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Starbucks Corporation:
Financial Analysis of a Business Strategy

This note introduces and illustrates common ratios used in financial statement analysis. These measures include three types: (1) profitability ratios measure the margin by which revenues cover various categories of costs; (2) asset management ratios address the efficiency with which the asset base is used to generate sales; and (3) financial leverage ratios measure usage of debt as a financing mechanism. We also discuss DuPont analysis of return on equity to illustrate how profitability, asset utilization, and financial leverage come together to measure ability to generate returns to shareholders.

This note uses financial results for fiscal 2010 through 2012 for Starbucks Corporation to illustrate basic financial analysis, including common size statements and ratio calculation, interpretation, and linkages to business strategy. We do not draw definitive conclusions about whether Starbucks is effectively managed. Instead, we illustrate how Starbucks' operating strategy is reflected in its financial results, in order to demonstrate that financial results tell an intuitive story about a firm's business model and operating strategy.

This note assumes a working knowledge of key financial statements: income statement and balance sheet. Note the following regarding language: most financial metrics, whether reported in financial statements or computed by analysts, have multiple equivalent titles. For example, net income is referred to interchangeably as net profit or profit after tax, while shareholders' equity is known equivalently as stockholders' equity or net worth. Therefore, analysis of financial results may require consultation of a financial dictionary, either in print or online.

BACKGROUND: STARBUCKS CORPORATION[1]

Starbucks is a roaster, marketer and retailer of specialty coffee. Its mission is "to inspire and nurture the human spirit—one person, one cup and one neighborhood at a time."[2] Through company-operated retail stores, the company purchases, roasts, and sells high-quality packaged coffees—along with freshly brewed coffees, teas, and other beverages, a variety of fresh food

[1] Unless otherwise specified, all information in this section is drawn from Starbucks Corporation Annual Reports for 2011 and 2012.
[2] Starbucks Company Profile, www.starbucks.com, accessed April 5, 2013.

This Note was prepared by Kathleen T. Hevert, Associate Professor of Finance at Babson College, as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. It is not intended to serve as an endorsement, sources of primary data or illustration of effective or ineffective management.

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items, and a focused selection of beverage-making equipment and accessories. Starbucks also sells a variety of coffee and tea products through other channels such as grocery stores, warehouse clubs, convenience stores, and national foodservice accounts. In addition to its Starbucks brand, its brand portfolio includes Tazo® Tea, Seattle's Best Coffee®, and Starbucks VIA® Ready Brew. The company's objective is to maintain the Starbucks brand as one of the most recognized and respected brands in the world. It also is committed to striking a balance between profitability and social responsibility.

Starbucks generates revenues through company-operated stores, licensed stores, consumer packaged goods ("CPG") and foodservice operations. Company-operated stores, which typically are located in high-traffic, high-visibility locations, benefit from a high degree of customer loyalty. While Starbucks does not franchise operations, it does enter into licensing arrangements to penetrate selected locations where it otherwise could not have a presence (e.g., airports, national grocery chains, major foodservice corporations, college campuses, and hospitals). In these arrangements, Starbucks provides coffee, tea, and related products for resale and receives a license fee and royalties on sales. CPG revenues comprise both domestic and international sales of packaged coffee and tea as well as a variety of ready-to-drink beverages and single-serve coffee and tea products to grocery, warehouse club, and specialty retail stores. It also includes revenues from product sales to and licensing revenues from manufacturers that produce and market Starbucks and Seattle's Best Coffee branded products through licensing agreements. Foodservice revenues come from companies that service business and industry, education, healthcare, office coffee distributors, hotels, restaurants, airlines, and other retailers.

Highlights of fiscal 2012 include the launch of the Verismo™ System, a breakthrough technology that allows customers to make Starbucks brewed or latte beverages in their homes. The company also introduced Starbucks Refreshers™ beverages, cold energy drinks made with natural green coffee extract, which are sold in cans, as an instant beverage, or served in stores. In addition, Starbucks and Tazo branded K-Cup® portion packs were launched at the start of fiscal 2012.

CPG revenues increased dramatically in 2012 primarily due to sales of Starbucks and Tazo branded K-Cup® portion packs and the company's transition to a direct distribution model for packaged coffee, which occurred during the second quarter of fiscal 2011. New store openings also contributed to growth: 151 company-owned stores were opened in 2011 and 398 were opened in 2012, bringing the total company-owned store count to 9,405 by the conclusion of fiscal 2012. In 2012, 151 net new stores were opened in the China/Asia Pacific reporting segment; this segment achieved a revenue growth of 31% in 2012. When combined with licensed stores, the total store count at the end of fiscal 2012 was 18,066. Same-store revenue growth was 7% in 2012, 8% in 2011, and 7% in 2010.

A key operating risk for Starbucks is commodity prices, especially for coffee and milk. Prices for *arabica* coffee are a particular concern, due both to the critical role played by coffee in Starbucks products and because these prices are highly volatile. Prices for *arabica* coffee reached record highs in 2011 and remained elevated in 2012.

Starbucks enters new product and geographic markets through joint ventures and strategic acquisitions. In fact, Starbucks completed two strategic acquisitions in 2012. On November 10, 2011 (first quarter of fiscal 2012), the company acquired Evolution Fresh, Inc., a super-premium juice company, to expand its portfolio of product offerings and enter the super-

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premium juice market. Evolution Fresh products are sold in Starbucks stores and grocery locations. On July 3, 2012, the company acquired Bay Bread, LLC and its La Boulange bakery brand to elevate core food offerings and build a premium, artisanal bakery brand. Not reflected in the fiscal 2012 results is the recent acquisition of Teavana Holdings, Inc., a specialty retailer of premium loose-leaf teas, authentic artisanal teawares, and other related merchandise. This acquisition closed December 31, 2012 (first quarter of fiscal 2013).[3]

Starbucks opened its first store in 1971 and went public in 1992. It is headquartered in Seattle, Washington, operates stores in 61 countries and employs over 200,000 "partners" (employees). Its stock trades on NASDAQ under the ticker symbol "SBUX." Its market capitalization was approximately $36.5 billion at the end of fiscal 2012.

Starbucks financial statements as of September 30, 2012 appear in **Exhibit 1** (Income Statement) and **Exhibit 2** (Balance Sheet).[4]

COMMON SIZE STATEMENTS

A helpful starting point for a financial analysis is a set of common size financial statements. A common size income statement expresses all income statement items as a percentage of sales, whereas a common size balance sheet expresses all balance sheet items as a percentage of total assets. These statements allow us to develop a preliminary understanding of trends in revenue mix, cost structure, and asset holdings, along with how a business is funded. The common size income statement appears in **Exhibit 3** and the common size balance sheet appears in **Exhibit 4**.

In the common size income statement, we see that revenue from company-owned stores declined year over year as a percentage of total revenue, not surprising given the rapid growth occurring in the CPG segment. Importantly, this change in revenue mix is useful to the interpretation of the ratio analysis to follow. We also see that net earnings as a percentage of sales (Starbucks' net profit margin) rose in 2011 and fell slightly in 2012. In the common size balance sheet, we see that inventories rose as a percentage of total assets, especially in 2011, perhaps another manifestation of the growing emphasis on packaged goods.

So, the common size statements begin to reveal the parity between Starbucks' operating strategy and its financial results, but with a little extra work we can learn much more. An analysis of key financial ratios will allow us to observe more clearly how the company's operating strategy is reflected in its financial results. It also will tell us whether Starbucks' effectiveness in creating shareholder returns has improved or deteriorated over time.

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[3] Melissa Allison, "Starbucks Closes Teavana Deal," *The Seattle Times*, December 31, 2012.
[4] Like all U.S. firms following generally accepted accounting principles, Starbucks isolates certain financial implications of noncontrolling interests—those in which Starbucks' ownership interest is 50% or less—on its income statement and balance sheet. Because firms are not required to provide detail on revenue and costs from noncontrolling interests, we disregard this distinction in the financial analysis to follow. We use "net earnings including noncontrolling interests" rather than "net earnings attributable to Starbucks," and "Total equity" rather than "Total shareholders' equity."

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FINANCIAL RATIOS

While there are many financial ratios, the most common appear in this section. We present Starbucks' ratios for fiscal 2010 through 2012, and provide calculation details to illustrate ratio computation for 2012. We briefly interpret ratio levels and trends.

Profitability Management Ratios

Profitability ratios measure the ability of a firm's revenues to cover its costs. Because there are three levels of costs, there are three types of profitability ratios: gross margin, operating margin, and net margin. Gross margin, which measures the ratio of gross profit to sales (revenues), is calculated as

$$\text{Gross margin} = \frac{\text{Gross profit}}{\text{Sales}}.$$

The only costs reflected in this measure are cost of goods sold (COGS), or costs directly attributable to producing a good or service. For a manufacturing firm, COGS includes raw materials, direct labor, and depreciation of manufacturing equipment. Alternative labels for COGS include Cost of Sales and Cost of Revenue. Gross margin measures the ability of the firm to cover its direct costs. This margin will vary according to product attributes, production efficiencies, leverage with suppliers, and many other factors. All else being equal, it will be greater for differentiated products than for commodity products, due to differences in value added and pricing power. It also will be greater for firms with higher leverage with suppliers (e.g., large firms with economies of scale in purchasing) as such firms procure raw materials on favorable terms. Many service firms do not report COGS or its equivalent, so we do not define gross margin for those firms.

The second profitability ratio is operating margin, calculated as

$$\text{Operating margin} = \frac{\text{Operating income}}{\text{Sales}}.$$

Operating income is determined by subtracting Selling, General, and Administrative (SG&A), Research and Development (R&D), depreciation expenses, and any other operating expenses from gross profit. SG&A includes costs not directly connected to product production, such as headquarters expense, marketing, and sales. Operating income is also knows as earnings before interest and tax, or "EBIT."

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Since operating income accounts for all operating expenses, it measures the ability of the firm to generate a profit after covering costs for producing and selling its products, nourishing its product pipeline (R&D), and meeting overall corporate expenses. Firms with heavy R&D will exhibit an operating margin far below gross margin, as will firms with heavy advertising and promotion. This measure also will be higher for firms with an ability to spread corporate overhead over high sales volumes.

The final profitability ratio is net margin, the ratio of net income to sales:

$$\text{Net margin} = \frac{\text{Net income}}{\text{Sales}}.$$

Also known as profit margin and return on sales (ROS), this measure extends operating margin to reflect non-operating costs: interest and taxes. Interest is the cost paid to suppliers of debt capital, primarily bondholders and banks. Interest costs are determined by a firm's financial strategy, rather than its business strategy. Taxes, while marginally responsive to management, are largely exogenous to strategy. So, while net margin does not add much information about the effectiveness of a firm's operating strategy, it is an important summary measure of income that belongs to shareholders after all costs, both operating and financial, have been covered.

Table 1 below illustrates margins for Starbucks. Gross margins are high, as we would expect for a company with strong brand equity, a differentiated product, and associated pricing power. Gross margin fell in 2011, likely due to the record high coffee input costs experienced in 2011. Gross margin fell again in 2012, as coffee input prices continued at high levels. Since we know coffee input prices fell a bit in 2012, we must assume that store occupancy prices increased in 2012. Given the aggressive international expansion that occurred in 2012, this is not surprising; prime international store locations often command higher rents than in the US.[5] Operating margins are substantially lower than gross margins, primarily due to high store operating expenses. It is reasonable that store operating expenses are significant given Starbucks' desire to provide superior service and maintain customer loyalty. Operating margins rose slightly over time as store operating expenses fell as a percentage of revenue (see **Exhibit 3**). This trend appears to reflect the changing revenue mix: as revenue from company-store sales declines as a percentage of revenue, store operating costs as a percentage of revenue decline as well. Net margins mirror the pattern for operating margins from 2010 to 2011. In 2012, net margin fell slightly as tax expense rose. More research is needed to uncover the cause of the increase in tax in 2012, but since tax expense is largely out of company control, the decline in net margin does not indicate a deficiency in the ability of Starbucks' operating strategy to generate profit.

[5] Starbucks 2012 Annual Report.

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Table 1 Profitability: Accounting Margins				
Ratio	Formula	2012	2011	2010
Gross margin	$\frac{\text{Gross profit}}{\text{Sales}}$	$\frac{13{,}299.5 - 5.813.3}{13{,}299.5} = 56.3\%$	58.0%	58.8%
Operating margin	$\frac{\text{Operating profit}}{\text{Sales}}$	$\frac{1{,}997.4}{13{,}299.5} = 15.0\%$	14.8%	13.3%
Net margin	$\frac{\text{Net income}}{\text{Sales}}$	$\frac{1{,}384.7}{13{,}299.5} = 10.4\%$	10.7%	8.9%

Asset Management Ratios

While profitability is indeed important, it does not tell a complete story about the ability of an operating strategy to generate shareholder returns. Another critical element is the efficiency with which a firm utilizes its assets. Why? Every dollar of assets is funded by a dollar of liabilities or equity; every dollar of equity and almost every dollar of liabilities is costly. The cost of a liability (e.g., a bank loan) is interest on that liability, while the cost of equity is the return required by shareholders. Therefore, in addition to profitability, generation of shareholder returns requires efficient use of corporate assets. The objective here is to generate maximum revenue on minimum assets, without compromising long-term strategy.

The most generic overall asset management metric is total asset turnover, calculated as

$$\text{Total asset turnover} = \frac{\text{Sales}}{\text{Total assets}}.$$

It measures the dollars of sales generated by each dollar invested in assets. Analysts make different methodological choices in selecting the denominator for turnover measures: sales can be measured against beginning assets, ending assets, or average assets. That is, asset turnover for fiscal 2012 can be measured by dividing 2012 sales by 2011 assets (beginning), 2012 assets (ending), or an average of 2011 and 2012 assets (average). The argument in favor of using average assets is that average assets best reflects the asset investment on which sales are generated during a reporting period. In the interest of simplicity, the convention used throughout this note for all turnover measures is a denominator defined as ending assets.

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An additional asset management measure, return on assets (ROA), integrates profitability and asset utilization. It is measured as

$$\text{Return on assets} = \frac{\text{Net income}}{\text{Total assets}} = \frac{\text{Net income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total assets}}.$$

In its simplest form, ROA measures the net income generated for each dollar invested in assets. When decomposed, however, one can see that ROA is the product of net profit margin and total asset turnover. The decomposition reveals that an effective strategy must be both profitable and asset efficient.

Table 2 below shows that Starbucks' asset turnover deteriorated from 2010 to 2011, but its ROA improved substantially thanks to the strong increase in net profit margin in 2011. In 2012, marginal improvement in asset turnover combined with marginal decline in net profit margin combined to leave ROA almost unchanged. We uncover the sources of the changes in asset turnover in additional analysis to follow.

Table 2

Asset Management Ratios: Overall

Ratio	Formula	2012	2011	2010
Total asset turnover	$\frac{\text{Sales}}{\text{Total assets}}$	$\frac{13{,}299.5}{8{,}219.2} = 1.62$	1.59	1.68
Return on assets (ROA)	$\frac{\text{Net income}}{\text{Total assets}}$	$\frac{1{,}384.7}{8{,}219.2} = 16.8\%$	17.0%	14.8%

A subset of asset management ratios isolates key asset groups. Fixed asset turnover, calculated as

$$\text{Fixed asset turnover} = \frac{\text{Sales}}{\text{Net fixed assets}},$$

measures the ability of a firm's fixed assets (property, plant, and equipment) to generate sales. High fixed asset turnover indicates a superior ability to optimize usage of the existing capital base and to schedule capital expenditures.

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Another key asset is accounts receivable. This asset, which represents uncollected sales, arises from allowing customers to buy on credit and pay over time. While the extension of credit stimulates sales, the resultant accounts receivable must be funded with costly liabilities or equity. In this way, receivables are an investment, just like machinery used for production or packaging. Therefore, it is useful to investigate whether the accounts receivable investment is warranted by the sales generated. There are two related measures of the effects of extending credit to customers. The first is accounts receivable turnover, measured as

$$\text{Accounts receivable turnover} = \frac{\text{Sales}}{\text{Accounts receivable}}$$

This metric has the benefit of comparability with other asset turnover measures and, all else being equal, high receivables turnover indicates ability to collect credit sales quickly. However, this measure is properly interpreted only in light of the stated credit policy and business model. A more intuitive metric rearranges sales and accounts receivable to produce days sales in accounts receivable:

$$\text{Days sales in A/R} = \frac{\text{Accounts receivable}}{\text{Sales per day}}.$$

This metric is also known as average collection period and receivables days. Note that this measure is inversely related to the accounts receivable turnover measure. While we want turnover to be high, we want receivables days to be low. Because this metric is in units of days, it is directly comparable to stated policy and easily interpreted in light of business strategy. For example, if a firm's policy is net 30 and days sales in receivables is 45, one might conclude that credit is being poorly managed. Alternatively, one might conclude that the firm's key customers have considerable power, and exert this power by paying slowly. Some good rules of thumb for interpreting days receivables are as follows. When a firm transacts primarily in cash, days receivables are close to zero. Firms transacting primarily through third-party credit cards (e.g., MasterCard or Visa) tend to show days receivables of one to two weeks, while firms transacting primarily with other firms will tend to exhibit days receivables of 30 days (as net 30 is the most common business-to-business credit arrangement).[6]

The efficiency of a final key asset—inventory—can be measured analogously to accounts receivable. The only difference is that, because inventory is carried at cost on the balance sheet, it would not be appropriate to relate it to sales (which incorporates costs plus profit margin). So, inventory turnover is measured as

$$\text{Inventory turnover} = \frac{\text{COGS}}{\text{Inventory}},$$

while days cost of sales in inventory or inventory days is measured as

[6] William E. Fruhan, Jr.,"The Case of the Unidentified Industries—2012: Teaching Note," HBS # 9-207-096 (Boston: Harvard Business School Publishing, 2007), p. 2.

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$$\text{Days cost of sales in inventory} = \frac{\text{Inventory}}{\text{COGS per day}}.$$

The turnover metric for inventories has a more intuitive interpretation than it does for total assets and accounts receivable; it can be interpreted as the number of times an item of inventory is replenished each year.

Like receivables, we look for inventory turnover to be high and inventory days to be low. Unlike receivables, there exist fewer guidelines for interpretation from either stated policy or universal benchmarks. However, these measures will reflect business model and supply chain realities. For example, inventory days will be lower as product is more perishable and higher for long production cycles (inventory includes work in process) or raw materials with unpredictable availability. The challenge is to carry enough inventory to meet demand (both expected and unexpected), while not carrying so much inventory that needless financing and storage costs are incurred. The most effective inventory strategies successfully balance these competing considerations.

Examination of the key asset turnover ratios appears in **Table 3** below. Fixed asset turnover was flat in 2012, but rose substantially in 2011. We know that Starbucks opened 151 net new company-owned stores in 2011, which ordinarily would increase the investment in fixed assets in 2011. However, the Starbucks 2011 Annual Report discloses that on August 8, 2011, the company completed the sale of two office buildings for gross consideration of $125 million; this sale reduced the investment in fixed assets. After these and other miscellaneous changes in fixed assets, the balance sheet shows that Net Property, Plant, and Equipment is approximately $61.5 million lower in 2011 than in 2010. Higher revenues in 2011 on a lower fixed asset base increases fixed asset turnover in 2011. This is very good for shareholders, who realize a higher return on a lower investment in fixed assets.

Accounts receivable turnover declined steadily in 2011 and 2012, accompanied by related increases in receivables days. Because the overall receivables days measure is a weighted average of the receivables days from all revenue sources, a receivables days measure of approximately 10 in 2010 is consistent with the prevalence of customers transacting in stores with cash and credit cards. The steady increase in this measure is in line with a shift in revenue mix away from company-owned stores and toward licensing, CPG, and other sources, which surely are on some sort of typical business-to-business credit terms.

We see a dramatic reduction in inventory turnover, and associated increase in inventory days, in 2011. This suggests that Starbucks either (1) deliberately increased inventory levels to accomplish a valid operating objective or (2) bought product inputs and/or produced products that it was unable to sell as planned. It is possible that Starbucks bought *arabica* coffee at higher volumes than it typically would, in order to mitigate the record-high coffee prices in 2011. It also makes sense that increased commitment to CPG in 2011 would result in increased purchases of product inputs and increased holdings of completed product ready for sale. That said, investor concerns about inventory management in 2011 would be well justified, and investors would be wise to perform additional analysis to uncover the root cause of this change, especially since the deterioration continues in 2012. Inventory is a significant asset for Starbucks (see **Exhibit 4**), and inefficient management of this asset would cause shareholders needless costs to finance excess inventory.

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To summarize, Starbucks' overall asset management effectiveness, as measured by total asset turnover, appears to decline in 2011 and improve slightly in 2012. Investigation of key asset categories of fixed assets, accounts receivable, and inventory paints a more nuanced picture. Declining accounts receivable efficiency appears to be a reasonable manifestation of change in revenue mix, but declining inventory efficiency may point to a more serious issue. Had we stopped our analysis at the total asset turnover, we would have concluded that asset management improved in 2012, when in fact it deteriorated for receivables and inventory, and held steady for fixed assets. The small improvement in total asset turnover in 2012 is explained by miscellaneous reductions in non-operating assets, rather than improvement in key operating assets.

Table 3

Asset Management Ratios: Key Asset Categories

Ratio	Formula	2012	2011	2010
Fixed asset turnover	$\frac{\text{Sales}}{\text{Net fixed assets}}$	$\frac{13{,}299.5}{2{,}658.9} = 5.0$	5.0	4.4
Accounts receivable turnover	$\frac{\text{Sales}}{\text{Accounts receivable}}$	$\frac{13{,}299.5}{485.9} = 27.4$	30.3	35.4
Days sales in accounts receivable	$\frac{\text{Accounts receivable}}{\text{Sales per day}}$	$\frac{485.9}{13{,}299.5/365} = 13.3$	12.1	10.3
Inventory turnover	$\frac{\text{COGS}}{\text{Inventory}}$	$\frac{5{,}813.3}{1{,}241.5} = 4.7$	5.1	8.1
Days cost of sales in inventories	$\frac{\text{Inventories}}{\text{COGS per day}}$	$\frac{1{,}241.5}{5{,}813.3/365} = 78.0$	71.7	44.9

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Debt Management Ratios

An effective financial strategy enables and supports business strategy without compromising it. While there are many elements to financial strategy, a core element is the use of debt or financial leverage. One simple measure of degree of financial leverage is long-term debt to total assets, calculated as

$$\text{Long-term debt to total assets} = \frac{\text{Long-term debt}}{\text{Total assets}}.$$

Generally speaking, long-term debt on the balance sheet represents the balance owed on a company's issued and outstanding bond instruments. Except in rare circumstances, this measure is bounded between 0% and 100%, and therefore is easily interpreted.

A more comprehensive measure of overall indebtedness is the equity multiplier, which relates assets to equity as follows:

$$\text{Equity multiplier} = \frac{\text{Assets}}{\text{Stockholders' equity}}.$$

While this measure is not as easily interpreted as long-term debt to total assets, it will assist in illustrating debt as a "lever" that magnifies return on assets. The equity multiplier is bounded from below at one. Consider a firm with no financial leverage. Its only funding is equity, so the ratio of assets to equity is one. If that same firm now replaces equity with debt, while keeping assets the same, the denominator will decline. Because the numerator does not change, the equity multiplier begins to rise above one. The next section will expand upon the importance of this measure, which links ROA and return on equity (ROE).

The appropriate relationship between debt and assets is driven by the level of tangible assets and business risk. All else being equal, there tends to be a positive relationship between the level of tangible assets and use of financial leverage, because tangible assets can be used as collateral against the debt. Also all else being equal, there tends to be a negative relationship between the degree of business risk and the use of financial leverage. The next section illustrates how any debt magnifies ROA, and more debt leads to greater magnification. Therefore, if a firm's business is inherently volatile (e.g., technology intensive businesses), magnification of that volatility with debt is generally deemed undesirable.

The debt management ratios presented in **Table 4** below show that long-term debt has declined as a percentage of assets for Starbucks between 2010 and 2012. This is because Starbucks had a single bond issue outstanding over the period. Starbucks' Annual Reports disclose that on August 2007, the company issued $550 million of 6.25% Senior Notes due in August 2017. An annual interest rate of 6.25% on this debt is payable semi-annually, half on February 15 and half on August 15 of each year. Since the terms of the Notes stipulate that the $550 million principal is not paid until the Notes mature, the long-term debt balance is

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unchanged over the three years. As assets have grown and long-term debt has remained unchanged, the long-term debt to total assets measure has declined.

Similarly, the more comprehensive equity multiplier declined over the three years. This says that, in addition to the company's decision to refrain from issuing more long-term debt to support its growing asset base, other sources of debt financing have declined in importance as well relative to equity financing. One possible explanation for this is the company's profitability: as Starbucks generated and retained net income each year, its retained earnings balance increased. This powerful source of internally-generated funds means that the company did not need to seek funding from debt sources. However, note that Starbucks to some degree decided to allow financial leverage to decline. The company could have maintained or otherwise controlled financial leverage by, for example, paying a higher dividend or repurchasing stock to reduce shareholders' equity, while issuing more debt.

Table 4

Debt Management Ratios

Ratio	Formula	2012	2011	2010
Long-term debt to total assets	$\frac{\text{Long-term debt}}{\text{Total assets}}$	$\frac{549.6}{8{,}219.2} = 6.7\%$	7.5%	8.6%
Equity multiplier	$\frac{\text{Total assets}}{\text{Stockholders' equity}}$	$\frac{8{,}219.2}{5{,}114.5} = 1.61$	1.68	1.73

DuPont Analysis of Return on Equity

If one wishes to measure the overall ability of a business strategy to generate returns for shareholders, the most useful metric is return on equity (ROE), calculated as

$$\text{Return on equity (ROE)} = \frac{\text{Net income}}{\text{Stockholders' equity}}.$$

Stockholders' equity (also known as shareholders' equity, common equity, or equity) represents the cumulative funds invested—directly or indirectly—by shareholders. Funds are directly invested each time new shares are issued. Funds are indirectly invested when any portion of net

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income is retained for reinvestment, rather than paid out as dividends. Net income belongs to shareholders so, when it is not fully distributed through dividends, net income reserved for reinvestment (retained earnings) also belong to shareholders. Shareholders will be content with their investment if sufficient net income is generated on it relative to the risk of their investment. Insufficient ROE sets off a cascade of negative consequences: share price declines as discontented stockholders sell their shares, the company faces greater difficulty raising additional funds by issuing new equity, and growth plans may be compromised.

It turns out that ROE decomposes into its key drivers using the DuPont formula, as follows:

$$\text{ROE} = \frac{\text{Net income}}{\text{Equity}} = \frac{\text{Net income}}{\text{Sales}} \text{x} \frac{\text{Sales}}{\text{Assets}} \text{x} \frac{\text{Assets}}{\text{Equity}}.$$

That is, ROE is the product of profit margin, asset turnover, and the equity multiplier. By highlighting the three "levers" a firm can pull to create shareholder value, this decomposition provides a powerful framework for comprehensive evaluation of the financial ramifications of a business strategy. A value-creating firm must be profitable *and* efficient *and* optimally levered.

Also, because ROA is the product of profit margin and asset turnover,

$$\text{ROE} = \text{ROA} \times \frac{\text{Assets}}{\text{Equity}}.$$

The above presentation of ROE helps to highlight why the ratio of assets to equity is known as the equity multiplier. Recall that the equity multiplier is bounded from below at one, and increases as financial leverage increases. Therefore, when ROA is positive, ROE is increased by the presence of financial leverage. If, however, ROA is negative, financial leverage magnifies the deficit. That is, greater financial leverage means greater variability in ROE; a change in ROA is magnified by any level of financial leverage, and greater financial leverage means greater magnification.

The DuPont analysis of ROE presented in **Table 5** reveals that ROE increased substantially in 2011. This increase was due entirely to increased profitability, since asset turnover and financial leverage decreased in 2011. Even small improvements in asset utilization in 2011 would have created even greater return for shareholders. In 2012, ROE declined somewhat, due in part to declining profitability in 2012 and offset partially by the small improvement in asset turnover. In both 2011 and 2012, ROE would have been higher if financial leverage were greater. This is not to say that Starbucks is wise to add to leverage; doing so would magnify volatility in ROE, creating greater risk to shareholders.

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Table 5 DuPont Analysis of ROE				
Ratio	Formula	2012	2011	2010
Net margin	$\frac{\text{Net income}}{\text{Sales}}$	10.4%	10.7%	8.9%
Total asset turnover	$\frac{\text{Sales}}{\text{Total assets}}$	1.62	1.59	1.68
Return on Assets (ROA): Product of net margin and total asset turnover		16.8%	17.0%	14.8%
Assets to equity	$\frac{\text{Total assets}}{\text{Stockholders' equity}}$	1.61	1.68	1.73
Return on equity (ROE)	$\frac{\text{Net income}}{\text{Stockholders' equity}}$	27.1%	28.4%	25.8%

SUMMARY

This note has introduced common financial ratios, illustrated their calculation for Starbucks Corporation, and offered brief interpretations. Starbucks' business strategy and evolution in that strategy are evident in its financial results. Starbucks' management could use this financial analysis to identify opportunities for improvement, including inventory management and, perhaps, financial leverage. Starbucks' investors could use this financial analysis to identify areas for further research before buying Starbucks' stock. This analysis is only a starting point that can be extended in many ways. For example, an especially helpful extension is a benchmarking analysis that compares Starbucks' results to a competitor, to identify which patterns are explained by Starbucks' product market and which are explained by its competitive advantages or challenges within that market. In any case, the analysis presented here illustrates that financial results tell an intuitive story about a firm's business model, operations, and strategy.

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Exhibit 1: STARBUCKS CORPORATION
CONSOLIDATED STATEMENTS OF EARNINGS

(in millions, except per share data)

Fiscal Year Ended	**Sep 30, 2012**	**Oct 2, 2011**	**Oct 3, 2010**
Net revenues:			
Company-operated stores	$ 10,534.5	$ 9,632.4	$ 8,963.5
Licensed stores	1,210.3	1,007.5	875.2
CPG, foodservice and other	1,554.7	1,060.5	868.7
Total net revenues	13,299.5	11,700.4	10,707.4
Cost of sales including occupancy costs	5,813.3	4,915.5	4,416.5
Store operating expenses	3,918.1	3,594.9	3,471.9
Other operating expenses	429.9	392.8	279.7
Depreciation and amortization expenses	550.3	523.3	510.4
General and administrative expenses	801.2	749.3	704.6
Restructuring charges	-	-	53.0
Total operating expenses	11,512.8	10,175.8	9,436.1
Gain on sale of properties	-	30.2	-
Income from equity investees	210.7	173.7	148.1
Operating income	1,997.4	1,728.5	1,419.4
Interest income and other, net	94.4	115.9	50.3
Interest expense	(32.7)	(33.3)	(32.7)
Earnings before income taxes	2,059.1	1,811.1	1,437.0
Income taxes	674.4	563.1	488.7
Net earnings including noncontrolling interests	1,384.7	1,248.0	948.3
Net earnings (loss) attributable to noncontrolling interests	0.9	2.3	2.7
Net earnings attributable to Starbucks	$ 1,383.8	$ 1,245.7	$ 945.6
Earnings per share—basic	$ 1.83	$ 1.66	$ 1.27
Earnings per share—diluted	$ 1.79	$ 1.62	$ 1.24
Weighted average shares outstanding:			
Basic	754.4	748.3	744.4
Diluted	773.0	769.7	764.2
Cash dividends declared per share	$ 0.72	$ 0.56	$ 0.36

Source: Starbucks Corporation 2012 and 2011 Annual Reports.

Purchased by: Janet Le JANETLECL@HOTMAIL.COM on February 05, 2014

Exhibit 2: STARBUCKS CORPORATION CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)

ASSETS	Sep 30, 2012	Oct 2, 2011	Oct 3, 2010
Current assets:			
Cash and cash equivalents	$ 1,188.6	$ 1,148.1	$ 1,164.0
Short-term investments	848.4	902.6	285.7
Accounts receivable, net	485.9	386.5	302.7
Inventories	1,241.5	965.8	543.3
Prepaid expenses and other current assets	196.5	161.5	156.5
Deferred income taxes, net	238.7	230.4	304.2
Total current assets	4,199.6	3,794.9	2,756.4
Long-term investments—available-for-sale securities	116.0	107.0	191.8
Equity and cost investments	459.9	372.3	341.5
Property, plant and equipment, net	2,658.9	2,355.0	2,416.5
Other assets	385.7	409.6	417.3
Goodwill	399.1	321.6	262.4
TOTAL ASSETS	$ 8,219.2	$ 7,360.4	$ 6,385.9
LIABILITIES AND EQUITY			
Current liabilities:			
Accounts payable	$ 398.1	$ 540.0	$ 282.6
Accrued liabilities	1,133.8	940.9	936.2
Insurance reserves	167.7	145.6	146.2
Deferred revenue	510.2	449.3	414.1
Total current liabilities	2,209.8	2,075.8	1,779.1
Long-term debt	549.6	549.5	549.4
Other long-term liabilities	345.3	347.8	375.1
Total liabilities	3,104.7	2,973.1	2,703.6
Shareholders' equity:			
Common stock ($0.001 par value)—authorized, 1,200.0 shares; issued and outstanding, 749.3, 744.8 and 742.6 shares, respectively (includes 3.4 common stock units in all periods)	0.7	0.7	0.7
Additional paid-in capital	39.4	40.5	145.6
Retained earnings	5,046.2	4,297.4	3,471.2
Accumulated other comprehensive income	22.7	46.3	57.2
Total shareholders' equity	5,109.0	4,384.9	3,674.7
Noncontrolling interests	5.5	2.4	7.6
Total equity	5,114.5	4,387.3	3,682.3
TOTAL LIABILITIES AND EQUITY	$ 8,219.2	$ 7,360.4	$ 6,385.9

Source: Starbucks Corporation 2012 and 2011 Annual Reports.

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Exhibit 3: STARBUCKS CORPORATION
Common Size Income Statement

Fiscal Year Ended	Sep 30, 2012	Oct 2, 2011	Oct 3, 2010
Net revenues:			
Company-operated stores	79.2%	82.3%	83.7%
Licensed stores	9.1%	8.6%	8.2%
CPG, foodservice and other	11.7%	9.1%	8.1%
Total net revenues	100.0%	100.0%	100.0%
Cost of sales including occupancy costs	43.7%	42.0%	41.2%
Store operating expenses	29.5%	30.7%	32.4%
Other operating expenses	3.2%	3.4%	2.6%
Depreciation and amortization expenses	4.1%	4.5%	4.8%
General and administrative expenses	6.0%	6.4%	6.6%
Restructuring charges	0.0%	0.0%	0.5%
Total operating expenses	86.6%	87.0%	88.1%
Gain on sale of properties	0.0%	0.3%	0.0%
Income from equity investees	1.6%	1.5%	1.4%
Operating income	15.0%	14.8%	13.3%
Interest income and other, net	0.7%	1.0%	0.5%
Interest expense	-0.2%	-0.3%	-0.3%
Earnings before income taxes	15.5%	15.5%	13.4%
Income taxes	5.1%	4.8%	4.6%
Net earnings including noncontrolling interests	10.4%	10.7%	8.9%
Net earnings (loss) attributable to noncontrolling interests	0.0%	0.0%	0.0%
Net earnings attributable to Starbucks	10.4%	10.6%	8.8%

Source: Case writer calculations.

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Exhibit 4: STARBUCKS CORPORATION
Common Size Balance Sheet

ASSETS	Sep 30, 2012	Oct 2, 2011	Oct 3, 2010
Current assets:			
Cash and cash equivalents	14.5%	15.6%	18.2%
Short-term investments	10.3%	12.3%	4.5%
Accounts receivable, net	5.9%	5.3%	4.7%
Inventories	15.1%	13.1%	8.5%
Prepaid expenses and other current assets	2.4%	2.2%	2.5%
Deferred income taxes, net	2.9%	3.1%	4.8%
Total current assets	51.1%	51.6%	43.2%
Long-term investments—available-for-sale securities	1.4%	1.5%	3.0%
Equity and cost investments	5.6%	5.1%	5.3%
Property, plant and equipment, net	32.3%	32.0%	37.8%
Other assets	4.7%	5.6%	6.5%
Goodwill	4.9%	4.4%	4.1%
TOTAL ASSETS	100%	100%	100%
LIABILITIES AND EQUITY			
Current liabilities:			
Accounts payable	4.8%	7.3%	4.4%
Accrued liabilities	13.8%	12.8%	14.7%
Insurance reserves	2.0%	2.0%	2.3%
Deferred revenue	6.2%	6.1%	6.5%
Total current liabilities	26.9%	28.2%	27.9%
Long-term debt	6.7%	7.5%	8.6%
Other long-term liabilities	4.2%	4.7%	5.9%
Total liabilities	37.8%	40.4%	42.3%
Shareholders' equity:			
Common stock ($0.001 par value)—authorized, 1,200.0 shares; issued and outstanding, 749.3, 744.8 and 742.6 shares, respectively (includes 3.4 common stock units in all periods)	0.0%	0.0%	0.0%
Additional paid-in capital	0.5%	0.6%	2.3%
Retained earnings	61.4%	58.4%	54.4%
Accumulated other comprehensive income	0.3%	0.6%	0.9%
Total shareholders' equity	62.2%	59.6%	57.5%
Noncontrolling interests	0.1%	0.0%	0.1%
Total equity	62.2%	59.6%	57.7%
TOTAL LIABILITIES AND EQUITY	100%	100%	100%

Source: Case writer calculations.

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