Analysis of Apple Inc's Business Model Based on the SWOT Model and Financial Ratios

Hongyue Qiu*

[1] Division of Business and Management, BNU-HKBU United International College, Zhuhai, China

*Corresponding author. Email: P930006162@mail.uic.edu.cn

Abstract. Apple Inc is one of the most famous and valuable companies in the world. Its tremendous development speed, marketing strategies, and innovation mechanism have brought considerable returns to shareholders and created significant market influence. The topic of this essay is to explore Apple Inc's successful business model, which is specifically reflected in Apple Inc's significant competitive advantage in the industry and the financial analysis under the influence of COVID-19. Through the SWOT model, value chain analysis, and common-size financial statements, this essay discusses the distinction between Apple Inc compared with its main competitors and the reasons for maintaining a relatively stable rate of rapid development.

Keywords: SWOT, Value Chain, COVID-19

1 Introduction

In the process of studying the industry characteristics and development trends of the consumer electronics industry, Apple Inc, as one of the leading companies in the industry, is the research object that can't be ignored. Since its establishment, Apple Inc has grown at an astonishing rate of development in half a century to become one of the world's most innovative and valuable multinational enterprises and has brought a significant return to its shareholders. According to Lazonick and Mazzucato's paper, in July 2012 Apple paid $2.5 billion in dividends, its first such payout since October 1995. Since then Apple has been paying dividends every quarter for a total of $7.8 billion in the first three-quarters of fiscal 2013 [1]. Therefore, the essay selects Apple Inc as the case study object to analyze COVID-19 influences on financial statements and the reasons for Apple Inc's significant market competitiveness from the aspects of the company's business model, financial situation, and risk assessment.

Apple Inc designs, manufactures, and markets smartphones, personal computers, tablets, wearables, and accessories, and sells a variety of related services. In the consumer electronics industry, Apple Inc has tremendous competitive advantages with excellent brand awareness, market influence, and innovation ability, and ranked sixth on the 2021 Fortune Global 500 list.

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The remaining essay structure can be divided into business analysis, including SWOT and value chain analysis, financial analysis, risk assessment, and conclusion four segments.

2 Business Analysis

2.1 SWOT Analysis

2.1.1 Strengths.

- In 2014, Apple Inc. surpassed Google as the world's most valuable brand. Meanwhile, Apple Inc. has significant brand awareness and market influence, and these competitive advantages are based on Apple Inc.'s widely praised product quality. Specifically, Apple Inc has a sophisticated quality management system, and the processes of manufacturing are strictly controlled at multiple stages to ensure the performance and safety of products. For instance, according to the annual report, Apple Inc has established a consumer opinion collection system and is committed to providing customers with the best purchase experience. Among them, Apple Inc collects consumers' opinions through regular consumer questionnaires and online research, which can assist the management team increases their understanding of consumers' psychology and formulating improvement strategies. Therefore, Apple Inc establishes customer loyalty through its high-quality products and further improves the corporate image by minimizing consumer dissatisfaction, which creates a foundation for future expansion.
- Apple Inc not only focuses on product quality but also implements excellent marketing strategies to stimulate consumers' purchase desires. Specifically, Apple's marketing strategies focus on the lifestyle pursued by contemporary consumers and distinguish it from the marketing concept that only concentrates on products. Montgomerie and Roscoe's paper mentioned that the Apple business model is designed to drive consumers into its ecosystem and then hold them there, which gives Apple the unique ability to maintain a low-cost sourcing strategy and subsequently lock the consumer in through high switching penalties [2]. For example, Apple Inc's advertising in 2013 focused on the theme of the family, and the electronic products only played a supporting role in the record. This marketing strategy can let consumers enter the warm scene created by advertising, increase consumers' yearning for a better life, and finally produce the impulse to buy the marketed products. Hence, it's easier for consumers to resonate with Apple Inc's culture, increasing Apple Inc's competitive advantage compared with companies using ordinary marketing methods.
- In 2021, Apple Inc ranked first among the 50 most innovative companies in the world selected by Boston Consulting. Apple Inc can maintain a high growth rate for a long time because of its unique innovation ability, including product innovation and process innovation. For example, Apple Inc reformed the design and production of all-in-one machines, using hard disks instead of memory to make MP3s and so on. As Apple Inc's core competitiveness, these innovative reforms assisted Apple

Inc in quickly occupying and maintaining its leading position in the industry. This has brought huge profit margins and market influence to Apple Inc and provided a substantial basis for Apple Inc's future market expansion and strategic transformation plan.

2.1.2 Weaknesses.
Corresponding to the excellent innovation ability mentioned in the strengths, Apple Inc needs to afford high R&D expenditures every year. In this case, Apple Inc bears additional profit risks, which may disrupt the original long-term development plan and even cause the dilemma of capital chain rupture. Hence, once the new products designed can't be recognized by the market, Apple Inc needs to bear huge sunk costs and face significant financial distress.

2.1.3 Opportunity.

- During the corporation, suppliers can rely on Apple Inc's market influence to improve their reputation or obtain significant synergy. Lehman and Haslam mentioned that Apple's relationship with big box stores is unlike most suppliers as they retain strict control over display and prices [3]. In addition, Apple Inc will keep the core technology confidential, the upstream suppliers only assist in the basic work such as assembling. Hence, suppliers providing agent processing services have low bargaining power because of the service homogeneity. Accompanied by globalization, many professional electronic manufacturing services (EMS) began to emerge in many developing countries. The sharp increase in the number of global suppliers has provided Apple Inc with more supplier choices, giving Apple Inc a greater degree of reduction in product manufacturing costs while ensuring quality and service. Therefore, Apple Inc can take advantage of this opportunity to further optimize its product value chain and create considerable profit margins.
- Combined with the analysis of the strengths part, excellent brand effect, marketing strategy, and product quality can provide Apple Inc with a significant competitive advantage. Specifically, Bergvall-Kåreborn and Howcroft's paper considers Apple's rapid dominance of the mobile market. This they argue led to the emergence of a business model that weaves together internet-enabled mobile devices with digital content, brought together within a closed proprietary platform or ecosystem, which created a unique competitive advantage for Apple Inc [4]. Besides, according to the prediction of the American Consumer Electronics Association (CEA), the income of global consumer electronics products will grow rapidly at a relatively stable rate. In this case, the competitive advantage within the industry can provide the possibility for Apple Inc's business strategy of further seizing market share and attracting loyal customers of other brands.

2.1.4 Threats.
Apple Inc sells a wide range of products, including mobile phones, tablets, hardware, and software systems. This strategy disperses the business risks but increases the

number of Apple Inc's competitors. In this case, many enterprises focus on the production of one of these products, using more concentrated capital for innovation and development, which means they may become more competitive than Apple Inc in this specific field. Hence, once Apple Inc's development strategy is delayed or hindered, it is likely to face the dilemma of customer churn.

2.2 Value Chain Analysis

The margin of Apple Inc's value chain is generated by support activities and primary activities. Among them, the support activities of the enterprise also have an additional synergistic effect on primary activities, improving its efficiency indirectly.

2.2.1 Primary Activities.

Apple Inc's primary activities are divided into upstream production and downstream sales. Among them, the specific activities of upstream production include inbound logistics and operations, which are specifically reflected as material purchase and product development. Firstly, in accord with the discussion on the bargaining power of suppliers, the suppliers in the consumer electronics market don't have the main decision-making power because of the substitutability of their services. As a common feature shared by the whole industry, all existing enterprises can reduce their costs through the dominant bargaining power. However, different from the competitors in the industry, Apple Inc discloses in its annual reports that it invests huge additional funds to improve the supplier relationship every year. In addition, Apple Inc creates a win-win cooperation strategy by transmitting market forecast information to parts suppliers. Under the stable communication channels between Apple Inc and suppliers, suppliers can effectively obtain relevant information. In this case, compared with other companies in the industry, Apple Inc's huge annual investment and information transfer can ensure the stability of products and further improve its future profitability. Secondly, Apple Inc owns a well-praised market reputation because of its excellent products and innovation ability. Compared with other competitors in the same industry, such as Dell and Samsung, Apple Inc's products have significant technical advantages in design and manufacturing such as the development of the ecosystem. In addition, unlike other enterprises in the industry that face the problem of inefficient integration, Apple Inc has created an efficient JIT inventory system to align inventory integration. There is no doubt that tremendous innovation capability and production model integration can assist Apple Inc in quickly occupying market share and expanding its influence in the industry.

The downstream sales include outbound logistics, marketing & sales, and services, which are reflected specifically in product storage, delivery, advertising, and after-sales service. First, to reduce the serious problem of the company's inventory backlog, Apple Inc innovatively used the direct selling model. It means Apple Inc produces according to the demand of consumers, maximizing the mutual matching of the company's production capacity and profits. Therefore, Apple Inc always estimates the future production scale based on the market demand for similar products in previous years and implements the internet sales strategy through cooperation with e-commerce platforms. Unlike its competitors in the industry, Apple Inc can start manufacturing after accepting customers' orders and adjust the product configuration according to customers' needs to a certain extent. This mode of production can not only improve the purchase experience of consumers but also reduce the cash flow pressure of the company. Secondly, Apple Inc has an excellent advertising design team, which can attract loyal customer groups through marketing and media stories. As mentioned in the strengths analysis of Apple Inc, Apple Inc places the product in a special situation and transforms its product into a symbol that can represent the scene that is attractive to customers. This marketing strategy is easier to be accepted by consumers and attracts them to approve of Apple Inc's brand culture. Finally, Apple Inc has also been widely praised by consumers for its excellent after-sales service. No matter the introduction of a replacement service or Apple Inc's unique genius bar design, it can satisfy customers' demands as soon as possible, which has a significant positive impact on maintaining the brand image and attracting potential investors in the market.

2.2.2 Support Activities.

Apple Inc's support activities include firm infrastructure, human resource management, technology development, and procurement management. Firstly, as mentioned in the operations, Apple Inc has an excellent product and process design and treasures R&D and innovation as its core competitiveness in the market competition. In addition, Apple Inc discloses a sophisticated management and planning mechanism, which can effectively integrate logistics and cash flow in the production and sales process. In this case, Apple Inc's excellent innovation ability and technology developments can complete its long-term strategic layout and market expansion. Secondly, Apple Inc mentions in its annual reports that it has established a unique evaluation system for procurement management, including high standard requirements for quality, upstream logistics, and follow-up tracking. Apple Inc's careful and systematic evaluation process enables it to continuously monitor the performance of suppliers and reduce the possibility of receiving defective materials. Hence, Apple Inc can ensure the quality and efficiency of procurement by replacing unqualified suppliers.

Thirdly, Apple Inc has closed its useless production facilities in many places, including the United States and Ireland segments, and ensured its production efficiency by establishing a JIT integration system. In this case, Apple Inc has greatly reduced its infrastructure demand and reduced production costs on the premise of improving its profitability. Finally, to achieve effective human resources management, Apple Inc has specially set up an employee assistance center to deal with employees' daily consultations. Corresponding to Apple Inc's production and sales, a series of new employee induction training, technician-related training, and team cooperation training carried out by the employee assistance center can significantly help employees solve problems and improve work efficiency. In addition, Apple Inc implemented the benefit registration system FBE (Flex Benefits Enrollment) on the company's Intranet in 1996. The implementation of this plan enables most employees to gradually form the management habit of their post-retirement benefits, provide protection for employees to the greatest extent, and encourage employees to improve work efficiency and quality.

3 Financial Analysis

3.1 Consolidated Statements of Income Analysis

According to the information disclosure of Apple Inc's annual reports from 2019 to 2021, common-size consolidated statements of income are calculated by dividing all accounts by the total revenue of that year, which increases the comparability between different accounts in different years [5].

Table 1. Consolidated Income Statements

	Sep. 25, 2021	Sep. 26, 2020	Sep. 28, 2019
Net sales:			
Products	$ 297,392	$ 220,747	$ 213,883
Services	68,425	53,768	46,291
Total net sales	365,817	274,515	260,174
Operating costs			
Cost of sales:			
Products	192,266	151,286	144,996
Services	20,715	18,273	16,786
Research and development	21,914	18,752	16,217
Selling, general and administrative	21,973	19,916	18,245
Total costs and expenses	256,868	208,227	196,244
Operating income	108,949	66,288	63,930
Other income/(expense), net	258	803	1,807
Income before provision for income taxes	109,207	67,091	65,737
Provision for income taxes	14,527	9,680	10,481
Net income	$ 94,680	$ 57,411	$ 55,256

- 2019-2020

According to the analysis of the consolidated statements of income in 2019 and 2020, its total revenue increased from $260,174 million to $274,515 million, increasing 5.51%. However, the fluctuation of various operating costs, total operating income, and provision for income taxes were all less than 1% of the total revenue. Overall, the company's total operation cost increases were close to the rise of the company's total revenue from 2019 to 2020, which meant that the company's overall performance was maintained at a certain level. Meanwhile, the operating income of Dell, Apple Inc's main competitor, rose from $-191 million to $2,622 million from 2019 to 2020, and its growth accounted for 3.04% of the total revenue [6]. Therefore, Apple Inc's overall financial performance was slightly inferior compared with its competitors.

- 2020-2021

Based on the consolidated statements of income in 2020 and 2021, Apple Inc's total revenue increased from $274,515 million to $365,817 million, rising by 33.26% tremendously. In addition, the costs of sales of products and services, administrative expenses, R&D expenses, and other general cost factors percentage in the total revenue dropped compared with 2020. Among them, Apple Inc's cost of sales decreased significantly by more than 1%. Driven by these factors, Apple Inc's operating income percentage in total revenue increased by more than 5% in 2021. According to Apple Inc's disclosure, the significant decline in its costs of sale was mainly caused by the alleviating of the instability of its manufacturing supply chain and chip supply. Previously, due to the popularity of COVID-19, many Southeast Asian countries reduced production efficiency or interrupted manufacturing, which increased the maintenance cost of Apple Inc [7]. Therefore, Southeast Asian companies resumed production in 2021 dramatically reducing Apple Inc's operating costs. In this case, Apple's net revenue disclosed in 2021 reached $94,680 million, amplifying by about 5% compared with 2020. In this case, Apple Inc's operation activities were enhanced in 2021 overall, which means that Apple Inc had higher market competitiveness in the consumer electronics industry.

3.2 Consolidated Balance Sheets Evaluation, Ratio Analysis, and Suggestions

Similarly, common-size consolidated balance sheets are prepared by dividing all items by the total assets of that year.

Table 2. Consolidated Balance Sheets

	Sep. 25, 2021	Sep. 26, 2020	Sep. 28, 2019
Assets			
Current assets:			
Cash and cash equivalents	$ 34,940	$ 38,016	$ 48,844
Marketable securities	27,699	52,927	51,713
Accounts receivable, net	26,278	16,120	22,926
Inventories	6,580	4,061	4,106
Vendor non-trade receivables	25,228	21,325	22,878
Other current assets	14,111	11,264	12,352
Total current assets	134,836	143,713	162,819
Non-current assets:			
Marketable securities	127,877	100,887	105,341
Property, plant and equipment, net	39,440	36,766	37,378
Other non-current assets	48,849	42,522	32,978
Total non-current assets	216,166	180,175	175,697
Total assets	351,002	323,888	338,516
Liabilities and Shareholders' equity			
Current liabilities:			
Accounts payable	54,763	42,296	46,236
Other current liabilities	47,493	42,684	37,720
Deferred revenue	7,612	6,643	5,522
Commercial paper	6,000	4,996	5,980
Term debt	9,613	8,773	10,260
Total current liabilities	125,481	105,392	105,718
Non-current liabilities:			

Term debt	109,106	98,667	91,807
Other non-current liabilities	53,325	54,490	50,503
Total non-current liabilities	162,431	153,157	142,310
Total liabilities	287,912	258,549	248,028
Shareholders' equity			
Common stock and additional paid-in capital, $0.00001 par value: 50,400,000 shares authorized; 16,426,786 and 16,976,763 shares issued and outstanding, respectively	57,365	50,779	45,174
Retained earnings	5,562	14,966	45,898
Accumulated other comprehensive income/(loss)	163	(406)	(584)
Total shareholders' equity	63,090	65,339	90,488
Total liabilities and shareholders' equity	$ 351,002	$ 323,888	$ 338,516

Table 3. Comparison between Apple Inc. and Dell Inc.

Liabilities to Assets Ratio	2019	2020	2021
Apple Inc.	73.27%	79.83%	82.03%
Dell, Inc.	99.77%	96.82%	93.50%

- 2019-2020

According to the annual reports from 2019 to 2020, the total assets of Apple Inc decreased from $338,516 million to $323,888 million, decreasing by 4.3%. Meanwhile, the company's total liabilities increased from $248,028 million to $258,549 million, rising 4.24%. In this case, the company's liabilities to assets ratio increased from 73.27% to 79.83%. It meant that the company might face more extensive financial pressure and higher costs of debts, which would further limit the company's long-term development ability. However, according to Dell's annual report, its liabilities to assets ratios in 2019 and 2020 were 99.77% and 96.82% separately [8]. Therefore, although Apple Inc needed to afford higher debt pressure compared with the past, it still had a significant competitive advantage compared with its main competitors. Besides, based on the analysis of the company’s operation capacity, the company's assets turnover increased from 74.09% to 82.88%, which indicated that the company's ability to create sales by using total assets had been improved.

Moreover, the proportion of current assets in the total assets decreased from 48.10% to 44.37%, and the proportion of current liabilities increased from 31.23% to 32.54%. In this case, the adjustment of the company's financial accounts might mean a change in the company's strategic plan that transferred current assets to non-current assets or repay non-current liabilities. However, although the current ratio and quick ratio were still greater than 1, the decline in the proportion of the company's working capital would increase the possibility of the company facing short-term financial distress.

Furthermore, the company's liabilities to shareholder's equity ratio increased from 274.10% to 395.70%, mainly caused by the decrease of the total shareholder's equity from $90,488 million to $65,339 million. Among them, the company's retained earnings decreased from $45,898 million to $14,966 million. In this case, it indicated that Apple Inc provided benefits for existing shareholders in the form of dividends, which could enhance the reputation of the company and investors' confidence level. Therefore, the adjustment of the company's financial structure might illustrate the movement of the company's strategy that produce beneficial synergy for the company's long-term development under the cost of short-term risks.

Table 4. Ratio Analysis

	2019	2020	2021
Assets Turnover	74.09%	82.88%	108.41%
Current Ratio	154.01%	136.36%	107.46%
Quick Ratio	150.13%	132.51%	102.21%
Liabilities to Shareholder's Equity Ratio	274.10%	395.70%	450.01%
Operating Cash Flow to Current Liabilities Ratio	62.61%	76.43%	90.13%
ROCE	55.92%	73.69%	147.44%

- 2020-2021

According to the consolidated balance sheets from 2020 to 2021, Apple Inc's total assets increased from $323,888 million to $351,002 million, magnifying 8.37% [9]. In addition, the company's total liabilities also increased from $258,549 million to $287,912 million, increasing 11.31%. In this case, the company's liabilities to assets ratio increased from 79.83% to 82.03%. Similar to the changes from 2019 to 2020, the financial difficulties faced by the company might further increase. It might bring reparation or litigation consequences caused by insolvency, which potentially had a significant impact on the company's reputation and market influence. In this case, the company should carry out relevant market research, make a horizontal comparison between the company's financial data and the industry average level, and then adjust the existing business strategies to reduce its business risks. For instance, the management team can bargain with creditors through Apple Inc's significant market influence to obtain debt contracts that are more favorable to the company.

Based on the analysis of operation capacity, the asset turnover of the company increased from 82.88% to 108.41%, significantly increasing by 25.53%. In this case, the company could create sales based on total assets efficiently, which meant that the company's profitability and development ability had been significantly enhanced. Meanwhile, the proportion of current assets in total assets of the company decreased from 44.37% to 38.41%, and the proportion of current liabilities increased from 32.54% to 35.75%. However, the company's operating cash flow to current liabilities ratio increased significantly from 76.43% to 90.13%. Hence, despite current liabilities increasing to some extent, the company could generate a larger amount of cash flow from operating activities. It was not only conducive to reducing the risk of capital chain rupture but also conclude the company's efficient use of potential development opportunities, such as using existing cash to create investment income. Similar to the analysis from 2019 to 2020, the reduction of the company's existing assets might also be used to reduce non-current liabilities or create non-current assets. Therefore, it could create development opportunities for Apple Inc but also increase short-term risks to a certain extent.

Overall, Apple Inc's ROCE rose from 55.92% to 73.69% and finally reached 147.44% from 2019 to 2021. In this case, the significant enhancement of ROCE meant that existing shareholders could get a considerable rate of return, and it also indicated that the relevant strategic adjustments of the company were beneficial to its overall financial performance. Therefore, existing shareholders prefer to hold Apple Inc's shares and have strong confidence in Apple Inc's long-term development ability and profitability. However, it is worth noting that the fluctuation of the liabilities to assets ratio illustrated that the company still needed to bear a higher risk of capital chain rupture. In this case, the adjustment of the company's existing financial structure and the further improvement of its debt handling capacity can assist the company in further improving the performance of relevant financial indicators, and then stimulate the company's profitability and market influence.

4 Discussion

4.1 COVID-19

According to Apple Inc's 2020 annual report, the popularity of COVID-19 has had a significant negative impact on the normal operation of global enterprises, including the adoption of isolation and restrictions on the import and export of goods measures by governments. In this case, this global health and safety problem has seriously hit the global economic activities, hindering the circulation of goods and greatly affecting the revenue of enterprises. Specifically, Apple Inc closed many retail stores and outlets during 2020 and disclosed the increased transportation and storage costs in the financial statements. Meanwhile, Apple Inc revealed in its annual report that its internal risk assessment team has completed an effective assessment of the economic activity environment faced by the company, including the time, scope, and trajectory of the pandemic, and the impact of the vaccine epidemic on the global demand for consumer goods. In this case, Apple Inc quickly developed corresponding strategies to deal with potential risks and minimized high expenditure by using online offices. Moreover, Apple Inc's 2021 annual report revealed that the impact of the epidemic was still persistent, affecting the company's production and operation. Specifically, in the fourth quarter of 2021, the service of some parts suppliers of the company was interrupted, resulting in a shortage of product supply. It can be predicted that the impact of the epidemic will hit the company's operation for a long time in the future. Hence, Apple Inc needs to establish more sophisticated business models and sales channels, to weaken the impact of the epidemic as much as possible.

4.2 Business Risks

According to Apple Inc's annual reports, the business risks disclosed include the intensive competition of enterprises in the consumer electronics industry and the high dependence on component product manufacturing and logistics service outsourcing. Specifically, the enterprise competition within the industry intensifies the pressure on Apple Inc to rapidly develop high-quality products, which means that Apple Inc needs to periodically innovate new products and successfully promote them to the market to maintain its competitive advantage. Therefore, Apple Inc faces potential risks that new products are not recognized by the market and quality defects, which may cause a significant blow to the company's future revenue capacity and reputation. In this case, Apple Inc is required to establish a sophisticated R&D management system, including product testing, market acceptance survey, and inventory management. In addition, according to Haslam and Tsitsianis's paper, Apple's US manufacturing facilities have long since closed, and Apple is currently internally focused on design, the provision of technical services, and managing retail stores [10]. It significantly reduces Apple Inc's ability to directly control processing plants while sharing operating costs and labor costs. In this case, once the supplier violates relevant contracts or laws, Apple I's reputation, product supply capacity, and financial status may suffer significant impairment.

5 Conclusion

Overall, this essay evaluates Apple Inc's competitive advantages in the industry through business operation, financial situation, and related risk assessment analysis. Both business strategy, marketing concept, and financial analysis demonstrate that Apple Inc has a strong market influence and a successful business model compared with its main competitors. At the same time, according to Apple Inc's annual reports for 2020 and 2021, although Apple Inc needs to afford the higher risk of capital chain breakage under the impact of COVID-19, Apple Inc. can still create considerable returns for shareholders. While enhancing investor confidence, it also illustrates Apple Inc's sophisticated risk evaluation system.

However, the essay still has some limitations in the part of information collection and integration. Specifically, the revenue forecast for the next five years is evaluated by calculating the average growth rate of each operating segment in the past five years and taking it as the future annual growth rate. In this case, the annual growth fluctuations and global events including COVID-19 are ignored to some extent. This is because of the shortage of relevant internal information about the company's prediction model, so it's unrealistic to adjust the future growth rate of each operating segment in combination with the company's risk assessment of the market and the company's response strategies. Furthermore, the five-year forecast cycle amplifies the possibility of floating factors, which may cause large errors in the long-term forecast. Therefore, in future research, more reliable data from multiple enterprises in the industry should be collected, and then a risk prediction model can be established that conforms to industry characteristics. In this case, the negative impact of unexpected events on forecast accuracy can be minimized while considering the industry periodicity.

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