

Financial analysis and revenue forecasts of POP MART



An Independent Study Submitted in Partial Fulfillment of the
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การวิเคราะห์ด้านการเงินและการคาดการณ์รายได้ของ POP MART



สารนิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต
สาขาวิชาเศรษฐศาสตร์ธุรกิจและการจัดการ สาขาวิชาเศรษฐศาสตร์ธุรกิจและการจัดการ

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Title of POP MART
By Miss Ting Qiu
Field of Study Business and Managerial Economics
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ทิง ฉิว : การวิเคราะห์ด้านการเงินและการคาดการณ์รายได้ของ POP MART. (Financial analysis and revenue forecasts of POP MART) อ.ที่ปรึกษาหลัก : พัชรสุทธิ สุจริตตานนท์

POP Mart ได้มีการพัฒนาด้านการเงินอย่างรวดเร็ว และประสบความสำเร็จอย่างมากในผลิตภัณฑ์ด้านทรัพย์สินทางปัญญาในช่วงห้าปีที่ผ่านมา แม้ภายใต้ผลกระทบจาก COVID-19 ในปี 2020 POP Mart ก็ยังสามารถทำได้แม้ว่าจะมีแนวโน้มที่ลดลงก็ตาม อย่างไรก็ตาม เมื่อเผชิญกับรายได้ที่เพิ่มขึ้นอย่างรวดเร็วในปัจจุบัน โมเดลธุรกิจของ POP Mart ได้เผยให้เห็นถึงปัญหาบางประการ นอกจากนี้ ยังมีความไม่แน่นอนเกี่ยวกับการพัฒนาในอนาคต การศึกษานี้จะวิเคราะห์การเงินระหว่างปี 2017 และ 2020 จากหนังสือชี้ชวนประจำปี POP Mart ในการประมาณความสามารถในการชำระหนี้ ความสามารถในการดำเนินงาน ความสามารถในการทำกำไรโดยใช้การวิเคราะห์อัตราส่วนทางการเงิน และจากการคาดการณ์แบบ bottom-up ตามช่องทางการขายหลักของ POP Mart สำหรับการเปิดร้านใหม่ของธุรกิจและอัตราการเติบโตของสาขาเดิม และการคาดการณ์แบบ top-down สำหรับการตรวจสอบผลของตลาดและแนวโน้มของส่วนแบ่งตลาด ผลลัพธ์ภายใต้การวิเคราะห์อัตราส่วนทางการเงินและการคาดการณ์รายได้บ่งชี้ว่ารายได้ของ POP Mart ยังคงเติบโตอย่างต่อเนื่องระหว่างปี 2017 และ 2020 และเพิ่มขึ้นอย่างต่อเนื่องในปี 2020 และ 2021 เช่นกัน แม้ว่าอัตราการเติบโตจะชะลอลง แต่ก็มีโอกาสในการเติบโตต่อไป



สาขาวิชา เศรษฐศาสตร์ธุรกิจและการจัดการ
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POP Mart experienced rapid financial development and made significant success in IP products over the past five years. Even under the impact of the COVID-19 in 2020, the revenue of POP Mart is still in a profitable state although it has a declining trend. However, in the face of the current fast-rising revenue, POP Mart's business model has also revealed some problems. There is uncertainty about future developments. This individual study using the financial statement from 2017 to 2020 of POP Mart annual prospectus to estimate the debt-paying ability, operating ability, and profitability using the financial ratio analysis. And through a bottom-up split forecast based on POP Mart's main sales channels for the company's new store openings and same-store growth rate; and a top-down forecast for cross-validation with the trendy toy market space and the outlook of the market share. The results under the financial ratio analysis and future revenue forecasts indicate that POP Mart's revenues are continuing to grow steadily between 2017-2020 and will continue to rise in 2020 and 2021 as well, although the rate of increase will slow down, there is still an opportunity to grow further.



Field of Study:	Business and Managerial Economics	Student's Signature
Academic Year:	2020	Advisor's Signature

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1. INTRODUCTION

1.1 Introduction

In recent years, the rise of Chinese trendy toy industry, represented by POP Mart mystery box brand vendors, has become a favorite industry of young people. Different from children's toys, most of the toys for young people have anime or game background, it is a derivative peripheral of animation, some are even artists and designers original IP image. The reason that attracts young people to buy it is because on the one hand, it has a character story to carry, and on the other hand, it is exquisitely made and has decorative and collectible value. Previously, most of China's IP market was for children, and the IP derivative market for young people has never been developed in depth. But in recent years, the trendy toys for young people have expanded rapidly and penetrated daily life. When we visit shopping malls, we often see dolls or mystery boxes sold in the unmanned retail terminals of POP Mart, which are industries targeting young people. According to online data, about more than 12 million people bought trendy toy in 2018, which is enough to see the buying characteristics of young consumers now - like personality, like new products, like to be different. For young people, these hipster games have a special function, it is not just a need, but it is a spiritual trust.

As the current leader in the trendy toy industry in China. POP MART has formed an integrated platform for the whole industry, including artist discovery, IP operation, consumer reach and fan base, and trendy toy culture promotion. The company has formed a leading IP matrix in China through self-developed IP and acquiring first-class IP from top artists. Through the commercialization of IP, POP MART can reach consumers with various types of products such as trendy toys, and then build a fan community to promote the culture of trendy toys.

As the main profit model of POP Mart, the healthy development of IP design plays a decisive role in the mystery box industry. In the field of merchandise licensing, film and television, games and animation as the core resources of IP. And the mystery box industry is the soft periphery of the IP source. POP Mart's IP is mainly created by collaborating artists, well-known IP providers and in-house design teams. There are three major categories according to the POP Mart's IP source, which are own IP, exclusive IP and non-exclusive IP.(limited, 2020)

From prospectus of POP Mart released in 2020 we can indicate that the revenue and sales of POP Mart have been growing steadily since 2017. Despite the impact of the COVID-19, POP Mart maintained its strong growth momentum since 2017. The advantages of the whole industry chain platform with IP as the core were further demonstrated. The new head IP performed spectacularly, the offline layout accelerated,

the online grew rapidly, the overseas business developed steadily, while the layout of film and television, parks and the big entertainment platform based on IP took shape.(limited, 2020)

For the development prospects of POP Mart, with the importance of the trendy toy industry highlighted, POP Mart's leading position is difficult to shake. Compared with its competitors, POP Mart's core strengths are the industry's top IP operation capability, omni-channel sales network, and high stickiness of mystery box members, combined with easier access to top trend resources under the leading position and accelerated platform construction after the listing fundraising, the company's moat is expected to be further strengthened.

1.2 Research Objective

The main purpose of this individual study is to analyze the financial statements of POP MART from 2017 to 2020 in China, makes forecasts and assumptions about the profits of POP MART in 2021 and 2022 in China. Then give the valuation and investment advice.

2. Methodology and Data

2.1 Methodology

This individual study aims to analyze the financial statement of POP MART in China, and make forecasts and assumptions about the profits of POP MART in 2021 and 2022 by using the quantitative, Factor substitution and specific gravity method. Perform financing statement analysis and break-even point analysis. And using the PEG ratio and cross-validation to forecast the value of POP MART.

2.1.1 Quantitative method

Quantitative methods emphasize objective measurement and statistical, mathematical or numerical analysis of data collected through polls, questionnaires and surveys, or the manipulation of existing statistics using computational techniques(Babbie, 2010).

2.1.2 PEG ratio

PEG is the ratio of price-to-earnings ratio to earnings growth, which is the company's price-to-earnings ratio divided by the company's earnings growth rate(Wikipedia, 2008). For a public company, there is usually a static P/E and a moving P/E. The former reflects the growth rate of net profit of the previous year corresponding to the

company's current share price, while the latter reflects the expected growth rate of net profit of this year corresponding to the company's current share price.

$$\text{PEG Ratio} = \frac{\frac{\text{Market Value per Share}}{\text{Earning per Share}}}{\text{Projected Annual Earnings Growth}}$$

$$\text{PEG Ratio} = \frac{P/E}{\text{EPS Growth}}$$

2.2 Data

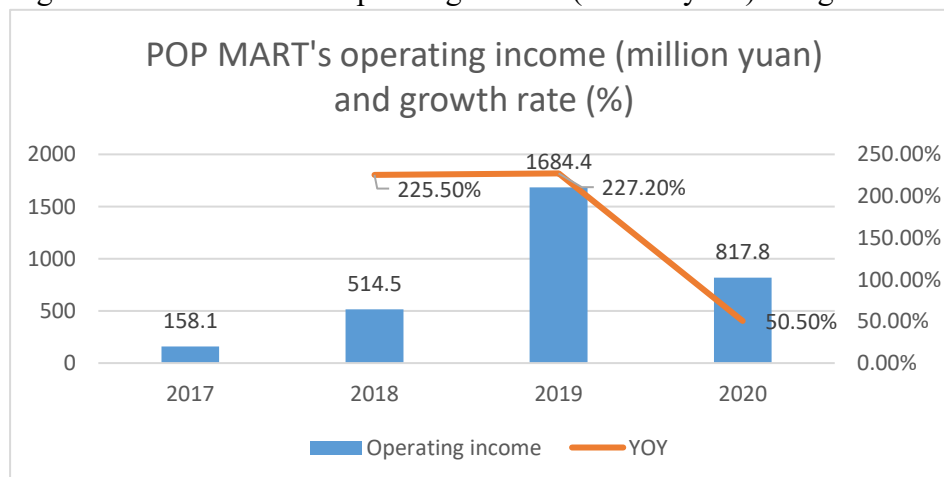
The data of this individual study collected from POP MART international group limited annual prospectus and HKEX-market data which include four years' financial statement from 2017-2020. And some others financial data collected from the Guru Focus POP MART. And all the data collection only focus on Chinese market.

3. Financial Analysis

3.1 Financial Highlights

3.1.1 Operating income: Continuous revenue growth and balanced revenue structure

Figure 1: POP MART's operating income (million yuan) and growth rate (%)

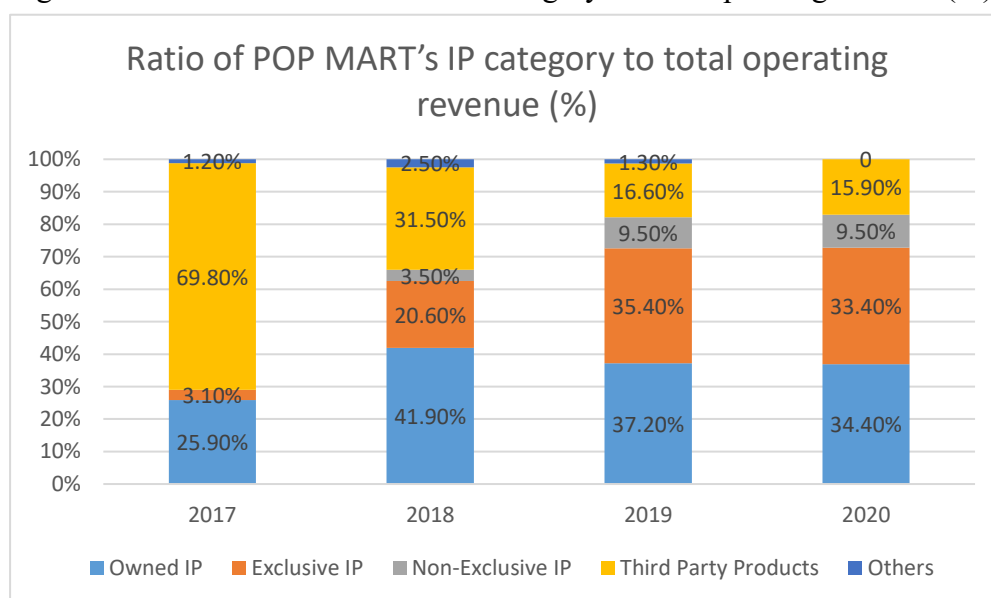


The revenue of POP MART's has increased significantly for three consecutive years, the revenue share of its own IP and exclusive IP has increased significantly, and the company's revenue structure has been optimized.

In 2018 and 2019, the company achieved revenue of 514.5 and 1,683.4 million yuan, with year-on-year growth rates of positive 225.5% and positive 227.2%, respectively.

In 2020, due to the impact of the epidemic on offline consumption, the company's revenue growth slowed down to 50.5%.

Figure 2: Ratio of POP MART's IP category to total operating revenue (%)



The company's revenue growth was driven by the rapid growth and increasing share of revenue from its own IP and exclusive IP products. The revenue share of the Molly series reached 25.9% in 2017, and the PUCKY series contributed 14.6% of the revenue in 2018 when it was launched. In 2018 and 2019, the revenue share of the Company's own IP and exclusive IP reached 62.5% and 72.6% respectively. The change in revenue structure reflects the Company's revenue mix. The change in revenue structure reflects the success of the company's strategic transformation from a channel player to a leading player in the trendy toy industry.

Figure 3: The proportion of internal sales revenue from owned IP by POP MART brand product

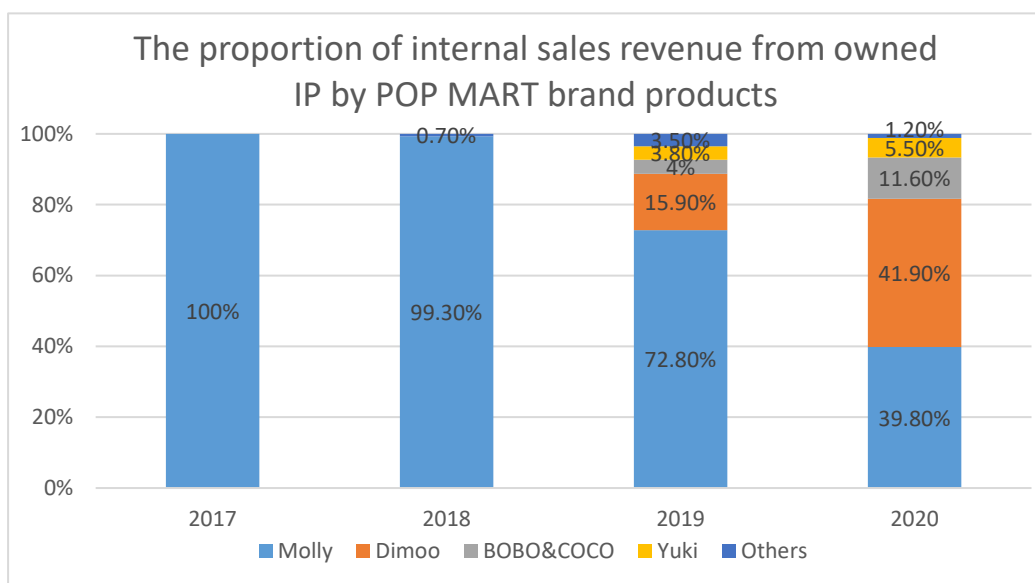
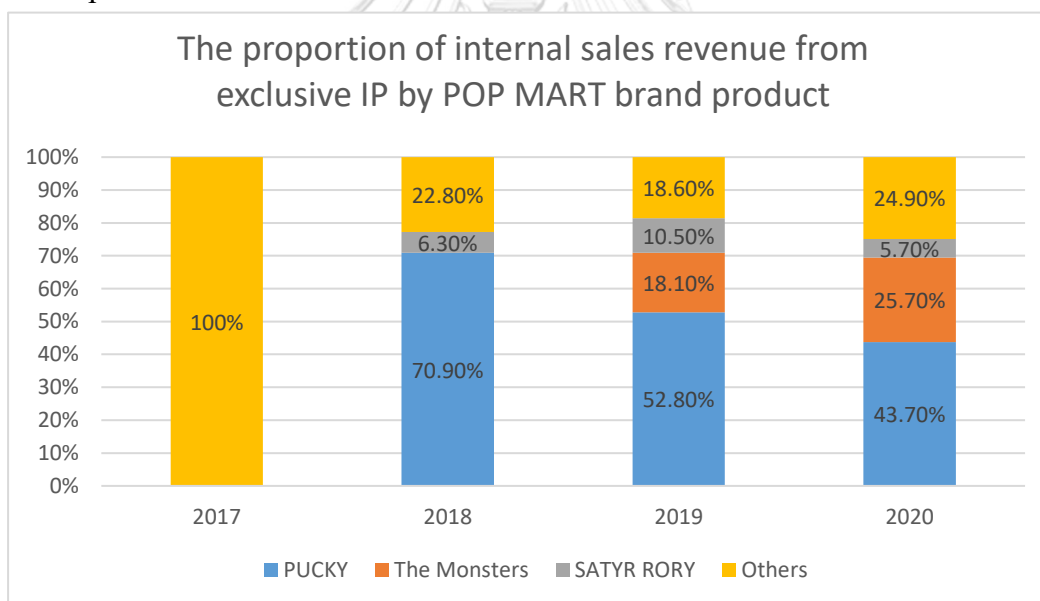


Figure 4: The proportion of internal sales revenue from exclusive IP by POP MART brand product



POP Mart's IP layout keeps iterating, successfully creating diversified IP, and the internal revenue structure of its own IP and exclusive IP tends to be balanced. Among its own IP, the revenue of DIMOO series reached 15.9% when it was launched in 2019, and surpassed Molly series in 2020 with a revenue ratio of 41.9%, becoming the first revenue engine of its own IP. In the exclusive IP, the company actively creates diversified exclusive IP in addition to the popular exclusive IP PUCKY series. In terms of the proportion of exclusive IP revenue outside PUCKY, the proportion was only 29.1% in 2018 and increased to 56.3% in 2020. A rich IP matrix expands the

company's product range and revenue streams, spreading the risk of a decline in the popularity of a IP.

Figure 5: Mystery box revenue by IP type (million yuan) and mystery box share of total revenue

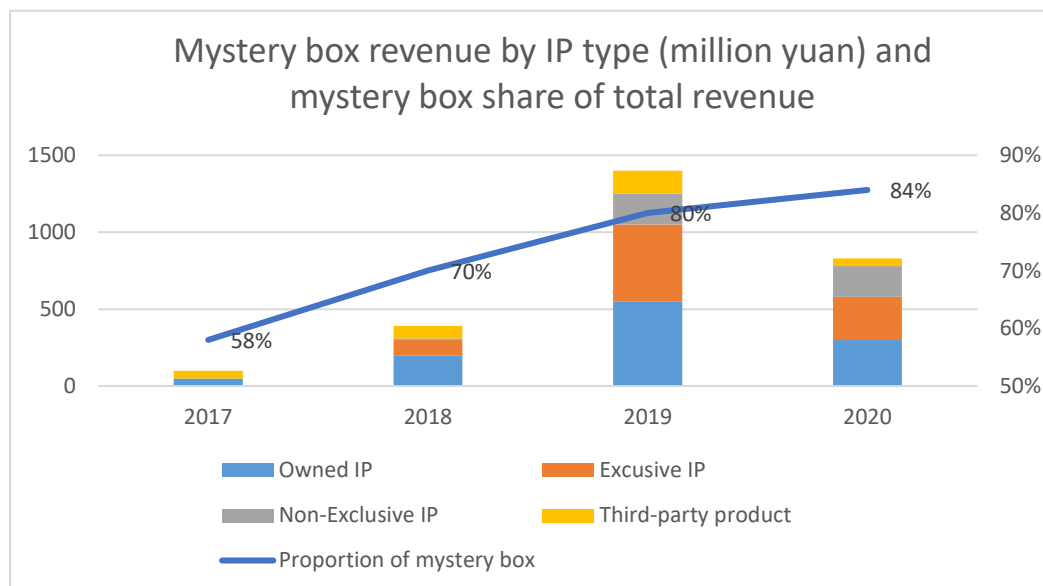
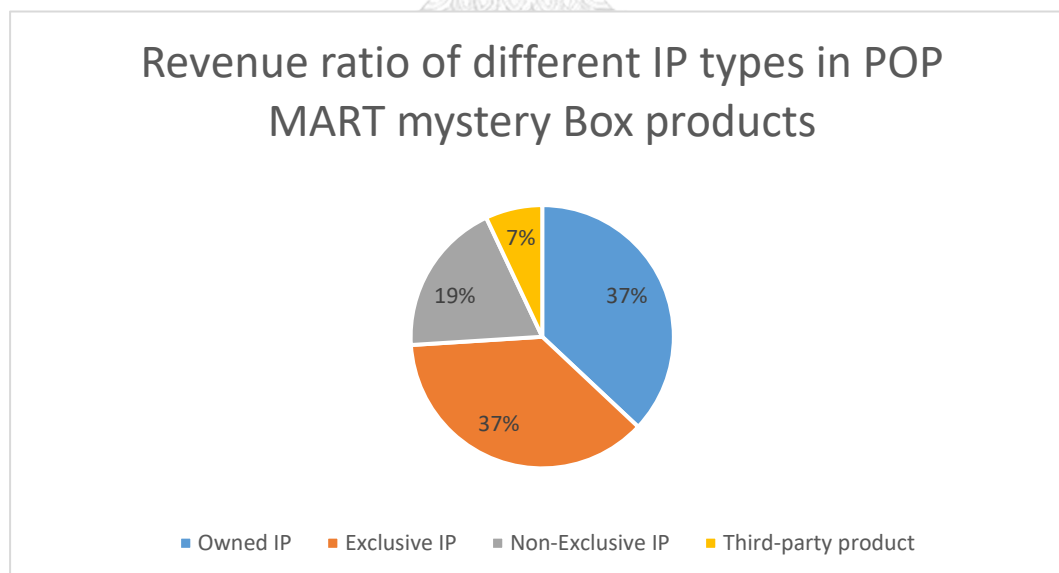


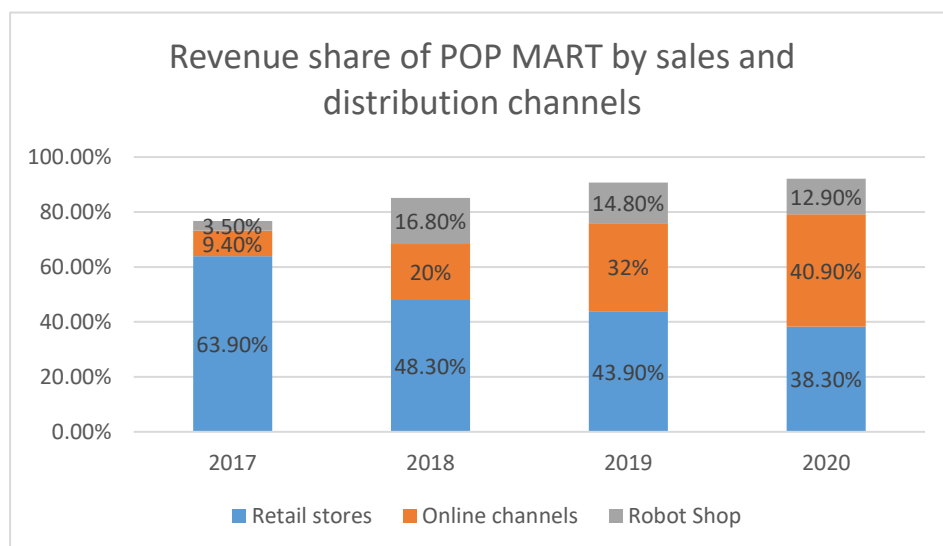
Figure 6: Revenue ratio of different IP types in POP MART mystery Box products



The Mystery box is the core product of the company, contributing 84% of the revenue in 2020, and the owned IP and exclusive IP mystery box accounts for Core advantage. POP MART is a pioneer in the Chinese mystery box industry, and the industry is rapidly entering a booming period under the company's promotion. Mystery box

product revenue accounted for 84% of the company's total revenue in 2020, which is the company's core product business line. Among the mystery box products, POP Matte brand products account for more than 90%, of which 37% are owned IP and exclusive IP respectively, and 19% are non-exclusive IP.

Figure 7: Revenue share of POP MART by sales and distribution channels



POP MART has built a comprehensive and extensive sales network to reach consumers, thereby promoting the culture of trendy toy and consolidating the Company's leading position in the industry. As of 2020, the Company has 136 offline retail stores located in mainstream shopping areas in 33 first- and second-tier cities in China and 1,001 robot stores in 62 cities in China; online channels such as TMALL flagship store and POP Drawer (securities, 2020). In addition, the company also has the Beijing International trendy toy exhibition and Shanghai International exhibition and 47 distributors worldwide and other wholesale channels. From the perspective of sales channel revenue proportion, the company's online channel revenue proportion gradually increased. In 2017, the online channel revenue proportion was only 9.4%, which rose to 40.9% in 2020. The comprehensive and gradually balanced sales network mitigated the impact of same-store revenue decline on the company's performance during the epidemic.

3.1.2 Operating Costs: Commodity costs and design licensing fees account for more than 90%

Figure 8: POP MART Operating Cost (million) and Growth Rate (%)

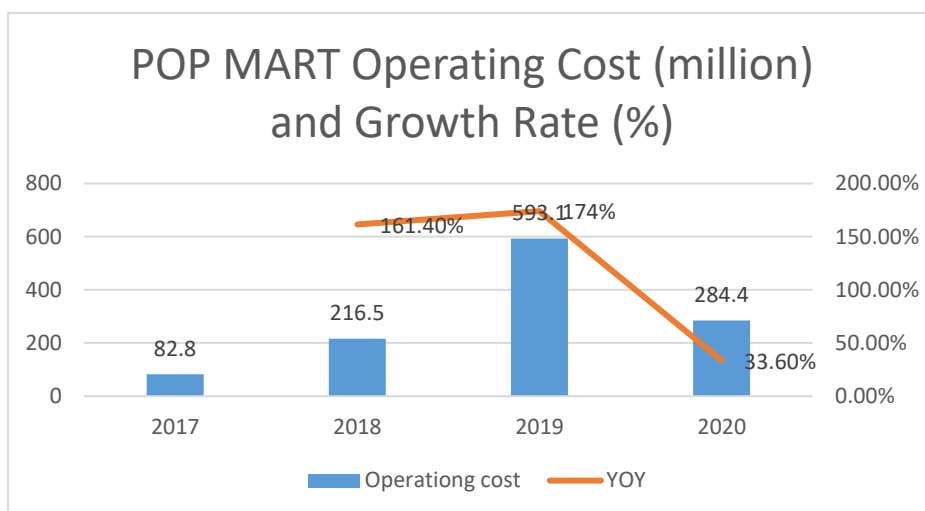
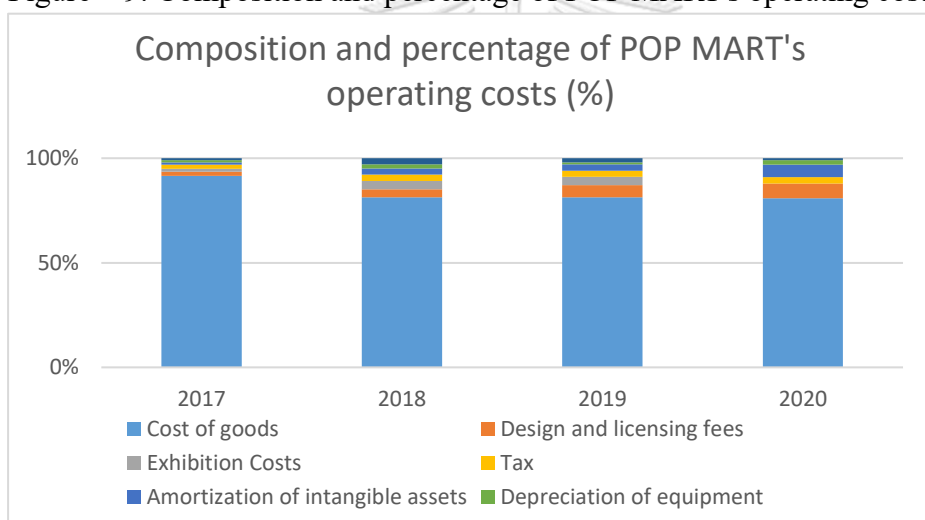


Figure 9: Composition and percentage of POP MART's operating costs (%)



Operating costs are primarily attributable to manufacturing and procurement costs, which account for more than 80% of costs. Cost of sales mainly includes manufacturing and procurement costs, design and license fees, exhibition costs, amortization of intangible assets. In 2020, cost of goods accounted for 80.3%, mainly including the cost of goods paid to third-party manufacturers and procurement costs of third-party products; Design and licensing fees accounted for 9.3%, mainly including design and licensing fees paid to artists and IP providers, which accounted for nearly 90% of the total (caibaoshuo, 2021).

Table 1: POP MART's gross margin by product category (%)

	2017	2018	2019	2020
Brand product	64%	71%	71.2%	71.1
Third-party product	42%	34.9%	37.9%	34.6%

Others	-21.1%	-1.5%	1.7%	0%
Total	47.6%	57.9%	64.8%	65.2%

Table 2: Gross margin by IP category for POP MART branded products (%)

	2017	2018	2019	2020
Owned IP	63.5%	72.7%	73.8%	73.3%
Exclusive IP	68.7%	69.5%	69.5%	70.3%
Non-Exclusive IP	0%	60.6%	67.9%	67.8%

The gross margin of the company exceeds 65% in 2020, and the gross margin of POP Mart's own brand (owned IP, exclusive IP, non-exclusive IP) products exceeds 70%. In the past three years, the company's gross profit margin level continues to improve, the company gross profit margin reached 65.2% in 2020. Compared with third-party products and others, the gross margin of the company's branded products is higher, which exceeding 70%. Among its own branded products, the gross margin of owned, exclusive and non-exclusive IP products is 73.4%, 70.3% and 67.8% in 2020 respectively, and the gross margin of owned IP products is the highest.

3.1.3 Expense ratio and profit margin: Expense ratio is well controlled, net interest rate increases significantly

Table 3: POP MART three expense ratios (%)

	2017	2018	2019	2020
Sales expense ratio	32.3%	24.5%	21.6%	27.3%
Management expense ratio	13.2%	8.5%	8.5%	15.3%
Financial expense ratio	1.1%	0.4%	0.3%	0.4%

The expense ratio is in the improvement channel from 2017 to 2019, and the expense ratio will increase in the short term due to the impact of the epidemic and accelerated store opening in 2020. The company's selling expense ratio gradually decreases from 32.3% in 2017 to 21.6% in 2019.

The increase in depreciation and amortization expenses and expenses related to

short-term variable leases due to the increase in the number of stores and robot stores, coupled with the impact of the epidemic on same-store sales, resulted an increase in the company's selling expense ratio to 27.3% in a short term.

The management expense ratio of 2020 is 15.3%, which is mainly caused by the increase of employee welfare expenses, one-time costs related to the re-designation of ordinary shares as preferred shares, and the impact of epidemic on same-store sales.

Table 4: POP MART Net Profit Margin (%)

	2017	2018	2019	2020
Net profit	-	99.52	451.12	141.28
Net margin	1.0%	19.3%	26.8%	17.3%

The net interest rate in 2019 was 26.8%, and the net interest rate in 2020 affected by the epidemic was 17.3%. In 2018 and 2019, the company's net profit rate reached 19.3% and 26.8% respectively, which was 18.4% compared with the same period last year. The increase of net profit rate was mainly due to the increase of the proportion of POP MART brand products and other reasons. The company's net profit margin for 2020 was 17.3%. The slight decrease in net profit margin was mainly due to the decrease in same-store sales caused by the epidemic and the increase in expense ratio.

3.2 Financial Ratio Analysis

Financial reporting follows generally accepted accounting principles and enables people to evaluate and compare companies, there are many analytical techniques that one can use to further obtain. This chapter covers many traditional analytical techniques, as well as some relatively new ones.(George T. Friedlob, 2018)

3.2.1 Leverage Ratios

Table 5: Leverage Ratio Analysis

	2017	2018	2019	2020
Debt Ratio	0.03	0.06	0.15	0.25
DE	0.49	0.34	0.31	0.04
EBITDA Coverage	4.78	153.03	672.31	851.55

Total Debt is calculated by adding short-term borrowings and capitalized lease liabilities plus long-term borrowings and capitalized lease liabilities (George T.

Friedlob, 2018). Total debt ratio for the past six months was 0.25 as of December 2020. The debt ratio of POP MART is growing at a steady pace, which indicate that creditors are now supplying more than half the total financing. In addition to an upward trend, the level of the debt ratio is well above the previous year.

As of December 2020, The POP Mart's debt-to-equity ratio for the past one year was 0.04. A higher debt-to-equity ratio mean that the company has been actively financing its business growth through debt. Additional interest expense may lead to earnings volatility. The debt to equity of POP MART is declining at a steady pace, which indicate that long-term debt position is healthy of POP MART. Creditors' rights and interests can be well protected.

EBIT or operating profit is correlated with Return on Capital ROC and Joel Greenblatt Return on Capital.(George T. Friedlob, 2018). As of December 2020, POP Mart's annualized return on capital ROC for the past six months was 89.04% and annualized Joel Greenblatt Return on Capital % of 198.23%. And the EBITDA of POP MART shows a trend of rapid growth from 2017 to 2020, even with the onslaught of the COVID-19, still maintaining a continuous growth trend, which indicate that POP MART has have enough cash available to cover their expenses.

3.2.2 Liquidity Ratios

Table 6: Liquidity Ratio Analysis

	2017	2018	2019	2020
Current Ratio	1.49	1.76	1.88	9.4
Quick Ratio	1.14	1.56	1.63	9.06

Current ratio is a measure of a company's ability to repay short-term debt with short-term assets. As of December 2020, the current ratio of the past year is 9.4.

Quick ratio is a measure of a company's ability to repay short-term debts with highly liquid short-term assets. As of December 2020, POP Mart's quick ratio for the past year was 9.06. The current ratio and quick ratio are both growing at a steady pace from 22017-2018 and a sharp rise in 2020, which indicate that POP MART has less pressure on pay off debts in short time.

3.2.3 Efficiency Ratio

Table 7: Efficiency Ratio Analysis

	2017	2018	2019	2020
Days of Inventory	68.49	38.16	38.76	62.68
Days of Payable	31.43	33.78	30.12	46.71

Days of Receivables	12.67	7.1	6.53	8.8
Asset turnover ratio	1.11	1.87	2.28	0.63
Inventory turnover ratio	5.33	9.56	9.42	5.82

Days of inventory refer to the number of days experienced by an enterprise from the acquisition of inventory to the consumption and sale of inventory. The fewer turn days, the more efficient the inventory management. As of December 2020, POP MART has been in the past six months Inventory turnover days of 62.11

Days of payable are used to measure how long it takes a company to pay off its suppliers, which belongs to the scope of the company's business capability analysis (BERRY-JOHNSON, 2021). As of December 2020, POP Mart's accounts days of payable for the past year were 46.71.

Days of Receivables are the average number of times an account receivable is converted into cash in each period (usually a year). It measures the liquidity of a business's accounts receivable. (PJ García - Teruel, 2007). As of December 2020, POP Mart's accounts days of receivables for the past year were 8.8.

Asset turnover is an important financial ratio to measure the efficiency of enterprise asset management. It reflects the turnover speed of all assets from input to output in the process of enterprise operation. This measure is usually calculated by dividing a company's operating income by its average total assets over a period (JAMES, 2021). As of December 2020, POP Mart's asset turnover ratio was 0.63.

Days of inventory measures the rate at which a company turns over inventory in a year. As of December 2020, POP Mart days of inventory for the past year was 5.82.

Compared with 2019, the Days of Inventory, Days of Payable and Days of Receivables in 2020 have increased to a certain extent. Asset turnover ratio and inventory turnover ratio both decrease compare with previous year. Which indicate that under the impact of the epidemic, POP Mart's inventory liquidation speed has been reduced, the private non-profit organization fund occupies in the search for a long-time side, and the efficiency of inventory management work has been reduced. But the company's collection efficiency is still in good shape. Overall, POP MART took a hit in 2020. Total asset turnover was reduced, sales capacity weakened and asset utilization efficiency decreased.

3.2.4 Profitability Ratios

Table 8: Profitability Ratio Analysis

	2017	2018	2019	2020
GPM	47.61	57.92	64.77	63.42
OPM	2.96	26.08	35.72	29.02
NPM	0.99	19.34	26.8	20.83

BEP	2.8	33.4	56.7	10.3
ROA	1.1	36.11	61.06	13.13
ROE	1.99	66.11	110.55	15.66
Earnings per Share	0.14	0.42	1.36	2.46
Payout Ratio	0	0	0	0

Gross margin is calculated by dividing gross profit by the company's operating revenue. (D Alcock, 2006). As of December 2020, POP Mart's gross profit margin for the past year was 63.42%.

The operating margin is determined by dividing operating profit by the company's operating revenue. As of December 2020, POP Mart's operating profit margin for the past year was 30.26%.

Net profit margin is calculated by dividing net profit attributable to shareholders of the parent company by the company's operating income (MURPHY, 2021). As of December 2020, POP Mart's net interest rate for the past year was 20.83%.

Break-even point is the production when total sales revenue equals all costs (intersection of sales revenue and total cost lines). With the break-even point, when sales revenue is above the break-even point, the company is profitable, otherwise, the company loses money (HAYES, 2021). As of December 2020, POP Mart's break-even point for the past year is 10.3%

ROA assets is a measure of how much net profit is generated per unit of assets. Net income attributable to shareholders of the parent company should be divided by the average total assets of the company over a period. As of December 2020, POP Mart's annualized return on assets for the past one year was 13.13%

ROE is determined by the company's net income to parent shareholders, net of preferred stock dividends, divided by the company's average equity attributable to the parent company over a period. As of December 2020, POP Mart's annual return on equity for the past one year was 15.66%.

Earnings per share are calculated by dividing operating income by the average number of diluted potential common shares outstanding (KINDNESS, 2021). Which is the amount a company derives from the normal course of its business, typically from sales of goods and services to customers. As of December 2020, the 1-year growth rate of earning per share of POP MART is 81.4%, and the 3-year growth rate of earning per share is 162.5%.

The dividend payout ratio is the ratio of dividends paid out to shareholders to a company's earnings. It reflects the company's dividend distribution policy and dividend payment ability. It is calculated by dividing the dividend per share by the company's earnings per share after non-recurring gains and losses, or by diluting the earnings per share (George T. Friedlob, 2018). As of December 2020, POP MART had a dividend payout ratio of 0 for the past year.

Compare to the 2018 and 2019, the most of data show a downward trend to varying degrees except earnings per share. Break-even point, return on assets and return on equity showed a significant decline compared with previous years in particularly. POP MART has a high capacity to adapt to changes in market demand and is highly risk resistant. But the asset utilization effect is not satisfactory. And it has not achieved good results in terms of increasing revenue and saving capital usage.

4. Assumptions and Revenue Forecasts

This chapter through a bottom-up split forecast based on POP Mart's main sales channels (retail stores, robot stores, online, wholesale, exhibitions) for the company's new store openings and same-store growth rate; and a top-down forecast for cross-validation with the trendy toy market space and the outlook of the market share by using the forecast assumptions and valuation model. The formula uses in this chapter is:

$$\text{YOY Growth} = \left[\frac{\text{This year} - \text{Last Year}}{\text{Last year}} \right] * 100$$

$$\text{Revenue} = \text{Average Price} * \text{Units sold}$$

4.1 POP MART Bottom-Up perspective forecasts

4.1.1 POP MART retail store revenue forecast

By analyzing the data trends of the past four years in POP Mart's annual financial report for 2020 and the future directions in the prospectus. (limited, 2020) Retail stores focus on first and second tier cities. Lease 100-150 square meters of space and open directly operated retail stores. As of 2019, a total of 114 offline retail stores have been opened in mainstream shopping areas in 33 first- and second-tier cities across China. The retail stores are an important channel for fans to experience new products and enhance the shopping experience, and for the Company to enhance brand awareness and establish its market position. This paper forecast that the number of new stores will be 80 and 100 in 2021 and 2022, and the same store sales growth rate is expected to be 20% respectively in the same period. Combining the above parameters, this paper forecast the company's retail store revenue to be ¥2.26 billion and ¥3.40 billion in 2021 and 2022, corresponding to a year-on-year growth rate of 109.98% and 50.79%.

Table 9: POP MART retail store revenue forecast (Unit: Million)

	2017	2018	2019	2020	2021	2022
Operation revenue	101.05	248.257	739.690	1074.23	2256.66	3401.40
<i>YOY</i>		<i>145.79%</i>	<i>197.95%</i>	<i>45.23%</i>	<i>109.98%</i>	<i>50.79%</i>
The number of retail store	32	63	114	221	298	395
<i>New open store</i>		35	52	110	80	100
<i>Closed store</i>		4	1	3	3	3
Average number of stores	24	47	88	168	260	347
New store time coefficient	0.50	0.50	0.50	0.40	0.45	0.50
New store Fin efficiency coefficient	0.83	0.83	0.92	0.75	0.92	0.92
New store (time * fin efficiency) coefficient	0.42	0.42	0.46	0.30	0.41	0.46
Average revenue per store	4.208	5.282	8.405	6.413	8.692	9.816
Average revenue per store after (time * fin efficiency) coefficient		5.527	8.563	7.352	8.924	9.932
<i>Same store sales growth rate</i>		<i>59.6%</i>	<i>63.1%</i>	<i>-20%</i>	<i>20%</i>	<i>10%</i>

4.1.2 POP MART robot store revenue forecast

By analyzing the data trends of the past four years in POP Mart's annual financial report for 2020 and the future directions in the prospectus. (limited, 2020). The robot stores focus on penetration in lower tier cities. Mainly located in shopping centers and subway stations and other high-traffic locations, each can store up to about 60 SKUs.

825 robot stores in the country as of the end of 2019, of which 81 are joint ventures, with the partner responsible for inventory, location leasing and maintenance, and a monthly share of 35% of total sales revenue, with no new joint venture robot stores in the future.

The paper forecast the number of new robot shops to be 500 and 400 in the period 2021 and 2022, corresponding to operating revenue of ¥660 million and ¥950 million in the same period. The same store sales growth rate is expected to be 30% and 5% respectively in the same period. 2020 same store sales growth rate decline is mainly based on the impact of the epidemic on offline consumption scenarios. Based on the above figures, this paper forecast the company's retail store revenue to be ¥660 million and ¥950 million in 2021 and 2022, corresponding to a year-on-year growth rate of 93.36% and 42.61%.

Table 10: POP MART robot store revenue forecast (Unit: Million)

	2017	2018	2019	2020	2021	2022
Operation revenue	5.568	86.43	248.5	343.6	664.4	947.5
		1	54	45	76	93
<i>YOY</i>		<i>1452.</i>	<i>187.5</i>	<i>38.26</i>	<i>93.36</i>	<i>42.61</i>
		<i>28%</i>	<i>8%</i>	<i>%</i>	<i>%</i>	<i>%</i>
The number of retail store	43	260	825	1,225	1,725	2,225
<i>New open store</i>	43	217	565	400	500	500
<i>Closed store</i>	-	-	-	-	-	-
Average number of stores	22	130	543	1,025	1,475	1,975
New store time coefficient	0.50	0.50	0.50	0.50	0.50	0.50
New store Fin efficiency coefficient	0.83	0.83	0.92	0.83	0.92	0.92
New store (time * fin efficiency) coefficient	0.42	0.42	0.46	0.42	0.46	0.46
Average revenue per store	25.31	66.49	45.77	33.53	45.04	47.98

Average revenue per store after (time * fin efficiency) coefficient		64.78	47.77	34.65	45.69	48.49
	<i>Same store sales growth rate</i>	59.6%	63.1%	-30%	30%	5%

4.1.3 POP MART online channel revenue forecast

By analyzing the data trends of the past four years in POP Mart's annual financial report for 2020 and the future directions in the prospectus. (limited, 2020). Online channels include Tmall flagship store, WeChat POP Mart box drawer, Pachinko and other mainstream e-commerce platforms in China. from 2017 to 2019, revenue from online channels was realized at RMB1.5 billion, RMB103 million and RMB539 million, respectively, accounting for 9.4%, 20.0% and 32.0% of total revenue. The Tmall flagship store opened in June 2016, which is one of the main channels to attract new fans. RMB252 million of revenue was generated in 2019, ranking first among Tmall model game flagship stores. And the WeChat POP Mart draw box machine launched in September 2018, increasing sales of mystery boxes on smartphones through embedded interactive features in small programs. generating revenue of 271 million yuan in 2019. Pachinko's self-run online community, including trendy toy culture materials and updates, e-commerce and social networking.

The paper forecast that the company's online sales channel will achieve operating revenue of ¥1.72 billion and ¥3.01 billion in 2021 and 2022, corresponding to year-on-year growth of 97.85% and 74.70%. Due to the impact of the epidemic on offline retail and the shift of some demand to online. The revenue of online channel will grow the fastest among all channels of POP MART in 2020. According to the revenue split model, this paper expects the revenue growth rate of TMALL flagship store to be 80.25% and 68.00%; the revenue growth rate of POP MART box to be 80.25% and 47.00%; and the revenue growth rate of other online channels to be 550.00% and 200.00% from 2021 and 2022.

Table 11: POP MART online channel revenue forecast (Unit: Million)

	2017	2018	2019	2020	2021	2022
Operation Revenue	14.854	102.886	539.201	869.419	1720.173	3005.181

	<i>YOY</i>	529.65%	227.07%	62.24%	97.85%	74.70%
TMALL flagship store		72.355	251.499	402.933	726.286	1220.161
	<i>YOY</i>	740.65%	247.59%	60.21%	80.25%	68.00%
POP MART box		22.951	271.214	433.907	782.117	1149.712
	<i>YOY</i>		1081.71%	59.99%	80.25%	47.00%
Other online channels		6.247	7.580	16.488	32.579	211.769
	<i>YOY</i>		21.34%	117.52%	97.6%	550.00%

4.1.4 POP MART wholesale and exhibition channel revenue forecast

By analyzing the data trends of the past four years in POP Mart's annual financial report for 2020 and the future directions in the prospectus. (limited, 2020).The paper forecast revenue from 2021 and 2022 to be ¥260 million and ¥350 million for the wholesale channel and ¥0.7 billion and ¥0.9 billion for the exhibition channel, respectively. In terms of wholesale business, this individual study believes that with the expansion of the company's overseas distribution network, the company's wholesale business is expected to maintain steady growth. According to the revenue splitting model, the paper forecast that the revenue growth rate of this channel is 45.40% and 31.73%, corresponding to operating revenue of ¥260 million and ¥350 million. In terms of exhibition business, considering the impact of the epidemic in 2020, this individual study expect that the exhibition revenue will be affected to a certain extent. With the development of the epidemic under control, the paper expect that the exhibition business of the company will resume steady growth in 2021 and 2022. The paper forecast that the exhibition revenue of the company will be ¥0.7 billion and ¥0.9 billion, corresponding to the year-on-year growth rate of 100.00% and 20.00%.

Table 12: POP MART wholesale and exhibition channel revenue forecast (Unit: Million)

	2017	2018	2019	2020	2021	2022
Wholesale Revenue	29.884	51.329	110.467	180.272	262.121	345.288
<i>YOY</i>		<i>71.76%</i>	<i>115.21%</i>	<i>63.19%</i>	<i>45.4%</i>	<i>31.73%</i>
1. Dealers	27.759	44.972	93.601	160.033	237.834	316.143
<i>YOY</i>		<i>62.01%</i>	<i>108.13%</i>	<i>70.97%</i>	<i>48.62%</i>	<i>32.93%</i>
2. Bulk purchasing	2.125	6.357	16.866	20.239	24,287	29.144
<i>YOY</i>		<i>199.15%</i>	<i>165.31%</i>	<i>20.00%</i>	<i>20.00%</i>	<i>20.00%</i>
Exhibition Revenue	6.763	25.608	45.522	36.417	72.835	87.402
<i>YOY</i>		<i>278.65%</i>	<i>77.76%</i>	<i>-20.00%</i>	<i>100.00%</i>	<i>20.00%</i>
1. Mystery Box	0.689	2.695	4.867	3.893	7.787	9.345
<i>YOY</i>		<i>291.23%</i>	<i>80.56%</i>	<i>-20.00%</i>	<i>100.00%</i>	<i>20.00%</i>
2. Others	6.074	22.912	40.654	32.523	65.047	78.057
<i>YOY</i>		<i>227.22%</i>	<i>77.44%</i>	<i>-20.00%</i>	<i>100.00%</i>	<i>20.00%</i>

4.1.5 Summary of POP MART revenue split and forecasts

By analyzing the data trends of the past four years in POP Mart's annual financial report for 2020 and the future directions in the prospectus. (limited, 2020). This individual study forecast the revenue of this company in 2021 and 2022 to be ¥4.98 billion and ¥7.79 billion respectively, corresponding to the year-on-year growth rate of 98.69% and 56.51%. This individual study believes that the impact of the epidemic on the company's offline retail has been effectively controlled. With the further expansion of the company's offline retail stores and robot stores in 2021, combined with the continuous growth of online channels, the paper believes that the revenue of company in 2021 is expected to further accelerate compared with that in 2020.

Table 13: POP MART revenue split and forecast (Unit: Million)

Revenue Split	2017	2018	2019	2020	2021	2022
Revenue	158.074	514.737	1683.52	2504.007	4975.305	7786.886
<i>YOY</i>		<i>225.63%</i>	<i>227.07%</i>	<i>48.74%</i>	<i>98.69%</i>	<i>56.51%</i>
Retail store	101.005	248.257	739.69	1074.231	2255.664	3401.401
<i>YOY</i>		<i>145.79%</i>	<i>197.95%</i>	<i>45.23%</i>	<i>109.98%</i>	<i>50.79%</i>
Online channel	14.854	102.886	539.201	869.419	1720.173	3005.181
<i>YOY</i>		<i>592.65%</i>	<i>424.08%</i>	<i>61.24%</i>	<i>97.85%</i>	<i>74.70%</i>
Robot store	5.568	86.431	248.554	343.645	664.476	947.593
<i>YOY</i>		<i>1452.28%</i>	<i>187.58%</i>	<i>38.26%</i>	<i>93.96%</i>	<i>42.61%</i>
Wholesale	29.884	51.329	110.467	180.272	262.121	345.288
<i>YOY</i>		<i>71.76%</i>	<i>115.21%</i>	<i>63.19%</i>	<i>45.40%</i>	<i>31.73%</i>
Exhibition	6.763	15.608	45.522	36.418	72.835	87.402
<i>YOY</i>		<i>278.65%</i>	<i>77.76%</i>	<i>-20%</i>	<i>100%</i>	<i>20.00%</i>

4.2 POP MART Top – Down perspective forecasts

4.2.1 POP MART market occupancy rate and retail value forecast

By analyzing the data trends of the past four years in POP Mart's annual financial report for 2020 and the future directions in the prospectus. (limited, 2020). The paper forecast the company's retail value to reach ¥4.94 billion and ¥7.79 billion in 2021 and 2022, respectively. This is like the bottom-up forecast of ¥4.98 billion and ¥7.79 billion. According to the disclosure of the company's prospectus, market share of POP MART in the trendy toy industry in 2019 is 8.5%, and this individual study believe that the company as the industry leader is expected to further consolidate its market position by virtue of its brand and channel advantages, and its market share is

expected to further increase. This paper forecast that the company's market share in the trendy toys market will increase by 2.5% in each year to 13.5% and 16.0% in 2021-2020. Combined with the Frost Sullivan data cited in POP Mart's annual prospectus, the market size of the trendy toy industry will reach ¥36.6 billion and ¥48.7 billion respectively in China, and this paper expect POP Mart's retail value will reach ¥4.94 billion and ¥7.79 billion respectively, corresponding to a year-on-year growth rate 96.15% and 57.70%.

Table 14: POP MART market occupancy rate and retail value forecast (Unit: Billion)

	2018	2019	2020	2021	2022
Trendy toy market size in China	14.0	20.7	22.9	36.6	48.7
<i>YOY</i>		47.86%	10.63%	59.83%	33.06%
POP MART's market share		8.5%	11.0%	13.5%	16.0%
POP MART's retail value		1.76	2.519	4.941	7.792
<i>YOY</i>			43.17%	96.15%	57.7%

4.2.2 POP MART gross profit margin forecasts

By analyzing the data trends of the past four years in POP Mart's annual financial report for 2020 and the future directions in the prospectus. (limited, 2020). In terms of profit margin, this paper forecasts the gross margin of company reach to 65.05% and 66.09% in 2021 and 2022, respectively, showing a slight improvement trend overall. In 2020, the cost of goods accounted for 80.3% of the company's operating costs, and the design and licensing fees accounted for 9.3%, both of which accounted for nearly 90%. As an industry leader, POP MART has a relative bargaining advantage in the OEM (original equipment manufacturer) process, which can dilute the tooling cost through high volume shipment. In addition, combined with the industry practice, the design fees paid to designers usually follow a decreasing trend with the number of sales.

This individual study believe that the company's gross margin still has space for slight improvement.

Table 15: POP MART gross profit margin forecasts

		2017	2018	2019	2020	2021	2022
Consolidated gross margin		47.61%	57.90%	64.76%	64.42%	65.05%	66.09%
	Retail store	54.95%	61.24%	65.64%	65.00%	65.00%	66.00%
	Online channel	56.05%	62.83%	68.94%	68.00%	68.5%	69.00%
	Robot store	63.16%	71.45%	70.72%	70.00%	70.00%	70.00%
	Wholesale	19.70%	25.56%	36.72%	40.00%	40.00%	40.00%
	Exhibition	29.85%	25.32%	36.83%	30.00%	30.00%	30.00%

4.3 Risk Analysis

4.3.1 Short IP life cycle

As the core content of IP operation, Molly's image background is blank, and there are no complete story lines and worldviews to support the character image. In other words, POP MART lacks of cultural heritage. POP MART CEO Wang Ning has publicly said that given five more years, POP MART will become the most Disney-like enterprise in China, although not as many movies as Disney, it will have a lot of very valuable IP like Disney. But POP Mart's IP operation is very different compared to Disney's. IP operation method of Disney is from content to commodity. Disney has accumulated rich experience in IP operation, and has developed a complete realization chain around IP from surrounding areas, film and television, games and theme parks. But POP Mart's IP operation method is direct commercialization. POP Mart's IP is a designed action figure. POP Mart is benchmarked against Japan's Sanrio, the company that owns Hello Kitty which is a global household name. However, Sanrio has been losing revenue and profits for six consecutive years. In the past four years, the company's financial data is in a very rapid decline: operating profit from 6.904 billion yen to 2.106 billion yen from 2016 to 2019, the profit shrinking by two-thirds; net profit from 6.475 billion yen in 2016 to 191 million yen in 2019. IP has a life cycle, strong as Hello Kitty after more than 40 years of hardship, will also encounter the problem of being abandoned by the times. Mystery box as a derivative of animation, the audience itself is small, the life cycle even shorter. POP MART must keep chasing

new IP, and even cross-border linkage.

4.3.2 Fierce competition

The current market size of trendy toys retail in China has increased from ¥6.3 billion in 2015 to ¥20.7 billion in 2019, with a CAGR (Compound annual gross rate) of 34.6%. And with the rising popularity of trendy toys in China, it is expected to reach ¥76.3 billion in 2024 (caibaoshuo, 2021), with an annualized CAGR of nearly 30% in the latter five years. However, the trendy toy market in China is crowded with players and has a highly fragmented market share. Data indicate that the market share of the top 5 players in the market by retail value is only 22.8% combined. As the current leader in market, the market share of POP MART is only 8.5%. Sky-eye data indicate that in the past five years, China's trendy toy-related enterprise annual registration trend is rising year by year, at the beginning of this year to November 30, China has added more than 260 new trendy toy-related enterprises. In the Chinese market, noteworthy competitors include Dreams, Medico Toy, 52Toys, and Twelve Buildings Culture. Among them, Dreams and Medico Toy are both veteran Japanese toy companies (think-tank, 2021). In addition to the above-mentioned competitors, new retail companies, including Masterpiece and San Fu, have started to launch low unit price mystery boxes, which may have an impact on POP Mart's market share and profitability.

4.3.3 Marketing model criticism

Mystery box originally from Japan and developed from a lucky bag, mystery box usually sold in a series, with each series generally having 8-12 styles. The most attractive part of mystery box is hard to get special styles. In addition to the ordinary style, those special styles with very low probability can motivate the gambling psychology and stimulate the mystery box consumption. This randomized buying experience is what makes many players willing to spend a lot of money on mystery box. The prices of pop-up products on the market are often very high. The price of special style can reach up to 40 times the selling price on the secondary market, and this uncertainty of return is one of the key reasons why the mystery box craze continues to rise. In fact, the mystery box business model has been criticized for emptying 'young people's wallets'. The biggest bet of the POP MART mystery box lies in the hidden section, but POP MART does not disclose the specific value, according to the player's statistics, the probability of the hidden section appearing is 1/144, which means that costumers must buy at least 12 full sets of mystery boxes to draw out, and the price of 12 full boxes is ¥8496.

4.3.4 Financial risk

In the balance sheet of POP Mart's IPO document, there is a proprietary column of asset data for property plant and equipment, a figure of nearly 140 million in the first half of 2020. And according to the rest of this IPO document, the clear majority of POP Mart's offline stores and vending machine sites across the country are leased; it does not hold its own properties, and even its office space is leased. In addition, all of POP Mart's products are manufactured by authorized third parties, so the plant and production facilities do not exist either. The only thing that counts as equipment are vending machines. According to the disclosure in the IPO filing, POP MART still maintains 1,001 vending machines nationwide in the first half of 2020. According to this figure, the cost of each vending machine is about ¥140,000, while the highest price of similar vending machines in the market is less than ¥25,000. The difference in between is puzzling. From the tax point of view, this company also has some incomprehensible problems. The profit margin of POP MART is more than 60%, and its annual revenue is close to 2 billion, but its 15 branches across the country are identified as small and micro enterprises by the local government, enjoying the treatment of enterprise income tax exemption.

5. CONCLUSION

From 2017 to 2020, the debt ratio of POP MART is growing at a steady pace, which indicate that creditors are now supplying more than half the total financing. In addition to an upward trend, the level of the debt ratio is well above the previous year. The debt to equity of POP MART is declining at a steady pace, which indicate that long-term debt position is healthy of POP MART. Creditors' rights and interests can be well protected. And the EBITDA of POP MART shows a trend of rapid growth from 2017 to 2020, even with the onslaught of the COVID-19, still maintaining a continuous growth trend, which indicate that POP MART has have enough cash available to cover their expenses. As for the Liquidity ratio, current ratio and quick ratio are both growing at a steady pace from 2017-2018 and a sharp rise in 2020, which indicate that POP MART has less pressure on pay off debts in short time. About the efficiency ratio. Compared with 2019, the Days of Inventory, Days of Inventory and Days of Receivables in 2020 have increased to a certain extent. Asset turnover ratio and inventory turnover ratio both decrease compare with previous year. Which indicate that under the impact of the epidemic, POP Mart's inventory liquidation speed has been reduced, the private non-profit organization fund occupies in the search for a long-time side, and the efficiency of inventory management work has been reduced. But the company's collection efficiency is still in good shape. Overall, POP MART

took a hit in 2020. Total asset turnover was reduced, sales capacity weakened and asset utilization efficiency decreased. Moving to the profitability ratio of POP MART. Compare to the 2018 and 2019, the most of data show a downward trend to varying degrees except earnings per share. Break-even point, return on assets and return on equity showed a significant decline compared with previous years in particularly. POP MART has a high capacity to adapt to changes in market demand and is highly risk resistant. But the asset utilization effect is not satisfactory. And it has not achieved good results in terms of increasing revenue and saving capital usage. To sum up, POP MART is experiencing some degree of financial weakness from the impact of the 2020 epidemic. However, it remained profitable overall, especially sales in the online channel increased dramatically, making up for the losses in the offline channel and bringing in significant revenue for the company.

Through a bottom-up split forecast based on POP Mart's main sales channels and a top-down forecast for cross-validation with the trendy toy market space and the outlook of the market share in 2021 and 2022. With the epidemic under good control in China, the market environment and sales environment for trendy toy industry has changed for the better. POP Mart's offline retail store sales have also recovered, and with the popularity of POP MART and its prevalence, the sales of POP Mart have improved substantially compared to the previous four years. From the present point of view, the trendy toy retail market is still in the initial stage of competition in China, far from saturation, and has not formed a market monopoly. Although online traffic growth is rapid, it plays the role of partial increment and consumer drainage, offline retail is the most important growth space of the mystery box market. Accordingly, the offline retail store still is the basic dish of POP Mart.

6. RECOMMENDATIONS

POP MART is the leader of the China's trendy toy industry. With IP design as the core value, the company has successfully built a closed-loop ecology of design, manufacturing, channels and users. This individual study forecast the company's revenue to be ¥4.98 billion and ¥7.79 billion from 2021 to 2022, and net profit to be ¥1.15 billion and ¥1.94 billion, respectively, corresponding to earning per share forecast of ¥0.82 and ¥1.38.

Table 16: Summary

	2018	2019	2020	2021	2022
Operating revenue	514.51	1683.43	2504.01	4975.31	7786.89

Operating revenue growth rate YOY	225.49%	227.19%	48.74%	98.69%	56.51%
Net profit (Million yuan)	99.62	451.12	553.91	1150.83	1937.00
Net profit growth rate YOY	6242.96%	353.29%	22.79%	107.76%	68.31%
Earnings per share (yuan)	0.07	0.32	0.40	0.82	1.38
Gross profit Return on equity ROE	57.92%	64.77%	64.42%	65.05%	66.09%
Net assets per share (yuan)	0.16	0.42	3.93	4.75	6.13
PE	888	196	160	77	46
PEG	0.6	2.2	3.2	0.9	0.8
PB	404	149	16	13	10

Considering that the trendy toy industry in which the company is located is still in a period of rapid development, and the POP MART as the industry leader, which is expected to lead the industry with its brand advantages, this individual study use PEG valuation method to estimate the value of the company. As of 13 January 2021, the stock price of company corresponds to a PEG multiple of 0.9 and 0.8 for 2021 and 2022, which is below the robust PEG valuation pivot 1.0. In the short term, this individual study believes that the number of POP Mart's stores and the increase in penetration of the trendy toy customers will drive the company's solid growth. In the long term, this individual study believes that with the brand influence of POP MART continues to expand, the company is actively building a diversified product matrix that is expected to bring long-term growth for the brand. This paper is optimistic about the continuous evolution ability of POP MART as a leading company of trendy toy players, and the POP MART is expected to grow into a high-end fashion brand for the young generation.

In recent years, various trendy cultures have emerged, but there are only a few

products that can keep the attention. From research, the POP MART needs to solve the following problems if it wants to achieve long-term development. Firstly, At the design level, there are many problems, such as the same image of trendy toy, creative collision, and insufficient protection of intellectual property rights. At the operational level, there is an over-reliance on the Mystery box format and on some of the head IP. Some company clime that if their head IP images do not remain attractive to consumers in the long run, they will face the dilemma of having no alternatives. Compared to story-based IP with a larger worldview, trendy toy's IP do not have story content to support them, which is both a reason for their rapid explosion and a reason for limiting their development. In addition, the mystery box is still the most attractive format in the trend toys industry, It is also unclear when this uncomplicated product model will lead to consumer fatigue. Many industry experts believe that, in the face of consumers' fleeting preferences and growing cultural needs, there is still a great deal of uncertainty and challenge as to whether the trendy toy operators can constantly introduce new designers, continuously innovate product forms and product lines, and attract consumers to repeat purchases. At the cultural level, a set of background that can represent the meaning of Chinese culture has not yet been formed. Compared to the traditional sense of toys, the deeper level behind the trendy toys is the cultural connotation. POP MART takes trendy culture as the cornerstone and designers as the core, integrating modern fashion, traditional culture, art and other trendy factors, representing the fashion of this generation. Moreover, it represents the cultural taste of young people in this generation. trendy toy expressing an attitude that has become a spiritual symbol. At present, many trendy toy companies have formed a mystery box culture by using uniform packaging, size, selling methods, special style ratios. But this format is not the first in the trendy toy industry and is only a sales model. The core of the trendy toy industry is still the form of content. Compared to the systems created by companies like LEGO and Disney, the Chinese trendy toy Industry needs to explore more models and incorporate more Chinese cultural elements and imagery.

REFERENCES



จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

- Babbie, E. R. (2010). *Research Guides*.
<https://libguides.usc.edu/writingguide/quantitative>
- BERRY-JOHNSON, J. (2021). *Days Payable Outstanding*.
<https://www.investopedia.com/terms/d/dpo.asp>
- caibaoshuo. (2021). *POP Mart financial statement*.
<https://caibaoshuo.com/companies/09992>
- D Alcock, R. H. (2006). Effects of pasture improvement on productivity, gross margin and methane emissions of a grazing sheep enterprise.
<https://www.sciencedirect.com/science/article/abs/pii/S0531513106001282>
- George T. Friedlob, L. L. F. S. (2018). *Essentials of Financial Analysis*.
https://books.google.co.th/books?hl=en&lr=&id=EmvUrUxhmdIC&oi=fnd&pg=PR3&dq=financial+analysis&ots=AzXiRZ7gH6&sig=3reUp2MLf24FgIQZbCYtZSJzZc0&redir_esc=y#v=onepage&q=financial%20analysis&f=false
- HAYES, A. (2021). *Break-Even Analysis*.
<https://www.investopedia.com/terms/b/breakevenanalysis.asp>
- JAMES, M. (2021). *Asset Turnover Ratio*.
<https://www.investopedia.com/terms/a/assetturnover.asp>
- KINDNESS, D. (2021). *Earnings Per Share (EPS)*.
<https://www.investopedia.com/terms/e/eps.asp>
- limited, P. M. I. (2020). 2020 ANNUAL REPORT.
https://cdn.shopify.com/s/files/1/0339/7091/3412/files/ANNUAL_REPORT_2020.pdf?v=1619439991
- MURPHY, C. B. (2021). *Net Profit Margin*.
https://www.investopedia.com/terms/n/net_margin.asp
- PJ García - Teruel, P. M. S. (2007). Effects of working capital management on SME profitability.
<https://www.emerald.com/insight/content/doi/10.1108/17439130710738718/full/html?journalCode=ijmf>
- securities, T. b. (2020). *POP Mart (09992.HK)*.
https://pdf.dfcfw.com/pdf/H3_AP202012111439167473_1.pdf
- think-tank. (2021). What you want to know about Gen Z, here's POP Mart to tell you.
<https://www.jiemian.com/article/5398009.html>
- Wikipedia, F. (2008). *PEG ratio*. https://en.wikipedia.org/wiki/PEG_ratio

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