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Hewlett Packard: Analysis Reveals Challenges to and Opportunities for Profitability

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Abstract:

This article presents analysis of Hewlett Packard (HP) for the fiscal years ending in October 2018, 2017 and 2016 with an update as of August 22, 2019. A major challenge to HP's future profitability is that total liabilities exceed total assets leaving owners' equity in a deficit. While HP has been a leader in the personal computer sector, HP has recently taken other sectors by storm. HP has become an icon of innovation in areas such as the medical field, education, and 3D printing. HP has taken on a new outlook for the future of HP. An example is the over 100% growth in reported net income for fiscal year ending October 2018 as compared to October 2017. An analysis of HP's income statement and balance sheet are presented to illustrate the company's progress over the time frame of 2016, 2017 and 2018. A comparison of HP's financial status to the technology industry reveals that HP is moving in the right direction to achieve corporate goals while still maintaining financial strength and technology powerhouse status. The diversification is profitable for HP, but challenging for analysts to incorporate in developing and considering the future profitability of HP.

Keywords: Hewlett Packard, technology, medical industry, education, 3D printing

1. Introduction

This article begins with a brief history of Hewlett Packard (HD). Analysis is presented of the HD income statements and balance sheets for the fiscal years ending in October of 2016, 2017 and 2018. HP's innovation leading to moving into diverse industries such as medical, education and 3D printing plus serious consideration of moving into the automobile industry makes comparing HD to industry standards somewhat of a challenge. Part of the analysis included in this article is about cost drivers as it relates to the ever-growing profitability of HP. Product lines are discussed before recommendations and then a summary is presented.

2. History

HP began the technology journey with calculators (Hewlett Packard, n.d.). This led HP to personal devices, such as computers including laptops and printers (Hewlett Packard, 2019). HP's continued efforts have resulted in many opportunities to expand the product lines. The HP mission is to continue to innovate and create new technology based on consumer needs and desires (Hewlett Packard, 2019). This has been the HP goal for the life of the corporation. HP has decided to now include aesthetics as well (Hewlett Packard, 2019). HP wants to make the products sleek and good looking as well as functional. HP's expansion of the product lines through the HP labs has begun to include medical equipment. For instance, HP has worked with medical research to aid in development of new prosthetic products (Hewlett Packard, 2019). HP is dedicated to continued advancements catering to what society needs to make life better (Hewlett Packard, 2019). The HP tag line is "Keep reinventing." It is not only a statement about HP, but is speaking to the world at large (Hewlett Packard, 2019). This article discusses the financial effects that HP's goals and plans have had as well as compare the company to the rest of the technology industry. The next section focused on analyzing the income statement.

3. HP Net Income

HP has been successful in endeavors that caused annual net income to continue to grow for the years 2018, 2017 and 2016 are \$5.327 billion, \$2.526 billion, and \$2.496 billion, respectively (Hewlett Packard, 2018, p. 55). Net income for 2018 showed a 110% increase from 2017 (Hewlett Packard, 2018). A growth of this percentage means that HP had more than doubled net income from the previous year. To further compare this accomplishment, first consider that the growth from 2016 to 2017 was only 1.2% (Hewlett Packard, 2018). It indicates that HP reinvented itself in a year's time. HP's mission and initiatives for the future seem to be effectively creating growth for the corporation. This diversification and reinvention present a challenge as how to identify HP with a particular industry. HP is now in more than just the technology industry.

When multiple years are included of financial data in the statement then horizontal analysis is possible. "Horizontal analysis provides a year-to-year comparison of a company's performance in different periods" (Braun & Tietz, 2018, page 839). The use of percentages rather than dollar amounts allows effective analysis and comparisons each year even when the actual monetary amounts differ. It is difficult to compare one year to the next when the revenues and expenses are different values. For instance, a company could have increased revenue and it looks as though the company is doing better than prior years. Upon further inspection, expenses may have increased excessively thus causing the company to actually be worse off than in prior years. The percentages included in same-size statements can reveal these anomalies and provide a better basis for analysis and decision making.

4. Income Statement

HP's same-size income statement in Figure 1 shows that HP has been fairly consistent with the percentage of the revenue relative to the expenses. HP has increased the overall revenue since 2016, but the percentage that is spent on expense remains approximately the same (see Figure 1). It seems HP has decreased the earnings from continued operations and then increased the benefits from taxes, which is revealed in Figure 1. To go along with these increased benefits, HP has eliminated the loss from discontinued operations and increased the overall net earnings (see Figure 1). Even though some of HP's data has remained consistent, in the end the small changes increased the net earnings around 4% from 2016 and 2017 (see Figure 1).

5. Cost Activity

As with any type of business, there are many facets that come together to create a product or service. "In information-intensive industries where state-of-the-art development and deployment of information systems are strategic necessities, infrastructure is a central issue" (Harter & Slaughter, 2003, p. 784). This means that HP must utilize not only the production specific activities but many of the other departmental activities.

There are five categories of infrastructure activities for technology manufacturers that are typical. "Five categories of infrastructure activities: product management, process management, integration management, operations management, and documentation production" (Harter & Slaughter, 2003, p. 787). Product management refers to those activities that deal with client relations, establishes schedules and budgets (Harter & Slaughter, 2003). Process management creates the processes involved with software, compliance and quality assurance (Harter & Slaughter, 2003). Integration management then deals with the implementation of the processes (Harter & Slaughter, 2003). Operations management runs production, provides assistance and support to consumers (Harter & Slaughter, 2003). Documentation production is where user manuals and maintenance documentation are produced (Harter & Slaughter, 2003).

Activity-based costing can be associated to an entity's reporting segments since this is where the costs appear in the financial statements. Hewlett Packard has, "three reportable segments: Personal Systems, Printing and Corporate Investments" (Hewlett Packard, 2018, p. 95). A majority of HP's costs are allocated through personal systems and printing. "Activity-based costing (ABC) models are examples of analytical method application and they consider the resources required in each activity (i.e., material, time, energy, customer service)" (Fiorentino, 2014, p. 1438). Corporate investments would use infrastructure costs, but not direct production costs such as materials and direct labor hours. One of the more obvious activities for any manufacturing business are advertising and accounting, but there are other less obvious for technology manufacturers. "Infrastructure services include activities such as computer operations, data integration, and configuration management that facilitate software development" (Harter & Slaughter, 2003, p. 784). HP must support the personal systems produced and related various software. HP must ensure that the processors contained inside the personal systems can function properly with the integrated software and data.

6. Cost Drivers

Now that debt has been identified as a potential concern, one should look to what could be the catalysts for these concerns. In analyzing debt, one should look to what drive costs. "A cost driver is simply another measure that is used to proportionately distribute the cost of activities to cost objects" (Geiger, 1999, p. 33). Cost drivers can be direct labor hours, machine hours, number of parts used, and so on. Each activity costs are then allocated based on the cost driver or drivers.

"The choice of cost driver is an important design issue that can give considerable impact on the effectiveness of a managerial costing system" (Geiger, 1999, p. 33). For a picture of the cost of an activity, the drivers must have a direct causation impact on that activity. For instance, HP would not allocate the cost of accounting using number of parts used as there is not a direct causal relationship between the two. "If management's goal is to understand the economic cost of the cost object, cost driver selection should exhibit correlation or causality to the consumption of costly resources by the cost object" (Geiger, 1999, p. 34). In order to manage cost effectively, the true nature of an activity's costs must be established. The cost driver for an activity in each of the following areas is considered: production, sales, human resources, and accounting. "Identify the significant cost drivers of each operation and to estimate a...function for manufacturing cost estimation" (Fiorentino, 2014, p. 1439). The accurate assignment of cost driver in each of the mentioned sectors allows for the proper management of costs and can have a major impact on debt.

Within production, materials handling would be an integral activity for HP. This cost activity is driven by number of parts used. "In a market where products become obsolete in short time and require low lead time, time to market and manufacturing cost, it is important to correctly evaluate the product costs starting from the preliminary phases of its production cycle" (Fiorentino, 2014, p. 1443). This activity is one of the preliminary phases of production as it enables the rest of the process of assembly. "The use of cost drivers, such as cycle time and number of parts, focused attention on key

operating parameters: greatly reducing the underlying causes of many operating costs" (Geiger, 1999, p. 34). When handling materials, the only variable directly causing the activity is the number of parts being used. Without these parts the activity would not occur.

HP's sales activity can be measured by the number of orders as the cost driver. "Our inventory management and distribution practices in both building products to order and configuring products to order seek to minimize inventory holding periods by taking delivery of the inventory and manufacturing shortly before the sale or distribution of products to our customers" (Hewlett Packard, 2018, p. 96). HP tries to keep obsolete or held inventory to a minimum. This is why the number of orders could depict the cost of sales.

The accounting for legislative expenses can be driven by the number of departments that are regulated by legislation. "We are also subject to legislation in an increasing number of jurisdictions that makes producers of electrical goods, including computers and printers, financially responsible for specified collection, recycling, treatment and disposal of past and future covered products" (Hewlett Packard, 2018, p. 100). According to HP's 2018 annual report, HP is having to increase regulatory expenses in an increasing number of departments. This will drive the cost of accounting up as it increases the amount of infrastructure expense allocated to those departments. The next section focusses on the Balance Sheet.

7. Balance Sheet

Much like with same-size income statements, same-size balance sheets can be the basis of analysis of an entity's financial growth or lack thereof. Using HP's balance sheets from 2016 through 2018, the trends or differences over time can be analyzed. For instance, in Figure 2 HP's percent that is accounts receivable has increased from 2017 to 2018. "The company may have relaxed its credit terms to generate more sales" (Braun & Tietz, 2018, page 841). They have also decreased the percentage that is cash or cash equivalent. Overall, HP has decreased the proportion of assets that are current assets and increased non-current assets.

As seen in Figure 2, property, plant and equipment has increased its portion minimally but other non-current assets have increased over 5% of total assets. This may not seem large but property, plant and equipment and other non-current assets increased by \$300 million and \$2 billion, respectively, from one year to the next (Hewlett Packard, 2018, p. 56). Meanwhile current assets dropped by \$1 billion overall, with cash and cash equivalents explaining much of that decrease (Hewlett Packard, 2018, p. 56).

Liabilities have seen some fluctuations as well. Accounts payable has increased steadily over the three-year period which would account for the majority of the current liabilities increase of almost 5% (see Figure 2). Whereas in Figure 2 HP has decreased the non-current liabilities by a combined 12% from 2017 to 2018, which is a continued decrease from 2016. HP has reduced the stockholder deficit by almost 8% from 2017 and 12% from 2016 (see Figure 2). Liabilities and stockholder deficit have not only decreased in percentage points but in gross dollar amounts as well (Hewlett Packard, 2018, p. 56). The next section discusses product lines.

8. Product Lines

HP lists the product lines in the annual reports. HP is, "a leading global provider of personal computing and other access devices, imaging and printing products, and related technologies, solutions and services" (Hewlett Packard, 2018, p. 94). Outside of personal systems, like laptops and tablets, HP also produces imaging products such as printers, scanners and copiers. These products lend themselves to a host of other activity costs, such as the production of printer drums and rollers. HP services provided where much of the direct labor hours costs should be allocated as it requires more human interaction than automated production technology.

Like most manufacturing companies, HP outsources many pieces of the production line. "The use of [outsourced materials] OMs are intended to generate cost efficiencies and reduce time to market for HP-designed products" (Hewlett Packard, 2018, p. 96). These OMs are yet another cost activity that must be included in cost allocation. Many of the outsourced materials for HP are molds and housings included in the personal systems and printing products. "Dies and moulds [a.k.a, molds] represent an essential element in manufacturing process and significantly influence the fabrication time and cost of the products" (Fiorentino, 2014, p. 1437). These pieces are generally outsourced to save on the expense of producing them within HP. This does not mean that the cost of these pieces is not included in the overall cost of the products, but it does make production more cost efficient thus lowering the cost to consumers.

9. Industry Comparisons

Market Watch reported that HP's stock price was \$20.14 on August 2, 2019 at the close of the market. This is down 4.05% for the individual stock. The overall industry is also down by 0.62% (HPQ Stock Price: HP Inc. Stock Quote, 2019). Some of HP's larger competitors were also down like HP: Apple was down 2.12% and Xerox was down 3.35% (HPQ Stock Price: HP Inc. Stock Quote, 2019). Meanwhile, Super Micro Computer Inc., was up by 1.40% a month ago making them look better than HP at the time (HPQ Stock Price: HP Inc. Stock Quote, 2019). Overall, HP's stock has fallen over 15% in the last twelve months (HPQ Stock Price: HP Inc. Stock Quote, 2019).

According to the CSI Market site, both HP's quick ratio (0.22) and working capital (0.86) are low for their corporate history (HP Financial Strength Comparisons, 2019). Although, the ranking in the mid-teens in the industry is unchanged. HP's revenue growth is below industry average at 10.33% compared to 12.63% (HP Financial Strength Comparisons, 2019). The net profit margin is 9.44%, which puts HP at number 6 in the computer hardware industry and 140 in the technology sector (HP Financial Strength Comparisons, 2019).

One of the concerns for HP is debt. There is more debt than assets. "Over the last three years, HP recorded free cash flow worth a fulsome 82% of its EBIT, which is stronger than we'd usually expect. That puts it in a very strong position to pay down debt" (Simply Wall Street, 2019, para 8). The earnings before interest and taxes (EBIT), or operating profit, is a measure of the true ability to pay debt. Financial analysts report that HP is in a better debt position than the balance sheet initially reveals. In fact, one such analysis stated that HP should be, "no more threatened by its debt than an elephant is by a mouse" (Simply Wall Street, 2019, para 7).

10. Financial Analysis

As concerning as parts of the balance sheet are valuation can be an excellent indicator of an entity's success. The price per earnings is a measure of how much an investor is willing to pay for a share of a company's stock, almost like a financial popularity contest. "Investors should note that HP has a Forward P/E ratio of 8.86 as of August 2019. This represents a discount compared to its industry's average Forward P/E of 9.75" (Zacks Equity Research, 2019, para 8). Even though HP's P/E ratio is a discount from the industry it is not a large or discomfiting difference. Forecasts for HP's future are looking good, especially with the new innovations and contracts. HP should see an almost 8% increase revenue from 2018 (Savitz, 2019). "In the U.S., HP leads with close to 30% share, according to Gartner, just ahead of Dell Technologies (DELL), with Lenovo and Apple farbehind" (Savitz, 2019, para 4). This may continue to grow with the influx of business from their 3D printer plans as well as HPs move into other markets with the plans to assist in the manufacture of auto parts.

The supply sector is profitable for HP, "as Bernstein analyst Toni Sacconaghi notes, more than 100% of HP's profits come from supplies. HP Inc. is HP Ink" (Savitz, 2019, para 5). HP produces a lot of income from printer and copier ink and other supplies. With HP's addition of 3D printing, this should only expand with the supplies and service. HP continues to be a profitable investment as well. "In the latest quarter, HP returned \$936 million in dividends and buybacks" (Savitz, 2019, para 8). They have a consistent record of sharing profits with their investors. HP surpasses competitors in dividend yield. HP's reputation precedes it. Many analysts proclaim HP as a good investment with a high rate of return.

11. Summary

HP is progressing much the same as the rest of the technology industry (HP Financial Strength Comparisons, 2019). Although, that does not mean there is not room for improvement within the company. Keeping with HP's focus of innovation and technology improvements, reinvestment in the areas of research and development could be one step in their action plan (Hewlett Packard, 2018). Making investors aware of this may positively affect the market standing and set HP apart from others in the technology sector as HP has been and continues to diversify. Without insider information as to the future plans for HP, analysts can only make educated assumptions based on the figures in the HP financials and news releases as to the effects these adaptations may have. For instance, the increase in accounts payable compared to prior years may be part of HP's initiative to further the innovation of advanced technology (Hewlett Packard, 2018). This could be evidence of investing in new equipment, properties, or even staff that can contribute to these discoveries and moving HP to the front of the technology pack. This assumption goes hand in hand with the increase in non-current assets and the slight increase in property, plant and equipment (Hewlett Packard, 2018). These increases could be due to acquiring the necessary assets to further the research and development segment.

HP has a vast amount of cost activities that occur throughout the corporation's operations. This can be from infrastructure that supports production and sales to those activities directly involved in production and sales. Many organizations want to maximize profits while lowering costs, which appears to be HP's goal as well. When management evaluates costs, having an accounting of where the costs stem from makes identifying areas of improvement that much easier. Applying an average of costs to every activity or department is far from accurate, especially in a business as large as HP. Effective cost management for HP is possible when the cost can be followed back to its origination, thus where effective decreases can be made.

In the future, HP has much to look forward to and many of the plans are already in motion. "HP has alliances with Siemens, BASF, and Jaguar Land Rover. The company has set big goals around automotive and industrial manufacturing" (Savitz, 2019, para 13). These alliances are revolving around their 3D printing initiatives. HP plans to aid in the manufacture of auto parts and other industrial pieces using their 3D printers. These 3D printing plans have been in motion for a while but have not produced significant financial results yet. "HP doesn't see a material earnings impact for another three to five years" (Savitz, 2019, para 14). The new 3D printer plant will assist in moving this innovation forward over the next several years, hopefully producing financial gains.

The company's own Chief Executive Officer (CEO) has a growth mindset when it comes to the future of HP. "Weisler sees another opportunity in commercial graphics—specialized printers for signs, packages, publications, and textiles, a \$30 billion market where HP is just starting to be a factor" (Savitz, 2019, para 11). It seems the company is looking to break into more than just the automotive parts industry with their printing product lines. With the trusted HP name in personal computers and printers it may be an easy transition.

As mentioned, analysts continue to support HP as an investment. "HPQ currently has a Zacks Rank of #2 (Buy)" (Zacks Equity Research, 2019, para 7). It may not be the highest ranking, but for a company with some tough numbers on the financials it is an excellent spot to be. Investors may be put off by the annual reports with total liabilities exceeding total assets and the recent stock history, but analysts see that the future of HP looks very bright.

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Appendix

	For Fiscal Years Ended October 31		
	2018	2017	2016
	Percents to the nearest hundredth		
Net Revenue.....	100	100	100
Costs and Expenses:			
Cost of Revenue.....	81.75	81.60	81.35
Research and Development.....	2.40	2.29	2.51
Selling, General and Administrative.....	8.31	8.41	7.95
Restructuring and other charges.....	0.23	0.70	0.42
Acquisition-related charges.....	0.21	0.24	0.01
Amortization of Intangible Assets.....	0.14	0.00	0.03
Defined Benefit Plan Settlement Charges.....	0.01	0.01	0.37
Total Costs and Expenses.....	93.05	93.24	92.64
Earnings from Continuing Operations.....	6.95	6.76	7.36
Interest and Other, net.....	(1.80)	(0.47)	0.44
Earnings from Continuing before Taxes.....	5.15	6.29	7.80
Benefit from (provision for) taxes.....	3.96	(1.44)	(2.27)
Net Earnings from Continuing Operations.....	9.11	4.85	5.53
Net Loss from Discontinued Operations.....	0	0	(0.35)
Net Earnings.....	9.11	4.85	5.17

Figure 1

Note. Adapted from "HP 2018 Annual Report," By Hewlett Packard 2018, P. 54

Same-Size Balance Sheet			
Assets	As of October 31		
	2018	2017	2016
Current Assets:	All percents rounded to the nearest hundredth		
Cash and Cash Equivalents.....	14.92%	21.26%	21.69%
Accounts Receivable, net.....	14.77%	13.41%	14.19%
Inventory.....	17.51%	17.58%	15.47%
Other Current Assets.....	14.57%	15.56%	12.36%
Total Current Assets.....	61.77%	67.81%	63.71%
Property, Plant and Equipment, net.....	6.35%	5.71%	5.99%
Goodwill.....	17.24%	17.08%	19.39%
Other Non-Current Assets.....	14.64%	9.40%	10.90%
Total Assets.....	100%	100%	100%
Liabilities and Stockholders' Deficit			
Current Liabilities:			
Notes Payable and Short-Term Borrowings.....	4.23%	3.26%	2.68%
Accounts Payable.....	42.79%	40.35%	38.30%
Employee Compensation and Benefits.....	3.78%	2.72%	2.62%
Taxes on Earnings.....	0.98%	0.65%	0.80%
Other Accrued Liabilities.....	21.30%	21.13%	22.90%
Total Current Liabilities.....	72.59%	68.09%	64.88%
Long-Term Debt.....	13.07%	20.50%	23.23%
Other Non-Current Liabilities.....	16.19%	21.76%	25.30%
Commitments and Contingencies.....	—	—	—
Stockholders' Deficit:			
Preferred Stock, \$0.01 par value.....	—	—	—
Common Stock, \$0.01 par value.....	0.05%	0.05%	0.06%
Additional Paid-In Capital.....	1.91%	1.15%	3.55%
Accumulated Deficit.....	-1.37%	-7.25%	-12.07%
Accumulated Other Comprehensive Loss.....	-2.44%	-4.31%	-4.96%
Total Stockholders' Deficit.....	-1.85%	-10.35%	-13.42%
Total Liabilities and Stockholders' Deficit.....	100%	100%	100%

Figure 2

Note. Adapted from "HP 2018 Annual Report," by Hewlett Packard 2018, p. 56