

**AMAZON.COM:
SUCCESSFUL ETAILER,
PLATFORM OF ECOMMERCE...
SO WHY ARE THEY STILL IN DEBT?**

Submitted for ENTS630 Final Project

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I. Introduction

Amazon.com is one of the world's largest eCommerce retailers, or etailers for short, of consumer goods. With sales several times that of its competitors, the company has achieved its status as the industry leader by adopting the concept of selling goods via the Internet's World Wide Web. The company presently enjoys significant brand, scale and capital advantages over its rivals.

Despite the fact that Amazon is currently in debt, the company very well may still make profit in the future because of its low discount rate and excellent market strategy. Thus, we would like to present our investigation into Amazon.com. First, we will respectively describe Amazon's marketing mix. Second, we will attempt to analyze its cost and revenue structures. Moreover, we will display the Porter model of competition, and the comparison of working capital and infrastructure requirements of retailers and etailers. Third, we will explain the reasons why Amazon.com runs into debt, and present an analysis of the company's Net Present Value (NPV). Finally, we will provide our recommended solutions for Amazon to get out of debt.

II. Marketing Mix

1. Product lines

Amazon has many products such as books, music, video & DVDs, auctions, toys & games, consumer electronics, e-Cards, and zShop. However, the etailer is not satisfied with the current situation and still trying to expand its product lines. According to a company report by C.E. Unterberg Towbin, CEO Jeff Bezos recently said that he would be disappointed if the company does not open more stores in 2000 than it did in 1999. Therefore, it is clear that the company will expand its product lines to increase its scale. We believe that scale advantages will enable Amazon to support many of its key investment initiatives, including its distribution infrastructure development and its product lines and services.

2. Pricing

Amazon's pricing goal is to offer a lower price than its competitors. With lower prices, it can attract new customers to maximize its market share. We are convinced, based upon our investigation, that Amazon will be able to consistently offer lower prices in relation to the traditional retailers.

3. Distribution Channel

Although the method by which Amazon distributes its products and services to its customers is a retailer mode, there are several differences between traditional retailer and etailer manners of distribution. Etailers provides more shopping convenience, local inventories, and exchange services than do traditional retailers.

When one goes shopping at holiday time, while an eCommerce site will have shortages of hot items, just as a traditional retailer will, the consumer can conveniently find this information at their desktop - not after a 20-minute drive to the mall. When stock outages occur, the time lag between Amazon re-ordering a good and it being available to consumer is likely to be several days shorter than the supply chain of retailers.

The centralized inventory in the eCommerce world givesetailers a distinctive advantage in terms of product availability and selection. Where a physical world store has to make a lot of efforts to catalogue the various products for customers, an retailer can easily customize its online store for repeat customers based on their prior purchase habits.

In January 1999, Amazon announced plans to build a network of distribution centers throughout the country to warehouse and ship the products it sells. This is the most dramatic change to occur in Amazon's business model. It rapidly shifts towards sourcing products directly from manufacturers, eliminating distributors from the supply chain when appropriate. (ABC news, 01/1999)

In April 1999, the company clarified the magnitude of the investment required to open these distribution facilities, and the short-term losses that would result. These facilities will cause the company to operate with excess capacity for the rest of 1999 and probably well into 2001. The expense for these facilities falls into its sales and marketing expense line, causing it to triple on a year-over-basis in the 2Q99, significantly faster than revenue growth. Therefore, some have criticized these facilities as being an indication that Amazon is no longer gravity-free, that it will have to support infrastructure just like traditional retailers(ABC news, 12/99).

4. Promotion

Aside from the expense of its distribution facilities, the largest investment-related expenses come from brand building. Its major promotion activity is to make use of mass media - print and broadcast like newspaper, TV, and radio - to make initial contact with customers. Through advertising, Amazon increases its brand awareness. A recent study by Interbrand ranked Amazon.com as the 57th most valuable brand in the world. A separate study by Opinion Research Corp. indicated that 60% of US adults were aware of the Amazon brand name, the highest awareness for any eCommerce brand name.

III. Cost Structure

Amazon possesses a relatively complex cost structure that encompasses the following major categories: advertisement, investment, products, sales, research and development, and the distribution facilities.

Of these expenses, marketing and sales account for the greatest expenditure. According to a company report published by C.E. Unterberg Towbin, Amazon spent \$132 million dollars in 1998 on marketing and sales. Of course, these types of expenses include advertisement, product acquisition, smaller variable costs, and personnel-related costs. Amazon classifies some of these personnel costs as “investments” because it purposefully aims to hire the “right” people for its senior executive positions. Another way in which the company spends its money in a creative fashion: each shop is treated as its own entity, and rewarded (monetarily and otherwise) for its performance.

The next most draining costs are related to research and development. As the company has adopted the extremely broad vision of staying far ahead of its competitors and offering for sale everything that its customers desire, it is easy to see why expenditures in this arena would need to be high. According to the same report by C.E. Unterberg Towbin, in 1998 Amazon spent an amazing \$45.5 million on research and development, and would spend a total of \$139.8 million in 1999 and \$205 million in 2000 based upon estimates!

One of the reasons why the costs in the research and development category have risen so dramatically of late is due to the building of the distribution facilities. The near-term losses that the construction of these facilities has represented caused much dissent among Amazon investors when discussions of the topic commenced. However, the storm finally began to calm once it became apparent that not only would the facilities provide a significant cost-of-procurement and cost-of-distribution advantage over Amazon’s competitors, but also that the facilities would eventually be needed. Amazon, in its perpetual foresight, has simply anticipated this future necessity and it working to curb it early on in the game. A second reason for the recent growing costs in research and development is that the etailer has been rolling out new shops very quickly. Additionally, the infrastructure behind Amazon’s Auctions and zShops is deceptively complex, and it represented a significant drain on the company’s wallet as well. The estimates for the coming quarters only forecast

exponentially rising costs in the category because the eCommerce giant hopes to present even more new shops in the coming year than in the past year. So, it is safe to bet that Amazon will not be cutting its R&D budget any time soon.

Finally, the same report by C.E. Unterberg Towbin portrays an expenditure of \$16 million in 1998 on general and administrative costs, with an estimation of \$62 million in 1999 and \$93 million in 2000. Although we could not locate exact figures for Amazon's investment expenditures, we did find that the retailer has virtually hundreds of interesting holdings. For example, the company has a 20% or higher stake in the following companies, just to name a few: pets.com, drugstore.com, HomeGrocer, Della & James, and Gear.com. Of course, being investments as they are, these 'costs' will also show up in the form of revenue when we discuss Amazon's revenue structure. Recent news has informed us additionally of Amazon's acquisition of a local toy company, and an alliance with high-tech manufacturer Hewlett-Packard. So although these costs are also rising at an alarming rate to some, we must remember that they represent considerable additional income.

IV. Revenue Structure

Compared to other major retailers, Amazon maintains a relatively high capability of generating revenue. According to figure 1 below, Amazon reeled in \$1.258 billion in the most recent year (ending Jun-99), which is several times greater than the revenue of other major retailers.

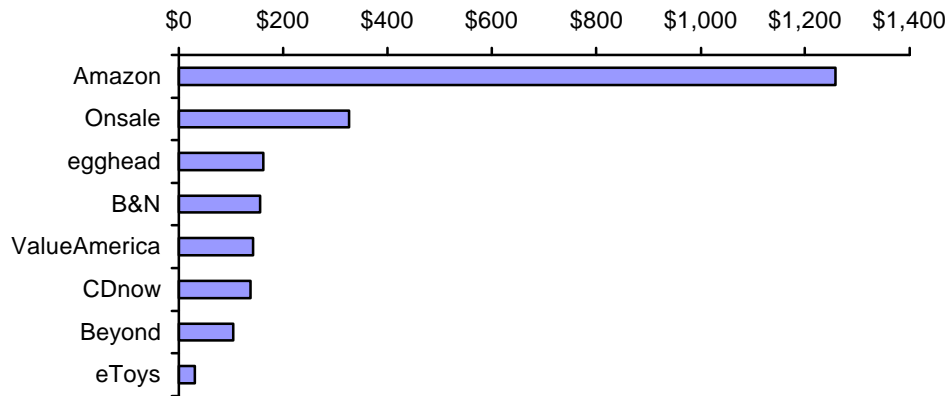


Figure 1. Comparison of major Retailers' Annual revenues

Source: C.E.Unterberg Towbin

Amazon's revenue is mainly derived from two sources:

1. Products groups:

A key point of Amazon's success is the dominance of multiple product lines. It is generally considered difficult for retailers to expand from their primary product lines. "Books and music are low-margin business, and moving into other product categories may be more easily said than done," pointed out *Kimberly Weisul and Larry Dignan* while discussing in January 1999 the possibilities of Amazon adding catalogs. However, in the past months Amazon used its initial success in books to expand and take the lead in music and videos. Moreover, the company added five stores in 1999 and the CEO further claimed that they would open more than five in 2000. The table below shows the distribution of revenues generated from each shop in Amazon.

SHOP	Percentage of company's revenue				
	1997	1998	1999	2000	2001
Books	100%	88%	69%	57%	51%
Music		12%	15%	14%	13%
Videos & DVDs			8%	7%	7%
Auctions			1%	3%	5%
Toys & Games			3%	8%	9%
Consumer electronics			3%	6%	8%
Zshops			1%	5%	7%

Source: Amazon.com and C.E.Unterberg Towbin

2. Partnerships & Investments:

Utilizing its eCommerce knowledge base and capital, Amazon has made investment in several emerging eCommerce categories. These investments lead to two advantages. They:

1. Give Amazon another means of leveraging its eCommerce expertise.
2. Enable Amazon to participate in some emerging market without having to support the entire operation.

Company	Percentage of ownership
Pets.com	54%
Drugstore.com	27%
HomeGrocer	35%
Della & James	20%
Gear.com	49%

Source: C.E.Unterberg Towbin

Although Amazon generates the largest revenue among all eCommerce retailers, the revenue figure is only a portion of that of a traditional retailer. Wal-Mart brought in 11 times Amazon's revenue last year and Barnes & Nobles made 2.5 times that figure. Based on the excellent performance of Amazon and the Internet market potential, many economists believe Amazon will easily be capable of continuing to raise its revenue in the future. In the past two years, Amazon has been experiencing an exponential growth of revenue and the CAGR (Compound annual growth rate) is expected to be 68% throughout 1998 to 2002.

	1998	1999	2000	2001	2002	CAGR
Total revenue (in millions)	\$610	\$1468	\$2471	\$3607	\$4817	68%
Yr/Yr growth	312%	141%	68%	46%	34%	

Source: C.E.Unterberg Towbin

V. Why is Amazon in debt?

Amazon has been regarded as the most successful retailer of the moment. Many stockbrokers think of it as a platform for eCommerce. No one would disagree that Amazon is the best revenue generator in the eCommerce arena. However, it is also true that Amazon is now facing a huge debt. This section examines the reasons for the company's debt, and we will give proposed solutions in a later section.

1. Expenditure > Profit

One of the major causes of Amazon's huge debt is its large expenditure. In order to keep its advantageous position, Amazon has no choice but to continue to spend astronomical amounts of money on sales & marketing, research & development, and general & administrative costs.

“One misstep, and its love affair with investors and sources of capital could be over.”
-- Kimberly Weisul

The table below is a simple balance sheet of Amazon from the year 1998 to 2002 (expected). In 1999, the total expenses are 39% of revenue, equivalent to \$566 million whilst the gross profit is 21% of revenue, equivalent to \$310 million. It leads to a negative \$255 million operating income.

It is worth noticing that the ratio of expenditures is expected to decrease year by year, from 1999's 39% to 2002's 20%. This essentially means that a great part of the expenditure today is spent with a long-term prospect in mind. Along with significantly growing revenue, in the long run these cost would become fixed costs and account for a relevantly lower percentage of the revenue than it does today.

Categories	Percentage of revenues				
	1998	1999E	2000E	2001E	2002E
Sales & Marketing	22%	25%	20%	16%	12%
Research & Development	8%	10%	8%	7%	6%
General & Administrative	3%	5%	5%	4%	3%
Total expenses	32%	39%	32%	26%	20%
Income before taxes	-12%	-21%	-12%	-4%	2%

Source: C.E.Unterberg Towbin

	1998	1999E	2000E	2001E	2002E
Gross Profit	\$134	\$310	\$548	\$826	\$1108
Total expenses	\$196	\$566	\$780	\$922	\$981
Operating Income	-\$62	-\$255	-\$232	-\$95	\$127

Source: C.E.Unterberg Towbin

2. Competitors

Although Amazon won the battle soon after entering the online CD and music market, there are some competitors in other product lines that may be too immensely strong to beat. For example, in March of 1999, Amazon introduced an auction service. After a few months effort, its auction business performed slightly, indicating how difficult it is to challenge the giants eBay and Yahoo!Auctions.

	27-Sep-99	Multiplier Needed to equal eBay listings
AmazonAuctions	4.8%	15.3
eBay	73.6%	
Yahoo!Auctions	21.6%	3.4

Source: Auction Web Sites and C.E.Unterberg Towbin

3. Consumer behavior

Amazon.com is widely regarded as having one of the best management teams of any Internet company. However, there are some outside forces that are not easy to manipulate.

. Security

As the number of Internet crimes increases, customers are becoming aware of the possible danger involved in the process of on-line shopping. This security problem may be not difficult to improve since security technology is innovated quickly, but to convince the customer of this is not as easy.

. Etailers vs. retailers

Another factor that is hard to manage is customers' purchasing habits. Most consumers still prefer the capability of seeing a product before buying it. Additionally, the number of people buying personal computers and that of the Internet population will directly affect Amazon's sales. These factors are beyond Amazon's control.

Another approach we can take might be to look at the market from the perspective of the Porter model, which we present in the following section.

VI. The Porter's model: (5 forces)

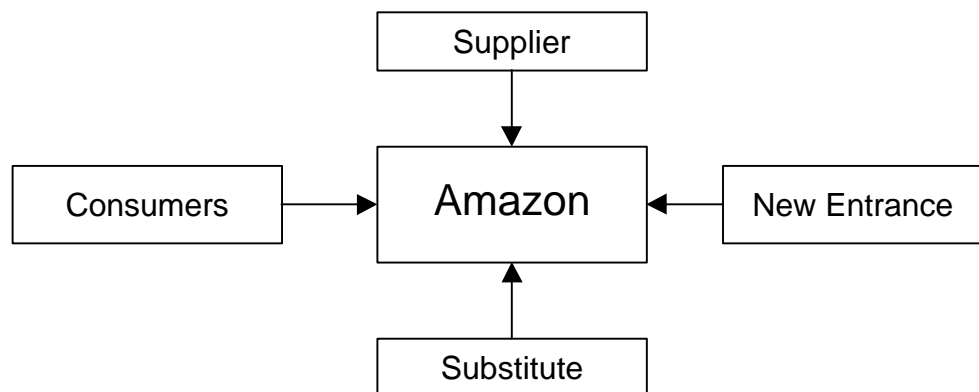


Figure 2. Porter's competitive force model

The major player here is Amazon. To increase its ability to compete, Amazon has to optimize those five forces.

For Supplier, Amazon started to build its own distribution centers in different locations and moving the products directly from the factory rather than from other distributors such that Amazon can lower its marginal cost.

Amazon was (fairly indisputably) the pioneer in this frontier called eCommerce. The company started very early in the new industry. However, it must continually remain aware of the new Entrants that become competitors to Amazon. New Entrants did not put forward as much effort as Amazon must to develop this business. For instance, BN.com (Barnes & Noble) was accused of copying the Amazon's style and business strategy. As a result, BN.com has become Amazon's biggest competitor. The companies both sell similar products in a similar fashion and with similar prices. Moreover, the aggressive competition between these two companies has put them in a non-profit status since they struggle to offer the lowest price. Besides, other new entrants such as eBay, Yahoo!Auction, and beyond.com are also try to grab a piece of this online business.

For the Consumer, Amazon.com continues to spend a lot of money on advertisement to reach customers as well as to increase consumers' awareness of eCommerce in general and the brand name in particular. Despite the fact that it is sometimes more convenient to shop on line rather than travel to a conventional store, consumers don't tend to change their shopping behavior in a sudden way, but rather slowly by the influence given through an environment such as advertisement.

Thus, the Substitute of eCommerce, the traditional retailers, is still more attractive than the etailers. For example, we as consumers more than likely would rather go to the bookstore and browse through a book before we buy it, as opposed to purchasing something which we have no idea about online without a preview.

Comparison of Etailers and Retailers

COMPARISON OF WORKING CAPITAL AND INFRASTRUCTURE REQUIREMENTS OF RETAILERS AND ETAILERS

Traditional Retailers		Ticker	Yr. Ending	Annual Revenue	Account Receivables	Inventory	Account Payables	PP&E	(Inventory - A/R - A/P) / Revenues	PP&E / Revenues
Barnes & Nobles	BKS	Jan-99	3,006	58	945	498	510	16.8%	17.0%	
Best Buys	BBY	Feb-99	10,078	132	1,046	1,012	424	1.7%	4.2%	
BJs Wholesale Club	BJ	Jan-99	3,552	51	373	214	440	5.9%	12.4%	
Comp USA	CPU	Jun-98	5,286	214	521	535	211	3.8%	4.0%	
Gap	GPS	Jan-99	9,054	0	1,056	684	1,876	4.1%	20.7%	
Office Max	OMX	Jan-99	4,338	142	1,255	626	353	17.8%	8.1%	
Pets Mart	PETM	Jan-99	2,109	49	336	149	419	11.2%	19.9%	
Rite-Aid	RAD	Feb-99	12,731	750	2,893	2,868	1,455	6.1%	11.4%	
Toys R Us	TOY	Jan-99	11,170	204	1,902	1,415	4,226	6.2%	37.8%	
Walmart	WMT	Jan-99	139,208	1,118	17,076	10,257	25,973	5.7%	18.7%	
Average								7.9%	15.4%	
eTailers		Ticker	Yr. Ending	Annualized Revenue	Account Receivables	Inventory	Account Payables	PP&E	(Inventory - A/R - A/P) / Revenues	PP&E / Revenues
Amazon.Com	AMZN	Jun-99	1,258	0	59	166	156	-8.5%	12.4%	
barnesandnoble.com	BNBN	Jun-99	156	8	2	3	48	3.9%	30.5%	
Beyond.com	BYND	Jun-99	105	19	0	22	7	-3.1%	7.0%	
CDnow	CDNW	Jun-99	138	4	0	20	16	-11.4%	11.9%	
Cyberian Outpost	COOL	Aug-99	147	3	7	12	8	-1.2%	5.5%	
Egghead	EGGS	Jun-99	162	2	12	18	10	-2.4%	6.0%	
eToys	ETYS	Jun-99	32	0	11	13	9	-6.8%	27.9%	
Onsale	ONSL	Jun-99	326	8	7	14	5	0.4%	1.4%	
ValueAmerica	VUSA	Jun-99	143	7	2	16	6	-4.6%	4.4%	
Average								-3.7%	11.9%	

Source: C.E. Unterberg Towbin

Source: Auction Web Sites and C.E.Unterberg Towbin

According to the chart above, we can see that the revenue of retailers is greater than that of etailers. However, the inventory of etailers is in general much smaller than that of retailers. The lower the levels of inventory that a company maintains, the lower are its risks in product storage. So, it becomes an advantage for etailers to compete with retailers based on this aspect of business. Moreover, as technology improves, consumers should experience decreasing worry about online security and other problems. Eventually, consumers will shift toward online shopping on some level because of its obvious convenience. Imagine that one could order anything from anywhere in the world simply by viewing an online catalogue, and without buying an airplane ticket! Therefore, it is entirely feasible that eCommerce may become more popular than traditional retailing in the future. If that happens, Amazon will no longer be in debt, but rather making huge revenue from the very foundation they have built today!

VII. Net Present Value (NPV)

NPV is a way to forecast investments. If an NPV is positive, then in most cases it would be fair to say that investment is a safe choice, it shows that one would make more money on the investment than one would spend on the cost of capital. If NPV is negative, then a project usually would not be approved because one would be paying more in interest on the borrowed money than one would make from the project. Thus, now, we can use this way to estimate the Amazon.com's value. The NPV equation is:

$$NPV = \sum_{t=0}^n \frac{p_t}{(1+r)^t}$$

where r is the risk-adjusted discount rate (the required rate of return).

p_t is the firm's profits in year t .

But how can we get the risk-adjusted discount rate, r ? To simplify, in this paper, we use the Capital Asset Pricing Model (CAPM) to calculate the discount rate. The equation of CAPM is:

$$CAPM = r_f + b(r_m - r_f) \approx r$$

where r_f is the Risk Free Rate (the rate of return on a "risk free investment", like U.S. Government Treasury Bonds). Here, we adopt 30 year US Government Treasury Bonds.

r_m is the expected return on the overall stock market. (You have to guess what rate of return you think the overall stock market will produce.) Here, we adopt S&P 500.

b is Beta. Beta is the overall risk in investing in a large market, like the New York Stock Exchange. A company's beta is that company's risk compared to the risk of the overall market. If the company has a beta of 3.0, then it is said to be 3 times more risky than the overall market.

Searching some investment data of Amazon.com, we find an income statement from C.E. Unterberg Towbin.

	Year Ending December 31 (\$ IN MILLIONS)				
	1998A	1999E	2000E	2001E	2002E
Net income	\$-74	\$-306	\$-303	\$-155	\$87

Source: Company Report, C.E. Unterberg Towbin

Besides, we adopt $r_f=6.5\%$, $b=2.98$, and $r_m=13\%$, and we can get the discount rate, r , is 25.9%. Then, we can calculate the NPV (from 1998 to 2002), and get NPV is \$-551.251 millions.

	Year Ending December 31 (\$ IN MILLIONS)				
	1998A	1999E	2000E	2001E	2002E
Net income	\$-74	\$-306	\$-303	\$-155	\$87
NPV = -551.251					

Analysis:

After the calculation, we get a negative NPV. Does it mean that it is not a good project to invest Amazon.com? Not exactly, for the reason that Amazon.com is a high tech company and it still is investing much money to expand its physical facilities and business lines. So now it is in debt. However, we really cannot evaluate high tech companies in the same way, because high tech companies are the more often than not the fastest growing companies around. Thus, NPV is just a kind of index to judge the value of a company. Moreover, based on the finance forecast of Amazon.com, we can find that Amazon.com will probably start to earn money in 2002. Thus, if we extend our expectancy for ten years or more, we will probably get a positive NPV. Besides, after checking the stock market, we find that the overall beta is 2.98. The value of beta is high, and it means that investing in Amazon.com is more risky than the overall market. However, high risk also denotes the possibility for high profit, so Amazon.com is still (we believe) a worthy company in which to invest.

VIII. Opinions and Conclusion

After our extensive research into Amazon's marketing mix, cost and revenue structures, net present value, and additional factors, we have come up with a four-part solution that might possibly help the eCommerce giant to finally turn a profit.

Our first suggestion, ironically, is increased expenditure in the research and development arena. We believe that Amazon should prepare itself for additional telecommunications implementations such as high speed Internet, wireless Internet, and network security. These types of implementations, though representative of considerable R&D costs, are probably the three most significant factors thatetailers must prepare for in the near future. As users' connections increase in speed, any delays on the part of the etailer they are connecting to will become more and more obvious and will be less tolerable. Also, as wireless Internet continues to gain in popularity, some enterprising users will undoubtedly wish to connect to etailers while on the move. Amazon can stay ahead of the pack by preparing a unique and comfortable (yet abbreviated) interface for these users. And finally, network security (or infosec, information assurance, etc.) is one of the moment's buzzwords. As consumers become more accustomed to the internet and begin to take the plunge into the eCommerce world, they become more aware of the need for network security, and are likely to only do business with the etailers they find to be the most secure. Amazon will hardly go wrong by investing in the maintenance and improvement of its own network security, and although it has the brand name to back it up now, it **MUST** continue to prove the integrity of its data transmission means and methods.

Our second recommendation for Amazon is to increase its word-of-mouth advertisement. This might seem odd for an industry leader to rely upon such a quaint tactic as this, but we truly believe that in the world of the Internet this is a powerful tool. We are quick to visit sites that our friends identify as being fabulous, and Amazon might capitalize on this by rewarding its customers who can reel in new prospects.

Our third recommendation to Amazon is to continue expanding its product lines. Given Amazon's vision and its unique position in the etailer industry, the cost associated with entering new markets is significantly lower than that of its competitors. There is no reason to let this advantage slip away unused.

And finally, Amazon must continually strive to offer low, competitive prices to its customers. In order to draw people away from traditional on-site shopping and toward Internet buying, we feel that prices will be the overwhelmingly decisive factor. Amazon has already proven itself as a low-cost retailer, and has evolved (such as building the distribution facilities) into a position where it can continue to offer these discounts. However, it will be vitally important that the company steer clear of any sudden price increases if it wants to maintain its customer base.

In conclusion, however, we must be fair and state that Amazon in fact is already doing these things for the most part. And although the company has yet to turn a profit, is it in fact favorable for them to remain in debt for the time being? We have investigated Amazon's relative NPV and discount rate, and discovered that the company's large expenditure on investments will cause a shift that will lead the company to lower marginal costs and higher fixed costs in the future. Despite the fact that the retailer's profitability is currently reduced, won't these factors indeed maintain its dominance once its discount rate rises? So although we have introduced our opinions about how Amazon can expect to speed up its profitability horizon, in fact it seems that for the moment the company holds an advantageous position while remaining in debt. No matter what, there is no doubt that Amazon has proven its worth as a company. The feat that the retailer has accomplished by moving to be the industry leader and being considered an actual platform for the technology is astounding. With Amazon's expertise, marketing, and forecasting all being taken into consideration, there is little doubt that the company will eventually emerge from its debt and reap the benefits of waiting patiently for its profits.

Works Cited

Unless otherwise noted, our figures and quotations came from the following Web site:

<http://www.teachmefinance.com>, and "Research Report: amazon.com." by Ries, Dan and Truong, Van.