 43.98 times to -5.98 times. This suggests that MCH's is no longer able to repay its borrowing costs through retained earnings, and implies that MCH needs to borrow even more to repay its borrowing costs which would further increase its borrowing costs downstream. This again implies that **MCH has a greater risk of insolvency in the long-term given that its expected future borrowing costs are higher than its expected earnings**.

Asset Use Efficiency Ratios

6. Computation of Inventory and Account Receivables Period. MCH's Inventory and Account Receivables Periods from 2013 to 2017 are as shown in **Table 5**, with the changes in these over the years as shown in **Table 6**.

Table 5: MCH's Inventory and Account Receivables Periods from 2013 to 2017

Ratios	2013	2014	2015	2016	2017	Remarks
Inventory Period	361.16	373.06	327.29	444.17	209.02	Inventory Period = Inventory / (COGS/365)
Account Receivables Period	8.65	8.57	13.25	11.02	15.35	Account Receivables Period = Receivables / (Sales/365)

Table 6: Changes in MCH's Inventory and Account Receivables Periods from 2013 to 2017

Ratios	2013-2014	2014-2015	2015-2016	2016-2017
Change in Inventory Period	11.91	-45.78	116.88	-235.16
Change in Account Receivables Period	-0.08	4.68	-2.23	4.33

7. Analysis of Inventory and Account Receivables Period. **MCH's efficiency in the management of its inventory improved significantly from 2013 to 2017**, with a shortening of its Inventory Period by about 150 days. This implies that MCH is holding less inventory, which would reduce its inventory holding costs. On its own, this also implies that MCH has improved its cashflow with regards to its inventory, which would reduce its borrowing costs. However, MCH's Inventory Period remains quite high at 209 days. **MCH's efficiency in collecting back cash on trade credit worsened slightly from 2013 to 2017**, with an increase in its Account Receivables Period by about seven days. This could have been for a variety of reasons such as extending credit to consumers to support sales efforts, lower sales volumes or weakened financial discipline in collecting back cash. Regardless, this suggests that MCH is less efficient in collecting cash.

8. Computation of Cash Cycle and Total Asset Turnover Ratio. MCH's Cash Cycle and Total Asset Turnover from 2013 to 2017 are as shown in **Table 7**, with the changes in these over the years as shown in **Table 8**.

Table 7: MCH's Cash Cycle and Total Asset Turnover from 2013 to 2017

Ratios	2013	2014	2015	2016	2017	Remarks
Cash Cycle	-4,133	-3,064	-2,895	-3,474	-3,322	Cash Cycle = Inventory Period + Accounts Receivables Period - Accounts Payables Period
Total Asset Turnover	0.30	0.26	0.21	0.21	0.14	Total Asset Turnover = Sales / Total Assets

Table 8: Changes in Cash Cycle and Total Asset Turnover

Ratios	2013-2014	2014-2015	2015-2016	2016-2017
Change in Cash Cycle	1,069.69	169.02	-579.52	152.44
Change in Total Asset Turnover	-0.05	-0.05	0.00	-0.06

9. Analysis of Cash Cycle and Total Asset Turnover Ratio. **MCH's Cash Cycle is highly negative, which suggests that it is highly efficient in managing its supplier relationships**. In particular, MCH's Cash Cycle implies that MCH receives cash from its customers about nine years earlier than it needs to pay its suppliers and vendors for the goods and services it used to produce those sales. Excluding its Inventory Period and Account Receivables Period, this means that MCH has about ten years to pay for its goods and services. This could be due to MCH having strong supplier relationships and favorable credit terms, which could be due to its market power in the slimming and beauty industry in Singapore, as its pioneer. While this is a positive sign, MCH's Cash Cycle did worsen slightly from 2013 to 2017, with it decreasing by 800 days. This may possibly be because suppliers may be growing anxious in further extending its trade credit to MCH

given its weakening sales. **MCH's Total Asset Turnover is generally low, which suggests that it is inefficient in employing its assets to generate sales**. MCH's Total Asset Turnover also decreased from 2013 to 2017 by about 16 percentage points. This suggests that **MCH's asset use efficiency has weakened over time, with its assets generating less sales over time**. This was largely due to a fall of sales, given that MCH's total assets remained largely stable throughout the same period.

Profitability Ratios

10. Computation of Profit Margin, Return on Assets and Return on Equity. MCH's Profit Margin, Return on Assets and Return on Equity from 2013 to 2017 are as shown in **Table 9**, with the changes in these over the years as shown in **Table 10.**

Table 9: MCH's Profit Margin, Return on Assets and Return on Equity from 2013 to 2017

Ratios	2013	2014	2015	2016	2017	Remarks
Profit Margin	1.33	0.18	-0.18	-0.26	-0.70	Profit Margin = Net Profit / Revenue
Return on Assets	0.40	0.04	-0.04	-0.05	-0.10	Return on Assets = Net Income / Total Assets
Return on Equity	0.81	0.09	-0.08	-0.12	-0.27	Return on Equity = Net Income / Total Equity

Table 10: Changes in MCH's Profit Margin, Return on Assets and Return on Equity

Ratios	2013-2014	2014-2015	2015-2016	2016-2017
Change in Profit Margin	-1.15	-0.36	-0.08	-0.44
Change in Return on Assets	-0.36	-0.08	-0.02	-0.05
Change in Return on Equity	-0.73	-0.17	-0.03	-0.15

11. Analysis of MCH's Profit Margin, Return on Assets and Return on Equity. **MCH's profitability has fallen significantly over time**, as seen from its falling profit margin. Excluding the anomalously high net profit margin in 2013 due to the significantly high "non-sales income", MCH's profit margin has fallen from 18% in 2014 (which was comparable with the Leisure Industry) to -70% in 2017. Correspondingly, **MCH's Return on Assets and Return on Equity have fallen significantly from 2013 to 2017** and are both its assets and equity are currently generating negative returns. This is despite the Total Assets and Total Equity being relatively stable. This is again largely due to the fall in sales, coupled with the stable "fixed costs", such as staff costs, operating lease expenses, other operating expenses and finance costs.

Relative Ratios

12. Computation of Price to Earnings and Price to Book Ratios. MCH's Price to Earnings and Price to Book Ratios from 2013 to 2017 are as shown in **Table 11**, with the changes in these over the years as shown in **Table 12**.

Table 11: MCH's Price to Earnings and Price to Book Ratios from 2013 to 2017

Ratios	2013	2014	2015	2016	2017	Remarks
Price to Earnings Ratio	0.82	7.59	-2.50	-2.13	-1.87	Total Debt Ratio = Total Debt / Total Assets
Price to Book Ratio	0.35	0.28	0.25	0.27	0.48	Times Interest Earned = EBIT / Interest

Table 12: Changes in MCH's Price to Earnings and Price to Book Ratios

Ratios	2013-2014	2014-2015	2015-2016	2016-2017
Change in Price to Earnings Ratio	6.77	-10.09	0.37	0.26
Change in Price to Book Ratio	-0.08	-0.03	0.02	0.21

13. Analysis of Price to Earnings and Price to Book Ratios. MCH's Price to Earnings Ratio has fallen over time. Given that its Earnings Per Share has been falling, a decreasing Price to Earnings Ratio further suggests that **its share price is falling at a faster rate than the decrease in its Earnings Per Share**, which reflects growing investors pessimism regarding MCH's future profitability. Similarly, MCH's Price to Book Ratio has also been decreasing over time, before the surge in MCH's share price in 2017. The current **Price to Book Ratio of less than one suggests that investors are valuing MCH at a lower value than the accounting value of the assets that it is holding**. This could be due to: (a) skepticism that MCH would be able to turn around its declining revenues and profitability; (b) discounting of non-liquid assets that the market perceives as over- valued or difficult to monetise; or (c) expectations that MCH's value will drop further.

14. Usage of Price to Cashflows Ratio. With MCH's negative earnings, **the Price to Earnings Ratio may no longer be representative of its market valuation** as it will suggest a negative intrinsic value of MCH, which is not possible. **It is possible to use Price to Cashflows to assess MCH's valuation, which compares MCH's Price Per Share to its Cashflow Per Share.** The strength of this approach is that it uses operating cashflows, which will likely be more representative of MCH's situation given its negative profits alongside its highly negative cash conversion cycle. It is also useful in the context of an acquisition, as it will price in the potential for MCH to use its free cashflow to reinvest in growth opportunities, repay debt and stakeholders, or return capital to shareholders. At the same time, the Price to Cashflows Ratio may face the same limitations as the Price to Earnings Ratio should MCH's operating cashflows be negative.

DuPont Analysis

15. Computation of DuPont Ratios. MCH's DuPont Ratios from 2013 to 2017 are as shown in **Table 13**.

Table 13: DuPont Analysis from 2013 to 2017

Ratios	2013	2014	2015	2016	2017
Net Income/Sales	1.33	0.18	-0.18	-0.26	-0.70
Sales/Total Assets	0.30	0.26	0.21	0.21	0.14
Total Assets/Total Equity	2.02	1.90	2.20	2.19	2.70

16. Analysis of DuPont Ratios. MCH's Return on Equity decreased from 81% to -27% from 2013 to 2017. **The DuPont Ratios suggest that this was largely due to three factors**. First, a *decrease in MCH's Profit Margin* (i.e., Net Income/Sales). Second, a *decrease in MCH's Total Asset Turnover* (i.e., Sales/Total Assets). Third, *an increase in financial leverage* (i.e., Total Assets/Total Equity) which amplified the impact of its negative Profit Margin on its Return on Equity. Combined, these suggest that MCH's negative Return on Equity is largely due to challenges in its main operating business together with its increased financial leverage. This is concerning as it implies that MCH's ability to generate cash is worsening, while it is increasing its borrowing which would result in further cashflow challenges in future, unless its Profit Margin or Total Asset Turnover improves.

Equity Multiplier, EBIT Margin and Enterprise Value to Sales Ratio

17. Computation of Equity Multiplier, EBIT Margin and Enterprise Value to Sales Ratio. MCH's Equity Multiplier, EBIT Margin and Enterprise Value to Sales Ratios in 2017 are as shown in **Table 14**, alongside these average values for its industry in 2016.

Table 14: Comparison of Financial Ratios with Industry Averages

Ratios	Industry Averages (2016)	MCH (2017)
Assets/Equity	1.78	2.70
EBIT Margin	13.85%	-58.01%
Enterprise Value/Sales	2.71	4.33

18. Analysis of Equity Multiplier, EBIT Margin and Enterprise Value to Sales Ratio. **MCH has a higher Assets to Equity Ratio in 2017 as compared to the industry average in 2016**. This has been increasing from 2013 to 2017 and suggests that MCH is increasing its financial leverage. This is consistent with the analysis above that MCH has increased its borrowing. **MCH has a significantly lower EBIT Margin in 2017 as compared to the industry average in 2016**. This has also been decreasing from 2013 to 2017 and probably partially explains why MCH had to increase its borrowing, which was likely to compensate for its fall in earnings, thus causing it to increase its financial leverage. **MCH has a higher Enterprise Value in 2017 as compared to the industry average in 2016**. On first glance, this could reflect greater investor optimism about future revenue, profits or cashflow, potentially driven by future acquisitions. However, upon closer study, MCH's relatively higher Enterprise Value is likely driven by its relatively higher debt as well as its drawdown of cash. Hence, Enterprise Value may not be as reliable for a financially leveraged firm such as MCH.

Analysis of Fall in Income

19. Arguably, the key challenge for MCH from 2013 to 2017 was the fall in its net income. This likely led to an increase in MCH's borrowing, which caused it to become more financially leveraged, which further exacerbated its challenges in paying off its interest. There are three possible reasons for MCH's fall in income. First, **MCH's revenue fell by about 54% and other operating income fell by about 98% from 2013 to 2017**. This could have been due to an increased competition in the beauty and wellness industry in Singapore or changing consumer preferences towards newer and more innovative beauty and wellness treatments. Second, **MCH's**

sales, general and administrative costs remained relatively stable, with staff costs falling only by about 23%, operating lease expenses increasing by about 5% and other operating expenses decreasing only by about 25%. Third, **MCH's interest costs grew by about 47%**. This likely stemmed from the need for MCH to borrow to pay its liabilities amid the fall in earnings, which did not allow it to pay its liabilities using retained earnings.

Net Working Capital

20. Computation of Net Working Capital. MCH's Net Working Capital from 2013 to 2017 is as shown in **Table 15**.

Table 15: MCH's Net Working Capital from 2013 to 2017

Ratios	2013	2014	2015	2016	2017	Remarks
Net Working Capital	-8,039	-8,429	-6,799	-5,672	-11,607	Net Working Capital = Current Assets – Current Liabilities

21. Analysis of Net Working Capital. MCH's Net Working Capital was negative from 2013 to 2017. This suggests that its current liabilities consistently exceeded its current assets. MCH could have financed its negative Net Working Capital in three ways. First, **it could have increased its short-term borrowings**. This is consistent with the observation that MCH's borrowings under its current liabilities has increased by about 200% from 2.7 million to 6.8 million from 2013 to 2017. Second, **it could have delayed its payments to its directors**. This is supported by the observation that MCH's amount due to directors increased from 0.2 million to 3.5 million from 2013 to 2017. These were also likely shifted from current liabilities to non-current liabilities in 2015 to reflect the expected longer payback period. Third, **it could have run down its reserves**. This is consistent with the observation that MCH's reserves fell from 11.4 mil to -0.34 million from 2013 to 2017.

Assessment of MCH's Financial Ratios

22. Overall, it is assessed that **MCH faces considerable liquidity, solvency, efficiency and profitability challenges**. Given that these are expected to continue, this has caused investors to be pessimistic about the outlook of MCH, and thus resulted in a relatively low valuation of MCH. The **key driver of MCH's challenges is likely its significant fall in sales**, which fell more than 50% from 2013 to 2017, from 19.8 million to 9.2 million. This was accompanied with relatively stable fixed costs, which resulted in MCH's profitability falling drastically and MCH's cashflows worsening. Over time, this **likely resulted in increased borrowing to fulfil its liabilities**, which resulted in a vicious cycle of rising interest costs and borrowing. Given that the key driver of MCH's challenges is its fall in sales, **MCH's valuation and outlook could be significantly improved if it is able to address its fall in sales and better manage its fixed costs to improve its profitability**. This is especially given that it continues to have strong supplier relationships, and a heavily negative cash cycle, which would be very beneficial to a company with strong profit growth.

Part 2: Applying Relative Valuation Models

23. We can further assess whether investors should accept Suki Sushi's acquisition offer of $0.111 per share by estimating MCH's intrinsic value using relative valuation methods and the discounted cashflow model.

Determining a Suitable Benchmark

24. To apply the relative valuation models, it is important to first identify a suitable benchmark. There are three key considerations in identifying a suitable benchmark.

a. First, **the benchmark should have a similar operating business to MCH**. Ideally, its core services should include beauty and facial services, slimming services, as well as spa and massage services, while its ancillary business should include the sale of lifestyle and wellness products. More than that, it should have some hotel business given that MCH also owns Hotel Culture.

b. Second, **the benchmark should have a similar financial performance to MCH**. Ideally, it should have had a strong track record, but with declining sales, profits, cashflows and debt in recent years. It should also have a relatively weak forecasted future sales, profits, cashflows and debt.

c. Third, **the benchmark should have a similar financial environment to MCH**. Ideally, the benchmark should be valued at the same time (i.e., 2017) and place (i.e., listed in Singapore) as Suki Sushi's offer of MCH. This would control for the impact of the financial environment, such as the macroeconomic performance as well as the global and local investor sentiment, on the valuation.

25. However, in practice, it is difficult to find the perfect benchmark. In that regard, based on the available data, there are three possible groups of benchmarks that could be used to estimate MCH's intrinsic value using relative valuation methods:

a. First, it is **possible to use the key industry leaders in the hotels, restaurants and leisure industry as a benchmark**. The strength of this approach is that it would value MCH's potential should it be able to restructure into a key industry player. However, this may not be so appropriate as the valuation of key industry leaders are typically based more on earnings, which is not possible with MCH's current negative earnings. The valuation of key industry leaders are also likely to be rightfully higher than the valuation of MCH. Nonetheless, this could provide an upper bound on MCH's intrinsic value.

b. Second, it is **possible to use the average of the companies in the hotels, restaurants and leisure industry as a benchmark**. The strength of this approach is that it would peg MCH's valuation to the average within the industry and would represent MCH's potential better. However, this may still be an overestimate of MCH's intrinsic value given its current financial situation. This is given that the industry average sales,

earnings, and cash flow has remained relatively stable from 2013 to 2016, compared to MCH's declining sales, earnings and cashflows.

c. Third, it is **possible to use precedent transactions of mergers and acquisitions of companies in the hotels, restaurants and leisure industry as a benchmark**. The strength of this approach is that it would peg MCH's valuation to companies in a similar financial situation as MCH. However, the downside of this approach would be that it may be an underestimation of MCH's potential, given that following acquisition, MCH could potentially restructure and improve its sales, earnings and cashflows significantly.

26. Given that all three benchmarks have their strengths and weaknesses, we propose to use a **weighted average of the three groups of possible benchmarks, with the weights pegged to the likelihood of MCH: (a) transforming into a key industry leader; (b) restructuring into an average company in the industry; and (c) continuing to maintain its current outlook**. In particular, we propose to assign a 10% weight to MCH transforming into a key industry leader, a 40% weight to MCH restructuring into an average company in the industry and a 50% weight to MCH maintaining its current outlook. This would ensure a balanced approach in assigning MCH a 50% chance of success in its restructuring. To further ensure a better unbiased estimation, we propose to **further exclude and weight companies according to the similarities in their business with respect to MCH**. In particular, we propose to exclude companies in the restaurant, entertainment or manufacturing business only, and to have a 2:1 weightage ratio for companies in the beauty and hotel business respectively. The proposed weightage of the companies for the benchmark is as outlined in **Table 16**.

Table 16: Proposed Weightage of Benchmark

S/N	Companies	Weightage	Rationale
Key Industry Leaders		10%	Unlikely
1.	Melco Resorts and Entertainment Ltd.	2%	Has Hotel Business
2.	MGM China Holdings Ltd.	2%	Has Hotel Business
3.	Yum China Holdings Inc.	0%	Restaurant Only
4.	Sands China Ltd.	2%	Has Hotel Business
5.	Genting Berhad	2%	Has Hotel Business
6.	Genting Singapore PLC	2%	Has Hotel Business
7.	McDonald's Holdings Company (Japan) Ltd.	0%	Restaurant Only
8.	Galaxy Entertainment Group Ltd.	0%	Entertainment Only
9.	Jollibee Foods Corporation	0%	Restaurant Only
10.	Minor International PCL Company Ltd.	0%	Entertainment Only
Industry Average		40%	Possible
11.	Industry Average	40%	-
Precedent Transactions		50%	Possible
12.	Emerson Pacific Inc.	0%	Entertainment Only
13.	Arena Hospitality Group	0%	Entertainment Only
14.	Libra Group PLC	0%	Entertainment Only
15.	JSS Corporation	0%	Entertainment Only
16.	Variable Annuity Life Insurance Company	0%	Entertainment Only
17.	SD Entertainment Inc.	0%	Entertainment Only

S/N	Companies	Weightage	Rationale
18.	Essenden Ltd.	0%	Entertainment Only
19.	Beige Holdings Ltd.	5%	Has Beauty Business
20.	PGM Holdings K.K.	0%	Entertainment Only
21.	Physicians Formula Holdings Inc.	5%	Has Beauty Business
22.	Maesa SA	5%	Has Beauty Business
23.	Vrinda International Holdings Ltd.	5%	Has Beauty Business
24.	Monalisa Company Ltd.	5%	Has Beauty Business
25.	Natural Beauty Bio-Technology Ltd	0%	Manufacturing Only
26.	DSG International (Thailand) PCL	5%	Has Beauty Business
27.	Parlux Fragrances LLC	5%	Has Beauty Business
28.	Intrawest Resorts Holdings Inc.	0%	Entertainment Only
29.	Able C&C Company Ltd	5%	Manufacturing Only
30.	Ciz Holdings Company Ltd.	5%	Has Beauty Business
31.	Aderans Company Ltd	5%	Has Beauty Business
	Total Weightage:	**100**%	

Price to Book Ratio

27. With the benchmark identified, it is now possible to estimate an intrinsic value for MCH using the Price to Book Ratio. However, since the Price to Book Ratio for the key industry leaders are not available, we use 50% weightage of the industry average and a 50% weightage of the precedent transactions to estimate the benchmark Price to Book Ratio as in **Table 17**.

Table 17: Weighted Average (Benchmark) Price to Book Ratio

S/N	Companies	Weightage	Price to Book Ratio
1.	Industry Average	50%	2.76
2.	Beige Holdings Ltd.	5%	1.14
3.	Physicians Formula Holdings Inc.	5%	1.25
4.	Maesa SA	5%	3.56
5.	Vrinda International Holdings Ltd.	5%	4.57
6.	Monalisa Company Ltd.	5%	2.83
7.	DSG International (Thailand) PCL	5%	2.67
8.	Parlux Fragrances LLC	5%	1.70
9.	Able C&C Company Ltd	5%	3.80
10.	Ciz Holdings Company Ltd.	5%	5.06
11.	Aderans Company Ltd	5%	0.67
	Weighted Average (Benchmark):		2.74

28. Given that the weighted average Price to Book Ratio is 2.74, MCH's intrinsic value based on the Price to Book Ratio can be estimated by determining MCH's current book value per share and multiplying this by the benchmark Price to Book Ratio as follows:

$$MCH's\ Book\ Value\ Per\ Share = \frac{Total\ Equity}{Total\ Number\ of\ Shares} = \frac{23692000}{163495140} = 0.14$$

$$MCH's\ Intrinsic\ Value = \frac{Price}{Book\ Value_{Benchmark}}\ x\ Current\ Book\ Value\ Per\ Share = 2.74\ x\ 0.14 = 0.38$$

29. Overall, based on the benchmark Price to Book Ratio, MCH's intrinsic value is estimated to be at $0.38 per share. This suggests that MCH's intrinsic value is more than 200% higher than Suki Sushi's offer, and that MCH should not be sold at $0.11.

Price to Sales Ratio

30. We can adopt a similar approach using the Price to Sales Ratio, with the key industry leaders included this time given that the data is available. The benchmark Price to Sales Ratio is as outlined in **Table 18**.

Table 18: Weighted Average (Benchmark) Price to Sales Ratio

S/N	Companies	Weightage	Price to Sales Ratio
1.	Melco Resorts and Entertainment Ltd.	2%	7.94
2.	MGM China Holdings Ltd.	2%	19.18
3.	Sands China Ltd.	2%	79.02
4.	Genting Berhad	2%	3.91
5.	Genting Singapore PLC	2%	1.98
6.	Industry Average	40%	2.59
7.	Beige Holdings Ltd.	5%	0.43
8.	Physicians Formula Holdings Inc.	5%	0.76
9.	Maesa SA	5%	0.86
10.	Vrinda International Holdings Ltd.	5%	3.01
11.	Monalisa Company Ltd.	5%	1.04
12.	DSG International (Thailand) PCL	5%	0.87
13.	Parlux Fragrances LLC	5%	1.35
14.	Able C&C Company Ltd	5%	2.53
15.	Ciz Holdings Company Ltd.	5%	2.75
16.	Aderans Company Ltd	5%	0.31
	Weighted Average (Benchmark):		3.97

31. Given that the weighted average Price to Sales Ratio is 3.97, MCH's intrinsic value based on the Price to Sales Ratio can be estimated by determining MCH's current sales per share and multiplying this by the benchmark Price to Sales Ratio as follows:

$$MCH's\ Sales\ Per\ Share = \frac{Sales}{Total\ Number\ of\ Shares} = \frac{9177000}{163495140} = 0.056$$

$$MCH's\ Intrinsic\ Value = \frac{Price}{Sales_{Benchmark}}\ x\ Current\ Sales\ Per\ Share = 3.97\ x\ 0.0056 = 0.22$$

32. Overall, based on the benchmark Price to Book Ratio, MCH's intrinsic value is estimated to be at $0.22 per share. This suggests that MCH's intrinsic value is 100% higher than Suki Sushi's offer, and that MCH should not be sold at $0.11.

Price to Earnings Ratio

33. We can also adopt a similar approach using the Price to Earnings Ratio for the sake of completeness. However, given that the Price to Earnings Ratio for the precedent transactions are not available, we use a 90% weightage for the industry average as this is the most likely. The benchmark Price to Earnings Ratio is as outlined in **Table 19**.

Table 19: Weighted Average (Benchmark) Price to Earnings Ratio

S/N	Companies	Weightage	Price to Earnings Ratio
1.	Melco Resorts and Entertainment Ltd.	2%	12.9
2.	MGM China Holdings Ltd.	2%	11.6
3.	Sands China Ltd.	2%	21.0
4.	Genting Berhad	2%	14.3
5.	Genting Singapore PLC	2%	11.1
6.	Industry Average	90%	24.24
	Weighted Average (Benchmark):		23.23

34. Given that the weighted average Price to Earnings Ratio is 23.23, MCH's intrinsic value based on the Price to Earnings Ratio can be estimated by multiplying MCH's current earnings per share by the benchmark Price to Earnings Ratio as follows:

$$MCH's\ Intrinsic\ Value = \frac{Price}{Earnings_{Benchmark}}\ x\ Current\ Earnings\ Per\ Share$$
$$= 23.23\ x - 0.0375$$
$$= -0.87$$

35. Overall, based on the benchmark Price to Earnings Ratio, MCH's intrinsic value is estimated to be at -$0.87 per share. This suggests that MCH's intrinsic value is significantly lower than Suki Sushi's offer, and that MCH should be sold at $0.11. However, from the negative estimated intrinsic value, it is apparent that the Price to Earnings ratio is not a good measure to value MCH. This is because MCH's earnings have been rapidly decreasing and MCH is currently non-profitable. This results in the Price to Earnings Ratio estimating a negative intrinsic value for MCH. This negative intrinsic value is not reasonable as MCH currently still has a positive equity or net worth, and this should set a floor for MCH's valuation, as this is the amount that MCH would be worth should it cease operations immediately, liquidate its assets and pay off its debts.

Limitations of Relative Valuation Methods

36. In addition to the Price to Earnings Ratio not being useful given that MCH's earnings are currently negative, there are three other limitations of the relative valuation methods. First, all three ratios provide quite different estimations of MCH's intrinsic value, with a value of $0.38 using the Price to Book Ratio, a value of $0.22 using the Price to Sales Ratio and a value of -$0.87 using the Price to Earnings Ratio. Second, there is the limitation of data availability, with data for the key industry leaders not available for the benchmark for the Price to Book Ratio and the data for the precedent transactions not available for the benchmark for the Price to Earnings Ratio. Third, there remains the limitation that the benchmark is unlikely to be full representative of MCH's current intrinsic value based on its current outlook.

Discounted Cash Flow

37. Another way to value MCH would be to use its projected future cashflows to determine its intrinsic value. The strength of this approach is that it provides a valuation of the company based on a detailed forward-looking estimate of the company's cashflows. This is as opposed to using the weighted average benchmark ratios based on other companies to provide that "forward-looking" estimate of MCH's potential, with 50% weight that it would remain, 40% weight that it would become an average company, and 10% weight that it would become a key industry leader. The downside of this approach, however, is that MCH's future cashflows needs to be estimated, and that it needs to be provided with a discount rate, both of which the estimated intrinsic value can be sensitive to. The relevance of this estimation is then contingent on the accuracy of the predicted future cashflows and the discount rate.

38. One possibility for Suki Sushi, upon acquiring MCH, could be to further undertake investments to restructure MCH, and to make capital expenditures, which could improve future cashflows. One such projected cashflow to MCH from 2018 to 2027 is as shown in **Table 28**, with a possible steady growth in its projected cashflows by 2% subsequently from 2027 onwards.

Table 20: Projected Free Cashflows to MCH from 2018 to 2027

Year	Free Cashflows to MCH	Year	Free Cashflows to MCH
2018	-10086.9	**2023**	2764.444
2019	-2626.66	**2024**	3304.265
2020	-1199.17	**2025**	3587.672
2021	302.7094	**2026**	3878.163
2022	2011.205	**2027**	4175.917

39. With this, it is possible to determine the intrinsic value of MCH in 2017 by determining the present value of its future projected free cashflows from 2018 onwards. This can be achieved in six steps as follows:

Step 1: Determine the present value of MCH's free cashflows from 2018 to 2022, using the WACC of 20% as the discount rate:

$$Present\ Value\ of\ Free\ Cash\ Flows\ from\ 2018\ to\ 2022$$
$$= \frac{-10086.9}{(1+0.2)^1} + \frac{-2626.66}{(1+0.2)^2} + \frac{-1199.17}{(1+0.2)^3} + \frac{302.7094}{(1+0.2)^4} + \frac{2011.205}{(1+0.2)^5}$$
$$= -8405.75 - 1824.07 - 693.964 + 145.9825 + 808.2582$$
$$= -9969.54\ (Rounded\ to\ 2\ Decimal\ Places)$$

Step 2: Determine the present value of MCH's free cashflows from 2023 to 2027, using the WACC of 20% as the discount rate:

$$Present\ Value\ of\ Free\ Cash\ Flows\ from\ 2023\ to\ 2027$$
$$= \frac{2764.444}{(1+0.2)^6} + \frac{3304.265}{(1+0.2)^7} + \frac{3587.672}{(1+0.2)^8} + \frac{3878.163}{(1+0.2)^9} + \frac{4175.917}{(1+0.2)^{10}}$$
$$= 925.8067 + 922.1597 + 834.3778 + 751.614 + 674.4339$$
$$= 4108.39\ (Rounded\ to\ 2\ Decimal\ Places)$$

Step 3: Determine the 2027 value of MCH's free cashflows from 2028 and beyond, using the WACC of 20% as the discount rate and 2% as the growth rate:

$$2027\ Value\ of\ Free\ Cash\ Flows\ from\ 2028\ and\ beyond$$
$$= \frac{4175.917\ (1+0.02)}{0.2-0.02}$$
$$= 23663.53\ (Rounded\ to\ 2\ Decimal\ Places)$$

Step 4: Determine the present value of MCH's free cashflows from 2028 and beyond, using the WACC of 20% as the discount rate:

$$Present\ Value\ of\ Free\ Cash\ Flows\ from\ 2028\ and\ beyond$$
$$= \frac{23663.52967}{(1+0.2)^{10}}$$
$$= 3821.79\ (Rounded\ to\ 2\ Decimal\ Places)$$

Step 5: Determine the present value of MCH's free cashflows from 2018 and beyond by summing up the present value of MCH's free cashflows in each period:

$$\begin{aligned}&Present\ Value\ of\ Future\ Free\ Cash\ Flows\\ &= Present\ Value\ of\ Free\ Cash\ Flows\ from\ 2018\ to\ 2022\\ &\quad + Present\ Value\ of\ Free\ Cash\ Flows\ from\ 2023\ to\ 2027\\ &\quad + Present\ Value\ of\ Free\ Cash\ Flows\ from\ 2028\ and\ beyond\\ &= -9969.5433 + 4108.3921 + 3821.792152\\ &= -2039.36\ (Rounded\ to\ 2\ Decimal\ Places)\end{aligned}$$

Step 6: Determine the present value of MCH's free cashflows per share:

$$\begin{aligned}&Present\ Value\ of\ Future\ Free\ Cash\ Flows\ Per\ Share\\ &= \frac{Present\ Value\ of\ MCH's\ Free\ Cashflows}{Total\ Number\ of\ Shares}\\ &= \frac{-2039360}{163495140}\\ &= -0.012\ \ (Rounded\ to\ 2\ Decimal\ Places)\end{aligned}$$

40. The total present value of these projected cash flows is -$2,039,360. This implies that the capital expenditure from 2018 to 2020 would not be able to be recouped by the positive cashflows from 2021 onwards and in perpetuity with a steady growth rate of 2%. This also implies an intrinsic value of -$0.012 per share for MCH, and further suggests that MCH's intrinsic value is much lower than Suki Sushi's offer of $0.11, and that MCH should be sold at $0.11.

Sensitivity Analysis

41. Since the present value of the projected future cashflows tend to be sensitive to the discount rate and the growth rate of the future cashflows, it is useful to conduct a sensitivity analysis prior to concluding whether MCH should be sold at $0.11. In that regard, we can conduct three sets of sensitivity analysis.

a. First, **we can vary the discount rate** as shown in **Table 21**. A lower discount rate may be possible for Suki Sushi, who would likely have a lower WACC than MCH given its stronger liquidity, solvency and profitability. However, the sensitivity analysis suggests that the intrinsic value of MCH per share, even with a very low WACC of 5%, remains below $0.11.

Table 21: Sensitivity Analysis of Discount Rate

Present Value	5%	10%	15%	20%
Present Value of Future Cashflows	15230.29	6521.67	1221.23	-2039.36
Intrinsic Value of MCH Per Share	0.09	0.04	0.01	-0.01

b. Second, **we can vary the growth rate** as shown in **Table 22**. A higher growth rate be possible for Suki Sushi, who could be able to find synergies between MCH's businesses and its own businesses. It could also help MCH diversify and find new revenue streams.

However, the sensitivity analysis suggests that the intrinsic value of MCH per share, even with a very healthy growth rate of future free cashflows of 8%, remains below $0.11.

Table 22: Sensitivity Analysis of Growth Rate

Present Value	2%	4%	6%	8%
Present Value of Future Cashflows	-2039.36	-1477.33	-754.72	208.75
Intrinsic Value of MCH Per Share	-0.0125	-0.0090	-0.0046	0.0013

c. Third, **we can vary both the discount rate and the growth rate** as shown in **Table 23**. In this, it can be observed that of all the permutations of the discount rates and growth rates outlined above, MCH's intrinsic value per share based on its discounted cashflows only exceeds $0.11 in the scenario where MCH's discount rate is at 5% **and** its future growth is 6% and above.

Table 23: Sensitivity Analysis of Discount and Growth Rates

Rates	2%	4%	6%	8%
20%	-0.012	-0.009	-.005	0.001
15%	0.007	0.013	0.019	0.029
10%	0.040	0.048	0.059	0.073
5%	0.093	0.106	0.123	0.145

Conclusion and Recommendation

42. There are three key observations that investors could have from the above analysis:

a. First, **MCH's core operating business is struggling, with its sales declining by over 50%**. MCH has taken some steps to reduce the impact of its declining sales, such as through reducing some of its fixed costs and reducing its inventory, but this has been insufficient in allowing it to remain profitable, with its profitability declining rapidly from 2013 to 2017.

b. Second, **MCH's investors are pessimistic on its outlook**. MCH is trading significantly below its peers, with its stock price of $0.067 at about 80% and 70% lower than its intrinsic value using the Price to Book Ratio and Price to Sales Ratio respectively. This implies that MCH's investors do not think that MCH's situation would improve soon.

c. Third, **MCH's ability to restructure or diversify its business on its own seems to be limited**. MCH seems to have a slightly worsened cash conversion cycle, which means that it is less capable of generating cash for restructuring or diversifying its current operating business. More than that, MCH has increased its borrowing, which furthers weaken its short term cashflow and increases its baseline interest costs in the long-term.

43. The decision on whether investors should sell or hold MCH's shares at $0.11 per share then hinges on whether the acquisition of MCH by Suki Sushi would be able to address the three key challenges outlined above: (a) would Suki Sushi be able to improve MCH's operating business and increase its sales?; (b) would Suki Sushi be able to improve investor sentiment on MCH's

outlook?; and (c) would Suki Sushi be able to restructure or diversify MCH's business to improve its future cashflows? Based on the analysis of MCH's projected future free cashflows, presumably after restructuring from Suki Sushi, the answers to all three questions seems to be no, with MCH's intrinsic value still being low or negative even if MCH had the ability to restructure itself. Given this, investor sentiment is likely to remain pessimistic, which would imply that MCH's share price would remain low, especially since Suki Sushi intends to continue to keep MCH listed.

44. That being said, there remains questions on why Suki Sushi is willing to purchase MCH's shares at a premium from its currently traded price. One possible hypothesis is that Suki Sushi is doing so as a favour to MCH. This is especially since Suki Sushi is owned by Mary Chia's daughter and son-in-law. Another possible hypothesis is that Suki Sushi has other plans for MCH that is not told to investors publicly, but that could unlock significant value above its current valuation of $0.11 per share. The former hypothesis would support a selling of MCH's shares at $0.11 per share, while the latter hypothesis would support holding MCH's shares. Nonetheless, on balance, given that investors are not privy to any plans that Suki Sushi has for MCH that could unlock significant value, they are still likely to remain pessimistic and would likely continue to trade down MCH's shares for the foreseeable future following the completion of the acquisition. As such, it perhaps may be prudent to sell MCH's shares first at $0.11 and reconsider buying MCH's shares in the future again if Suki Sushi releases more concrete plans.

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Appendix – Calculations for Part 1: Analysis of MCH's Key Financial Ratios

	2013	2014	2015	2016	2017	Calculations
Short-Term Liquidity Ratios						
Current Assets	3390	3526	8583	2821	2557	Total Current Assets
Current Liabilities	11429	11955	15382	8493	14164	Total Current Liabilities
Inventory	564	694	729	662	402	Inventories
Current Ratio	0.30	0.29	0.56	0.33	0.18	Current Ratio = Current Assets - Current Liabilities
Quick Ratio	0.25	0.24	0.51	0.25	0.15	Quick Ratio = (Current Assets – Inventory) / Current Liabilities
Change in Current Ratio	-	0.00	0.26	-0.23	-0.15	
Change in Quick Ratio	-	-0.01	0.27	-0.26	-0.10	
Solvency Ratios						
Total Debt	24664	24825	30064	26976	29267	Total Debt = Borrowings + Bank Overdraft + Finance Lease Liabilities
Total Assets	65506	67419	72062	65731	63990	Total Assets
EBT	26130	3111	-2483	-3112	-6215	EBT = Loss Before Income Tax
EBIT	26738	3673	-1925	-2389	-5324	EBIT = EBT + Finance Cost
Total Debt/Asset Ratio	0.38	0.37	0.42	0.41	0.46	Total Debt Ratio = Total Debt / Total Assets
Interest Cost	608	562	558	723	891	Finance cost
Times Interest Earned	43.98	6.54	-3.45	-3.30	-5.98	Times Interest Earned = EBIT / Interest
Change in Total Debt/Asset Ratio	-	-0.01	0.05	-0.01	0.05	
Change in Times Interest Earned Ratio	-	-37.44	-9.99	0.15	-2.67	
Asset Use Efficiency Ratios						
Cost of Goods Sold	570	679	813	544	702	COGS = Purchases & Related Costs + Changes in Inventories
Inventory	564	694	729	662	402	Inventories
Account Receivables	470	404	548	407	386	Trade and other receivables
Inventory Period	361.16	373.06	327.29	444.17	209.02	Inventory Period = Inventory / (COGS/365)
Account Receivables Period	8.65	8.57	13.25	11.02	15.35	Account Receivables Period = Receivables / (Sales/365)
Changes in Inventory Period	-	11.91	-45.78	116.88	-235.16	
Changes in Account Receivables Period	-	-0.08	4.68	-2.23	4.33	
Account Payables	7033	6410	7207	5857	6821	Trade and other payables

	2013	2014	2015	2016	2017	Calculations
Accounts Payables Period	4,503.59	3,445.73	3,235.62	3,929.79	3,546.53	Account Payables Period = Payables / (COGS/365)
Cash Cycle	-4,133.78	-3,064.09	-2,895.07	-3,474.60	-3,322.16	Cash Cycle = Inventory Period + Accounts Receivables Period - Accounts Payables Period
Total Asset Turnover	0.30	0.26	0.21	0.21	0.14	Total Asset Turnover = Sales / Total Assets
Change in Cash Cycle	-	1,069.69	169.02	-579.52	152.44	
Change in Total Asset Turnover	-	-0.05	-0.05	0.00	-0.06	
Profitability Ratios						
Net Income	26359	3018	-2741	-3527	-6412	(Loss)/Profit for the financial period
Revenue	19836	17204	15093	13482	9177	Revenue
Total Assets	65506	67419	72062	65731	63990	Total Assets
Total Equity	32432	35501	32819	29999	23692	Total Equity
Profit Margin	1.33	0.18	-0.18	-0.26	-0.70	Profit Margin = Net Income / Revenue
Return on Assets	0.40	0.04	-0.04	-0.05	-0.10	Return on Assets = Net Income / Total Assets
Return on Equity	0.81	0.09	-0.08	-0.12	-0.27	Return on Equity = Net Income / Total Equity
Change in Profit Margin	-	-1.15	-0.36	-0.08	-0.44	
Change in Return on Assets	-	-0.36	-0.08	-0.02	-0.05	
Change in Return on Equity	-	-0.73	-0.17	-0.03	-0.15	
Relative Ratios						
Price Per Share	0.07	0.06	0.05	0.05	0.07	Based on Last Day of Each Year and 24 Aug 2017 for 2017
Earnings Per Share	0.0849	0.0079	-0.02	-0.0235	-0.0375	Earnings per share basic (cents)
Price-to-Earnings Ratio	0.82	7.59	-2.50	-2.13	-1.87	Price-to-Earnings Ratio = Price Per Share / Earnings Per Share
Book Value	32432	35501	32819	29999	23692	Book Value of Equity = Total Equity
Total Number of Shares	163495140	163495140	163495140	163495140	163495140	Number of Shares
Book Value Per Share	0.20	0.22	0.20	0.18	0.14	Book Value Per Share = Book Value / Total Number of Shares
Price-to-Book Ratio	0.35	0.28	0.25	0.27	0.48	Price-to-Book Ratio = Price Per Share / Book Value Per Share
Change in Price-to-Earnings Ratio	-	6.77	-10.09	0.37	0.26	
Change in Price-to-Book Ratio	-	-0.08	-0.03	0.02	0.21	
Dupont Analysis						
Net Income	26359	3018	-2741	-3527	-6412	(Loss)/Profit for the financial period
Revenue	19836	17204	15093	13482	9177	Revenue
Total Assets	65506	67419	72062	65731	63990	Total Assets

	2013	2014	2015	2016	2017	Calculations
Total Equity	32432	35501	32819	29999	23692	Total Equity
Net Income/Sales	1.33	0.18	-0.18	-0.26	-0.70	Net Income / Revenue
Sales/Total Assets	0.30	0.26	0.21	0.21	0.14	Revenue / Total Assets
Total Assets/Total Equity	2.02	1.90	2.20	2.19	2.70	Total Assets / Total Equity
Industry Comparisons						
Total Assets	65506	67419	72062	65731	63990	Total Assets
Total Equity	32432	35501	32819	29999	23692	Total Equity
EBIT	26738	3673	-1925	-2389	-5324	EBIT = EBT + Finance Cost
Revenue	19836	17204	15093	13482	9177	Revenue
Assets/Equity	2.02	1.90	2.20	2.19	2.70	Total Assets / Total Equity
EBIT Margin	1.35	0.21	-0.13	-0.18	-0.58	EBIT Margin = EBIT/sales
Net Working Capital						
Current Assets	3390	3526	8583	2821	2557	Total Current Assets
Current Liabilities	11429	11955	15382	8493	14164	Total Current Liabilities
Net Working Capital	-8039	-8429	-6799	-5672	-11607	Net Working Capital = Current Assets - Current Liabilities