

APPLE INC.: PRODUCT PORTFOLIO ANALYSIS

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CASE DESCRIPTION

The primary issue in this case involves assessing a company's product line mix relative to two marketing environmental factors and exploring four product line growth strategies using a product portfolio analysis approach. The case provides a history of the Apple Computer Company and overviews its key product lines. An approach to analyzing a company's product portfolio is reviewed and applied to Apple's product lines. Students will be able to see how each Apple product line fits within the portfolio analysis tool and will be asked questions relative to possible strategies for Apple's product portfolio. The case has a difficulty level 2 and is designed to be covered within one (75 minute) class period. The required preparation time is about 2 hours. It is appropriate for marketing principles, marketing strategy, and strategic management classes. The purpose of this case is to illustrate to students one approach to making decisions about a company's line of products and also to stimulate critical thinking in terms of future direction for a company product portfolio.

CASE SYNOPSIS

The Apple Computer Company is arguably one of the most innovative technology companies to emerge in the last three decades. Apple, Inc. is responsible for bringing to market such products as the Macintosh desktop and portable computer, iPod and iTunes, and most recently, the iPhone. The success of the company can be traced to the ingenuity of their founder and CEO, Steven Jobs. This philosophy has always been to create products that consumers will find easy to use and marry innovative technology to work productivity and personal entertainment. Throughout its history, Apple Inc. has accomplished these goals. However, with a growing line of products, a competitive market landscape, and an unpredictable technology lifecycle curve, the company faces challenges as to how to decide which product lines to hold, build, harvest cash, or divest. This case overviews a tool used to analyze a company's product line portfolio and applies it to Apple Inc.'s array of products. Questions for discussion are provided to enable students to use critical thinking skills in applying the case material.

INSTRUCTOR NOTES

CASE OVERVIEW AND RECOMMENDATIONS FOR TEACHING APPROACHES

Students will find the case very interesting and relevant as most of them will have used at least one of Apple's products or a similar product offered by an Apple competitor. Students will combine the facts presented in the case with their own perceptions and experiences with Apple's products to answer the discussion questions. The case enables students to analyze some basic

financial data (e.g., company market share and industry demand forecasts) to identify how each of the Apple product lines (reviewed in the case) fit and are classified within the BCG growth-share matrix (also reviewed in the case). Case discussion questions will then allow the student to identify other marketing factors (e.g., competitor, demand, trends, etc.) that could cause Apple products to be reclassified. The case promotes critical and strategic thinking in that students will be required to make judgments as to how they would decide the future of such Apple products as lines of personal computers, iPod, and iPhone. A unique aspect of this case is that Apple products are so ubiquitous that most students will have experienced the technological innovativeness of the company through personal ownership of an Apple product (or a similar competing company product). This aspect should make the case both relevant and interesting to students.

An approach for teaching this case could require students to read and prepare responses to the case discussion questions via a homework assignment and the class period could be devoted to an instructor led discussion of all of the questions. An alternative approach may include dividing the class into teams or small groups. Each group could address the following discussion questions relative to one Apple product line (e.g., group 1 = iMAC desktop computer, group 2 = iBook portable computer, group 3 = iPod, group 4 = iPhone). Class time could be divided to allow discussion of the questions (within the groups) followed by an instructor facilitated “readout” from each group or group representative. This would allow all students in the class to reap the benefits from the individual group discussions and offer additional comment or insight.

DISCUSSION QUESTIONS WITH SUGGESTED ANSWERS

1. ***How would you classify each of the Apple product lines (desktop computers, portable computers, iPod, and iPhone) according to the BCG Growth-Share Matrix (star, question-mark, cash-cow, or dog). Justify why you placed each product line in its class.***

The BCG Growth/Share matrix is a product portfolio analysis tool that enables firms to classify all of their product lines in a 2 x 2 matrix according to the dimensions; relative market share and market growth rate.

The dimension of relative market share (horizontal axis) is defined by the product line’s market share as compared to its *largest* competitor in the industry. Market growth rate (vertical axis) is a measure of how attractive a particular market is to the firm and is quantified by the annual growth rate (usually expressed as percent growth) for that product line. Given the estimates of relative market share (low-high) and its market growth rate (low-high), a product line can be categorized in one of the four cells illustratively named for the amount of resources generated from and requires from the firm (Grewal and Levy 2010).

Using the data from the tables provided in the case (see Exhibits 2 and 3 below), the Apple product lines can be classified as: desktop computers – dog, portable computers – question mark, iPhone – question mark, iPod – cash cow (see Figure 1 below).

Figure 1: Apple Inc. Product Lines as illustrated using the Boston Consulting Group - Growth Share Matrix Tool.

Market Growth Rate	Relative Market Share	
	High	Low
High	Star High growth and share Profit potential May need heavy investment to hold/sustain position	Question Mark High growth, low share Build into stars or phase out Requires cash to hold
Low	Cash Cow Low growth, high share Established and successful product line Source of harvesting cash for other product lines	Dog Low growth and share Low profit potential Consider divesting product line

 iPhone
 iMAC Portable Computers
 iPod
 iMAC Desktop Computers

Exhibit 2: Top competitors by Product Line 2008-2009 (% share of units sold)

Product Line	2008	2009	Apple's Relative MS
Desktop and Portable Computers			
Apple	8.6	8.8	.34 (8.8/26.2)
Dell	29.9	26.2	
Hewlett Packard	26.0	25.7	
MP3 Players			
Apple	72.0	71.0	6.45 (71.0/11.0)
Scandisk	10.0	11.0	
Microsoft	3.0	4.0	
SmartPhones			
Apple	2.8	14.4	.40 (14.4/36.4)
Nokia	47.4	36.4	
Research in Motion	17.3	19.9	

Sources: Van Buskirk (2009), www.gartner.com^a, www.gartner.com^b, www.gartner.com^c, Hefflinger (2008), Schonfeld (2010).

Exhibit 3: Industry Growth Estimates by Product Line 2008-2010 (in millions of units sold)

Product Line	2008	2009	% Growth ('08-'09)	2010*	% Growth* ('09-'10)	Market Growth Rate
Desktop Computers ^a	133.7	137.6	2.9	109.8	(20.2)	Low
Portable Computers ^b	141.6	168.2	18.8	256.3	52.4	High
MP3 players	11.8	9.9	(16.2%)	9.7	(2.1)	Low
SmartPhone/ related products	139.3	172.4	23.8	250.5	45.3	High

*Projected Sources: www.physorg.com, Southerland (2009), Elmer-Dewitt (2009), Schonfeld (2010), Frost and Sullivan (2009)

The justification for each of the classification was as follows:

The iMAC desktop computer was classified as a “Dog” due to its low relative market share (8.8%) as compared to the industry leader which was Dell (26.2%) and the low market forecast calling for a decline of over 20%. The industry outlook for desktop computer demand was rapidly eroding.

The MAC portable line of computers (or MacBook) can be classified as a “question-mark” due to its relatively low market share (8.8%) as compared to the industry leader which was Dell (26.2%) and the high market forecast for demand and growth potential in the portable computer segment of 52.4%. Seeing that computers are continuing the trend of smaller and more portable, This Apple line has the potential to be built into a “star” (with increasing market share).

The iPod line of products can be classified as a “cash-cow” mainly driven by Apple’s (71%) share of the MP3 market and relative to the next largest competitor (Scandisk with 11%). The project growth rate for standalone MP3 players was negative but with 2010 forecasts (-

2.1%) improving over the 2009 levels (-16%). Most SmartPhones have music playing capability which may contribute the declining demand for standalone MP3 players.

The iPhone can be classified as a “question-mark” due to its relatively low market share (14.4%) as compared to the industry leader which was Nokia (36.4%) and the high market forecast for demand and projected growth rate of the SmartPhone industry (upwards of 45% in 2010). SmartPhones are quickly becoming the portable choice for music, applications, and communication therefore the Apple iPhone has the potential to build into a “star” (with increasing market share).

2. For each of the Apple product lines classified, describe two factors that could cause it to be re-classified (e.g., move from a question-mark to either a star or dog)? For each factor, how would each be re-classified? Justify your answers.

iMac Desktop Computers - The iMac desktop computer line was currently classified as a “dog”, mainly due to low market share in a relatively low projected growth market. Two factors that could impact This product line’s BCG classification was an increase in market share or an increase in projected demand for desktop computers.

An increase in market share (alone) for Apple’s iMac desktop computer line would move it into the “cash cow” classification. An increase in market demand (alone) for desktop computers would move it into the “question market” classification. An (unlikely) increase in both factors (market share and market demand) would make the iMac desktop computer line a “star”. Students may justify their answers by speculating on what changes would need to occur in the competitive marketplace to support the most likely scenario - Apple’s gain in market share (e.g., product failures on the part of large competitors, mergers, etc.) as well as increased consumer demand for desktop computing (e.g., computer use preferences relative to portability, worker office environment, etc.)

iMac Portable Computers - The iMac portable computer line was currently classified as a “question mark”, mainly due to low market share in a relatively high projected growth market. Two factors that could impact this product line’s BCG classification was an increase in market share or a decrease in projected demand for portable computers.

An increase in market share (alone) for Apple’s iMac portable computer line would move it into the “star” classification. A decrease in market demand (alone) for portable computers would move it into the “dog” classification. An (unlikely) change in both factors (increased market share and decreased market demand) would make the iMac portable computer line a “cash cow”. Students may justify their answers by speculating on what changes would need to occur in the competitive marketplace to support the most likely scenario - Apple’s gain in market share (e.g., product failures on the part of large competitors, mergers, etc.) as well as decreasing consumer demand for portable computers (e.g., computer use preferences relative to portability, worker office environment, etc.)

iPod - The iPod line of MP3 player was currently classified as a “cash cow”, mainly due to high market share in a relatively low projected growth market. Two factors that could impact This product line’s BCG classification was a decrease in market share or an increase in projected demand for MP3 players.

A decrease in market share (alone) for Apple's iPod line of products would move it into the "dog" classification. An increase in market demand (alone) for the iPod line would move it into the "star" classification. An (unlikely) change in both factors (decreased market share and increased market demand) would make the iPod a "question mark". Students may justify their answers by speculating on what changes would need to occur in the competitive marketplace to support the most likely scenario - Apple's loss of a very large market share (e.g., competitors focus on a specific market demographic, competitive product improvements, etc.). However, a substantial loss of share would be necessary for the iPod to move from its "cash cow" position.

iPhone - The iPhone was currently classified as a "question mark", mainly due to low market share in a relatively high projected growth market. Two factors that could impact This product line's BCG classification was an increase in market share or a decrease in projected demand for SmartPhones.

An increase in market share (alone) for Apple's iPhone would move it into the "star" classification. A decrease in market demand (alone) for the iPhone would move it into the "dog" classification. An (unlikely) change in both factors (increased market share and decreased market demand) would make the iPhone a "cash cow". Students may justify their answers by speculating on what changes would need to occur in the competitive marketplace to support the most likely scenario - Apple's gain in market share (e.g., relationships with partner companies, mergers, etc.) as well as increased consumer demand for SmartPhones (e.g., desire for all in one communication devices, range and availability of applications, etc.)

3. *What should Apple do to build their question mark product line(s)?*

The two product lines that were "question marks" are the iMac portable computer and the iPhone. The strategy for product lines in this category was to build into stars or phase out. For the iMac portable line of computers, Apple should draw on their loyal base of customers to continue to buy portable "Mac" computers. This can be done by continuing to make portable computers thinner, lighter, and affordable without compromising the functionality and ease of use that attracts and retains Mac users. Apple's main challenge with portable computers was gaining market share of the Windows -based PC user. To overcome This challenge, Apple needs to find a price point and/or incentive program that will attract the PC user to try a Mac upon their next portable computer purchase.

The strategy to build the iPhone into a "star" will be based on increasing market share. The main factor here is the exclusive network relationships (with AT&T for example) which prevent some consumers from buying the iPhone (they may be under a non AT&T contract). Agreements between Apple and other cellular network companies to provide iPhone service will attract a new segment of the market that will increase share.

4. *How should Apple leverage their cash-cow product line(s)?*

Apple's "cash cow" was its iPod line of products. The strategy for product lines in this category was to harvest cash in order to pay for the investments required to build "question marks" and hold "stars". In Apple's case, the cash reaped from the sale of iPods can be used to market the iPhone and iMac portable line of computers. Apple's strategy for the iPod line was to offer various models based on the size, capacity, and functionality needs of its users. As long as Apple

maintains its dominant share (71%) of the MP3 market, it should continue to market, sell, and use the cash from iPod sales to fund the research, development, and marketing efforts of its other product lines.

5. What should Apple do with their dog product-line(s)? What justification can you provide to support keeping it?

According to the BCG classification model, the iMac desktop line of computers was Apple’s “dog”. Due to its low relative market share and the lack of growth and profit potential projected in the desktop computer market, this line was a candidate for product divestiture. Given the move toward personal computing portability, it was unlikely that demand for this product line will increase. Unless Apple can find a way to overcome the challenges inherent with a large embedded base of Windows-based PC users, the iMac desktop computer line, it was difficult to justify keeping it. One alternative was to continue to offer the product line but not invest in research, development, and marketing costs. To minimize support costs, technical support for this product line could be offered online only. The main justification for keeping this line might stem from the opportunity to offer corporate customers desktop computers for their office employees. Under these conditions, profitable corporate contracts could be structured to offer multi-year term agreements for bundled service offerings comprised of both computer/software products and support services.

6. Think of an experience you have had as a consumer of any one Apple or competitor product (e.g., desktop/portable computer, MP3 player, SmartPhone, etc.). Do you agree with the prediction for market growth of this product as described in the case? Why or why not?

For this question, students will draw mainly from their personal experiences. Most students will have either owned or used an iPod or a MacBook laptop computer. Few may own or may have used the new iPhone.

Products Line	Project Growth of Product Line	Agree/Why	Disagree/Why
Desktop computer	Low	<ul style="list-style-type: none"> • Movement toward portability • Laptops becoming more affordable 	<ul style="list-style-type: none"> • Desktops are very affordable • More value for the dollar • Convenience for home or office use
Portable computer	High	<ul style="list-style-type: none"> • Portables becoming smaller, more compact • Increased speed, storage, capacity • Cost effective options • Choices of competitors 	<ul style="list-style-type: none"> • Devices such as SmartPhones, NetTablets function as portable computers
MP3 player	Low	<ul style="list-style-type: none"> • SmartPhones and other handheld communication devices store and play music • Smartphone devices cannibalizing the iPod 	<ul style="list-style-type: none"> • Demographic (younger) only cares about music/video playing capability • Above demographic was primary user for music/video • Smartphone “apps” available via iPod touch • Can utilize iPod touch for internet access • MP3 player affordability
SmartPhone	High	<ul style="list-style-type: none"> • One device for all communication, entertainment, and internet needs • Range of model capabilities suitable for individual needs 	<ul style="list-style-type: none"> • Affordability of SmartPhones. • Limited choices of network providers

For comparison, students may have a MP3 player from a competing company (e.g., Scandisk, Sony, Samsung). Rival PC or laptops may include Dell, HP, Acer (mini laptops). Competitors to the iPhone are Blackberry, Palm, LG, Nokia (among others). As a suggestion for facilitating in-class discussion, the following table could be filled out as students volunteer answers – listed are some possible answers students may offer:

The most interesting point of this discussion was that the perspectives being offered are those of 20-22 year old college students. Therefore, the arguments presented will center primarily on their financial and entertainment concerns. This perspective may be different coming from working professionals whose primary concerns are productivity and convenience.

EPILOGUE

By consistently designing beautiful products that consumers line-up to buy the day it hits stores, Steve Jobs and Apple, Inc. have managed to change expectations about how technology should work. Within the first decade of the new millennium, Jobs and Apple have succeeded in the digital convergence of the personal computer with other consumer electronics devices and for his efforts, Jobs was named Fortune Magazine's "CEO of the decade" (November 5, 2009). However, to continue this trend of innovative product offerings, Jobs and Apple Inc. need to remain out in front of the demand curve by strategically designing and marketing new products to capture the productivity, communication, and entertainment needs of a very loyal customer base.

In January of 2010, Jobs told a crowd of reporters that he wanted to begin the year by introducing a "truly magical and revolutionary product" (Quittner, 2010, p. 34). The result was the birth of the iPad – a single portable device capable of functioning as part laptop computer, part iPod, and part iPhone. The iPad works like a giant iPod touch, weighing only 1.5 pounds, with a 10 inch screen and starting at an affordable \$499. Jobs described it as "way better than a laptop, way better than a SmartPhone ... it feels like your typical Apple product: smooth, sleek, a slice of the future" (Quittner, 2010, p. 35). Analysts estimate that Apple could sell 6 million iPads in 2010; that would surpass sales of the iPhone in its first year (Grossman, 2010). Furthermore, industry experts suggest that upward of 10.5 million traditional and next generation tablet computers will be shipped in 2010 (www.gartner.com^d). The impact to Apple's bottom line was expected to be \$2.5 billion in new revenues in 2010 (Lyons, 2010).

With the visionary Steve Jobs in charge, Apple's future remains bright. Annual revenues (2010) are projected to be \$54 billion, which was an expected fiscal increase of nearly 50 percent (Lyons, 2010). What will be Steve Jobs' curtain call to this? If the last 10 years are any indication, consumers of electronic devices have only seen "the tip of the iceberg".

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