

Earnings Quality, Pt.1

Handout 3 - ACCT452 Spring 2023

© 2023 Mark Finn

Earnings Quality Overview

- **Earnings Quality Definition No.1:**

- segregate cash earnings and accrual earnings; high accruals = low EQ
- captures the degree to which earnings are vulnerable to accrual manipulation; uncertainties of accrual reversals, etc.

- **Earnings Quality Definition No.2:**

- focus on the estimates required by accrual accounting, e.g., allowance for uncollectible receivables as a percentage total receivables
- evaluate the effect on earnings of changes in estimates

- **Earnings Quality Definition No.3:**

- segregate earnings into recurring and non-recurring components
- helpful tools include CFFO and non-GAAP earnings computations

Start with
mgmt's
adjustments

Add-to or
subtract-from
mgmt's
figures based
on your own
analysis

Table: Earnings Quality

\$ Millions, except EPS metrics	Quarter						YTD	
	1Q	2Q	3Q	4Q	1Q	2Q	2Q	2Q
GAAP Net income (loss) attributable to [REDACTED]	(20.3)	41.9	67.4	7.2	47.2	102.4	21.6	149.6
Acquisition & Integration Expenses	K	41.0	50.7	50.7	71.2	15.4	20.0	91.7
Amortization of Intangibles	K	75.0	70.0	43.8	36.6	27.4	27.7	145.0
Loss on Disposal		7.1	5.5	-	-	-	(0.6)	12.6
Non-Core Operating Expenses	L	41.0	1.6	14.4	9.9	2.0	0.5	42.6
Financing charges in interest expense		4.1	4.1	5.1	17.6	2.8	8.7	8.2
Tax effect of adjustments		(35.8)	(35.2)	(53.1)	(38.2)	(8.8)	(15.6)	(71.0)
Amortization of Intangibles in Non-Controlling Int.		(6.5)	(4.0)	(2.2)	(2.3)	(2.4)	(2.4)	(10.5)
Management Non-GAAP Net income		105.6	134.6	126.1	102.0	83.6	140.7	224.3
Adjustments								
Acq. Margin Fair Value Liability Amortization	A	(15.2)	(13.2)	(5.0)	(2.9)	(1.6)	(28.4)	(3.2)
Accelerated recovery of pension entitlement	B	-	(29.7)	-	-	-	(29.7)	-
Litigation Settlement	C	-	-	-	-	(26.6)	-	(26.6)
Correction of Immaterial Error	D	-	-	(5.5)	-	-	-	-
Change in Contingent liability Fair Value	E	-	-	-	-	-	(5.0)	(5.0)
Pension Income	F	(7.7)	(0.8)	(1.2)	(1.0)	(0.6)	(0.4)	(8.5)
Resolution of acquisition & project related matters	G	(13.2)	-	(7.7)	(10.8)	-	-	(13.2)
Project Incentive	G	-	-	-	(27.0)	-	-	-
Other Income	H	(3.0)	(0.7)	(1.5)	(2.9)	(0.9)	(1.2)	(3.7)
Change in provision for doubtful accounts	I	3.7	(2.1)	(7.0)	6.8	(1.6)	(1.4)	1.6
Total [REDACTED] Adjustments Pre-Tax		(35.4)	(46.5)	(27.9)	(37.8)	(31.2)	(9.7)	(81.9)
Add-Back Taxes on FR Adjustments		9.1	12.4	3.5	10.6	9.0	2.7	21.5
Discrete Tax Items	J	(4.2)	-	(38.4)	(16.4)	-	(52.4)	(4.2)
[REDACTED] Adjusted Net Income		75.0	100.5	63.3	58.4	61.3	81.4	175.6
GAAP EPS	\$	(0.13)	\$	0.27	\$	0.43	\$	0.05
Management Non-GAAP EPS	\$	0.69	\$	0.87	\$	0.81	\$	0.65
[REDACTED] Adjusted EPS	\$	0.49	\$	0.65	\$	0.41	\$	0.37
% (Under) / Over Management Non-GAAP EPS		(28.9)%		(25.3)%		(49.8)%		(42.8)%
% (Under) / Over Ex. Disclosed Items		(21.6)%		(10.9)%		(28.2)%		(1.0)%
								(22.6)%
								(42.2)%
								(27.0)%
								(36.5)%
								(15.9)%
								(7.0)%

Earnings Quality - Why Care?

- Earnings quality applications
 - Forecasting: understand the implications of past and current accruals for future earnings and cash flows
 - Special case: using accrual information to predict earnings “misses” and “beats”
 - Isolating “true” economic profit for valuation analyses
 - Governance: evaluate the links between opportunistic accruals and governance-variables... incentives to misstate earnings, executive compensation, etc.
- Why not simply study cash flows (dispense with accrual accounting)?
 - there are “good accruals” and “bad accruals”
 - accrual-based earnings is a better predictor of long-run performance (both accounting performance and stock returns) than past and current cash flow
 - Note that EBITDA, the most popular non-GAAP metric, is chockfull of accruals.

Earnings Quality (Definition No.1)

Accounting Earnings = Cash Earnings + Accruals/Deferrals

Require judgments and estimates

Examples:

$$\text{Sales Revenue} = \begin{matrix} \text{Cash collected at} \\ \text{the point of sale} \end{matrix} + \begin{matrix} \text{Future collections earned:} \\ \uparrow \text{Accounts Receivable} \end{matrix} + \begin{matrix} \text{Past collections earned:} \\ \downarrow \text{Unearned Revenue} \end{matrix}$$

Period 1: Sell 110 on credit; expect returns of 10: Net sales revenue = 100

Period 2: Returns of 0 \Rightarrow Additional net sales revenue = 10

Returns of 20 \Rightarrow Additional net sales revenue = -10

Earnings Quality (Definition No.1)

Accounting Earnings = Cash Earnings + Accruals/Deferrals

Require judgments and estimates

Accrual levels are indicators of the degree to which a company's income is affected by errors, biases, and opportunistic adjustments in making these judgments and estimates.

Examples:

$$\text{Sales Revenue} = \begin{matrix} \text{Cash collected at} \\ \text{the point of sale} \end{matrix} + \begin{matrix} \text{Future collections earned:} \\ \uparrow \text{Accounts Receivable} \end{matrix} + \begin{matrix} \text{Past collections earned:} \\ \downarrow \text{Unearned Revenue} \end{matrix}$$

$$\text{Rent Expense} = \begin{matrix} \text{Cash paid for} \\ \text{current rent} \end{matrix} + \begin{matrix} \text{Future obligation incurred:} \\ \uparrow \text{Rent Payable} \end{matrix} + \begin{matrix} \text{Prepaid occupancy used:} \\ \downarrow \text{Prepaid Rent} \end{matrix}$$

Earnings Quality (Definition No.1)

Accounting Earnings = Cash Earnings + Accruals/Deferrals

Require judgments and estimates

Sloan (1996):

Defined the accrual component of earnings as:

$$\Delta \text{Non-cash Working Capital} - \text{Depreciation}$$

Documented substantial risk-adjusted abnormal returns to a strategy of buying (shorting) companies with a high (low) proportion of Cash Earnings and low (high) proportion of Accrual Earnings.

The most compelling challenge to the Efficient Market Hypothesis before 2000

Earnings Quality (Definition No.1)

Accounting Earnings = Cash Earnings + Accruals/Deferrals

Require judgments and estimates

Later research:

$$\Delta \text{Non-cash Working Capital} + \Delta \text{Noncurrent accruals}$$

(e.g., pensions)

Documented a correlation between accrual component of earnings and...

- | | |
|--------------------------------|----------------------------------|
| • disappointing future results | • regulatory enforcement actions |
| • earnings restatements | • class action law suits |

Earnings Quality (Definition No.1)

Accounting Earnings = Cash Earnings + Accruals/Deferrals

Require judgments and estimates

Documented a correlation between accrual component of earnings and...

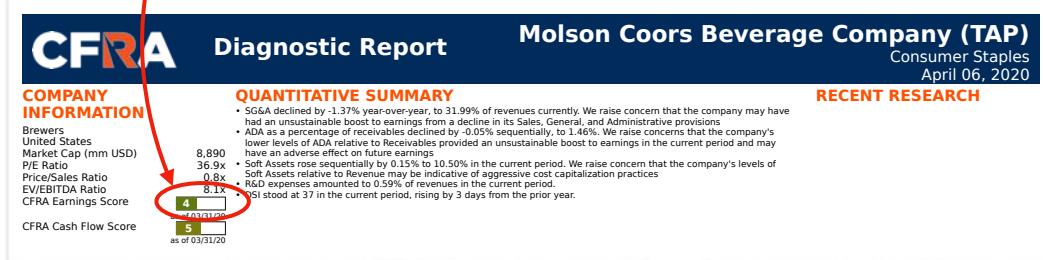
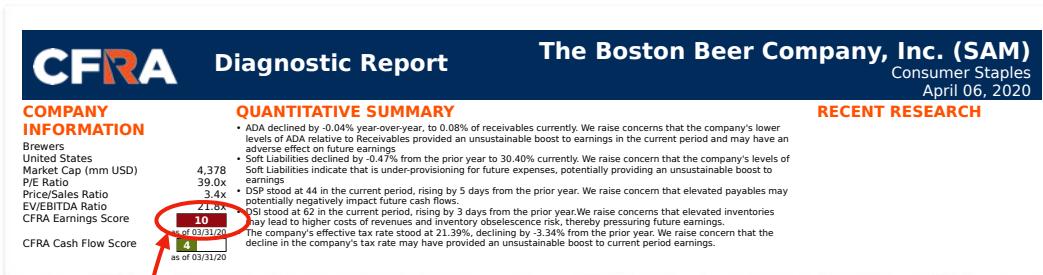
- disappointing future results
- earnings restatements
- regulatory enforcement actions
- class action law suits

Forensic research, e.g., CFRA, is often used to forecast short-term departures from earnings/cash flow expectations.

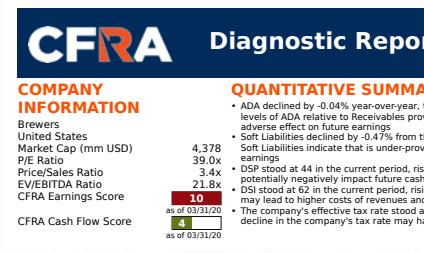
Forensic accounting applications mainly don't try to predict big frauds and financial disasters.

However, there is a dependable statistical association with large financial events.

CFRA Model



CFRA Model



"A proprietary aspect of the CFRA Score model is the adjustment that we make to account for differences in growth and performance. Accruals naturally occur for firms that are growing because they have growing receivables, inventories, and other working capital, all of which are non-cash items. For these firms, a high level of accruals may not be a major concern. Conversely, poorly performing firms are more likely to liquidate inventories and reduce working capital. Thus, we expect to see a relatively low level of accruals. If instead, the magnitude of accruals is relatively high for such a firm, this is a warning sign. Our proprietary adjustments help to parse out cases where high accruals are less of a concern and cases where earnings manipulations are more likely to be the reason for the high level of accruals, as well as cases where high accruals are a stronger indicator that forward earnings growth rates are unlikely to persist."

i.e., good accruals vs. bad accruals

CFRA Model



The table presents future annual mean size-adjusted returns for decile portfolios formed on CFRA Accrual Score by 2-digit SIC code. The sample covers 36,321 firm-year observations for the period 2001-2011. The hedge portfolio size-adjusted return for Adjusted CFRA score is 11.2%.

Portfolio	N	Adj. CFRA Score	Return	Size_Adj Return
1	3,977	-0.290	19.269	6.893
2	3,588	-0.153	19.769	8.436
3	3,667	-0.111	16.793	5.419
4	3,598	-0.084	13.161	1.930
5	3,537	-0.059	12.222	1.407
6	3,717	-0.034	14.474	3.130
7	3,673	-0.004	9.859	-1.113
8	3,594	0.038	12.727	1.110
9	3,661	0.112	9.539	-2.190
10	3,309	0.351	7.640	-4.338
1-10			11.629	11.231
T-Stat			5.650	6.328

THE BOSTON BEER COMPANY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	2019
Cash flows provided by operating activities:	
Net income	\$ 110,041
Adjustments to reconcile net income to net cash provided by operating activities:	
Depreciation and amortization	56,271
Impairment of assets	911
Loss on disposal of property, plant and equipment	871
Change in ROU assets	4,207
Bad debt expense	45
Stock-based compensation expense	12,337
Deferred income taxes	7,404
Changes in operating assets and liabilities:	
Accounts receivable	(12,260)
Inventories	(24,932)
Prepaid expenses, income tax receivable and other assets	(13,862)
Accounts payable	21,417
Accrued expenses and other current liabilities	18,618
Change in operating lease liability	(3,277)
Other liabilities	451
Net cash provided by operating activities	<u>178,242</u>

2019	
Cash flows provided by operating activities:	
Net income	
Net income	\$ 110,041
Adjustments to reconcile net income to net cash provided by operating activities:	
Depreciation and amortization	56,271
Impairment of assets	911
Loss on disposal of property, plant and equipment	871
Change in ROU assets	4,207
Bad debt expense	45
Stock-based compensation expense	12,337
Deferred income taxes	7,404
Changes in operating assets and liabilities:	
Accounts receivable	(12,260)
Inventories	(24,932)
Prepaid expenses, income tax receivable and other assets	(13,862)
Accounts payable	21,417
Accrued expenses and other current liabilities	18,618
Change in operating lease liability	(3,277)
Other liabilities	451
Net cash provided by operating activities	<u>178,242</u>

	<i>Absolute Value of △ Net Operating Assets</i>	<i>Absolute Value of △ Operating Assets</i>
Accounts Receive.	-12.3	12.3
Inventories	-24.9	24.9
Prepaid Asset	-13.9	13.9
Accounts Payable	21.4	21.4
Accrued Expenses	18.6	18.6
Other	-2.8	2.8
Net/Gross △ Total	-13.8	93.9

<i>in \$ millions</i>	Boston Beer		Molson Coors	
	2019	2018	2019	2018
Sales Revenue	1,329	1,057	13,009	13,338
% change	25.7%		-2.5%	
Operating Income	145	116	764	1,632
% change	25.1%		-53.2%	
Δ Net Operating Assets	13.8		12.5	
% of Sales Revenue	1.04%		0.10%	
Sum of Absolute Values of Δ Op. Assets	93.9		128.9	
% of Sales Revenue	7.07%		0.99%	

reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. These items are monitored and analyzed by management for changes in facts and circumstances, and material changes in these estimates could occur in the future. The more judgmental estimates are summarized below. Changes in estimates are recorded in the period in which they become known. The Company bases its estimates on historical experience and various other assumptions that the Company believes to be reasonable under the circumstances. Actual results may differ from the Company's estimates if past experience or other assumptions do not turn out to be substantially accurate.

Provision for Excess or Expired Inventory

The provisions for excess or expired inventory are based on management's estimates of forecasted usage of inventories on hand and under contract. Forecasting usage involves significant judgments regarding future demand for the Company's various existing products and products under development as well as the potency and shelf-life of various ingredients. A significant change in the timing or level of demand for certain products as compared to forecasted amounts may result in recording additional provisions for excess or expired inventory in the future. Provisions for excess inventory are included in cost of goods sold and have historically been adequate to provide for losses on its inventory. Provision for excess or expired inventory included in cost of goods sold was \$8.1 million, \$4.2 million and \$5.8 million in fiscal years 2019, 2018 and 2017, respectively.

Valuation of Property, Plant and Equipment

The carrying value of property, plant and equipment, net of accumulated depreciation, at December 28, 2019 was \$430.6 million. For purposes of determining whether there are any impairment losses, as further discussed below, management has historically examined the carrying value of the Company's identifiable long-lived assets, including their useful lives, semi-annually, or more frequently when indicators of impairment are present. Evaluations of whether indicators of impairment exist involve judgments regarding the current and future business environment and the length of time the Company intends to use the asset. If an impairment loss is identified based on the fair value of the asset, as compared to the carrying value of the asset, such loss would be charged to expense in the period the impairment is identified. Furthermore, if the review of the carrying values of the long-lived assets indicates impairment of such assets, the Company may determine that shorter estimated useful lives are more appropriate. In that event, the Company will be required to record additional depreciation in future periods, which will reduce earnings. Estimating the amount of impairment, if any, requires significant judgments including identification of potential impairments, market comparison to similar assets, estimated cash flows to be generated by the asset, discount rates, and the remaining useful life of the asset. Impairment of assets included in operating expenses was \$0.9 million, \$0.7 million and \$2.5 million in fiscal years 2019, 2018 and 2017, respectively.

Factors generally considered important which could trigger an impairment review on the carrying value of long-lived assets include the following:

(1) significant underperformance relative to historical or projected future operating results; (2) significant changes in the manner of use of acquired assets or the strategy for the Company's overall business; (3) underutilization of assets; and (4) discontinuance of products by the Company or its customers. The Company believes that the carrying value of its long-lived assets was realizable as of December 28, 2019 and December 29, 2018.

Valuation of Goodwill and Indefinite Lived Intangible Assets

The Company has recorded intangible assets with indefinite lives and goodwill for which impairment testing is required at least annually or more frequently if events or circumstances indicate that these assets might be impaired. The Company performs its annual impairment tests and re-evaluates the useful lives of other intangible assets with indefinite lives at the annual impairment test measurement date in the third quarter of each fiscal year or when circumstances arise that indicate a possible impairment or change in useful life might exist.

The guidance for goodwill impairment testing allows an entity to assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the estimated fair value of a reporting unit, of which the Company has one, is less than its carrying amount or to proceed directly to performing a quantitative impairment test.

Under the quantitative assessment, the estimated fair value of the Company's reporting unit is compared to its carrying value, including goodwill. The estimate of fair value of the Company's reporting unit is generally calculated based on an income approach using the discounted cash flow method supplemented by the market approach which considers the Company's market capitalization and enterprise value. If the estimated fair value of the Company's reporting unit is less than the carrying value of its reporting unit, a goodwill impairment will be recognized. The amount of impairment charge for goodwill is equal to the excess of the carrying value of the goodwill over the implied fair value of the goodwill. In estimating the fair value of the Company's reporting unit, management must make assumptions and projections regarding such items as future cash flows, future revenues, future earnings, cost of capital, and other factors. The assumptions used in the estimate of fair value are based on historical trends and the projections and assumptions that are used in current strategic operating plans. These assumptions reflect management's estimates of future economic and competitive conditions and are, therefore, subject to change as a result of changing market conditions. If these estimates or their related assumptions change in the future, the Company may be required to recognize an impairment loss for these assets. The recognition of any resulting impairment loss could have a material adverse impact on the Company's financial statements.

The Company's other intangible assets consist primarily of customer relationships and a trademark obtained through the Company's Dogfish Head acquisition. Customer relationships are amortized over their estimated useful lives. The trademark which was determined to have an indefinite useful life is not amortized. The guidance for indefinite lived intangible asset impairment testing allows an entity to assess qualitative factors to determine whether the existence of events or circumstances indicates that it is more likely than not that the indefinite lived intangible asset is impaired or to proceed directly to performing the quantitative impairment test. Under the quantitative assessment, the trademark is evaluated for impairment by comparing the carrying value of the trademark to its estimated fair value. The estimated fair value of the trademark is calculated based on an income approach using the relief from royalty method. The estimate of fair value is then compared to the carrying value of the trademark. If the estimated fair value is less than the carrying value of the trademark, then an impairment charge is recognized to reduce the carrying value of the trademark to its estimated fair value.

In estimating the fair value of the trademark, management must make assumptions and projections regarding future cash flows based upon future revenues, the market-based royalty rate, and other factors. The assumptions used in the estimate of fair value are consistent with historical trends and the projections and assumptions that are used in current strategic operating plans. These assumptions reflect management's estimates of future economic and competitive conditions and are, therefore, subject to change as a result of changing market conditions. If these estimates or their related assumptions change in the future, the Company may be required to recognize an impairment loss for these assets. The recognition of any resulting impairment loss could have a material adverse impact on the Company's financial statements.

Business Combinations

On July 3, 2019, the Company completed its acquisition of Dogfish Head Brewery and various related operations (the "Transaction"), through the acquisition of all of the equity interests held by certain private entities in Off-Centered Way LLC, the parent holding company of the Dogfish Head Brewery operations. Dogfish Head results of operations have been included in the Company's financial results beginning after the closing date of July 3, 2019. Under the acquisition method of accounting, the Company allocated the fair value of purchase consideration transferred to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values on the date of the acquisition. The fair values assigned, defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between willing market participants, are based on estimates and assumptions determined by management. The excess purchase

Table of Contents

consideration over the aggregate fair value of tangible and intangible assets, net of liabilities assumed, is recorded as goodwill. When determining the fair value of assets acquired and liabilities assumed, the Company makes significant estimates and assumptions, especially with respect to intangible assets. The Company's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. The fair value of the assets acquired and liabilities assumed is typically determined by using either estimates of replacement costs or discounted cash flow valuation methods. When determining the fair value of tangible assets acquired, the Company must estimate the cost to replace the asset with a new asset taking into consideration such factors as age, condition and the economic useful life of the asset. When determining the fair value of intangible assets acquired, the Company must estimate the applicable discount rate, the royalty rate, and the timing and amount of future expected cash flows. During the measurement period, not to exceed one year from the date of acquisition, the Company may record adjustments to the assets acquired and liabilities assumed, with a corresponding offset to goodwill if new information is obtained related to facts and circumstances that existed as of the acquisition date. After the measurement period, any subsequent adjustments are reflected in the consolidated statements of operations. Acquisition costs, such as legal and consulting fees, are expensed as incurred.

Revenue Recognition and Classification of Customer Programs and Incentives

The Company recognizes revenue when obligations under the terms of a contract with its customer are satisfied; generally, this occurs with the transfer of control of its products. Revenue is measured as the amount of consideration expected to be received in exchange for transferring products. If the conditions for revenue recognition are not met, the Company defers the revenue until all conditions are met. As of December 28, 2019 and December 29, 2018, the Company has deferred \$7.0 million and \$4.6 million, respectively in revenue related to product shipped prior to these dates. These amounts are included in accrued expenses and other current liabilities in the accompanying consolidated balance sheets.

The Company is committed to maintaining the freshness of the product in the market. In certain circumstances and with the Company's approval, the Company accepts and destroys stale beer that is returned by Distributors. The Company generally credits approximately fifty percent of the distributor's cost of the beer that has passed its expiration date for freshness when it is returned to the Company or destroyed. The Company reduces revenue and establishes an accrual based upon both historical returns, which is applied to an estimated lag time for receipt of product, and knowledge of specific return transactions. Estimating this reserve involves significant judgments and estimates, including comparability of historical return trends to future trends, lag time from date of sale to date of return, and product mix of returns. Stale beer expense is reflected in the accompanying financial statements as a reduction of revenue. Historically, the cost of actual stale beer returns has been in line with established reserves, however, the cost could differ materially from the estimated reserve which would impact revenue. As of December 28, 2019 and December 29, 2018, the stale beer reserve was \$1.8 million and \$2.1 million, respectively.

Customer programs and incentives are a common practice in the alcohol beverage industry. Amounts paid in connection with customer programs and incentives are recorded as reductions to net revenue or as advertising, promotional and selling expenses, based on the nature of the expenditure. Customer incentives and other payments made to Distributors are primarily based upon performance of certain marketing and advertising activities. Depending on applicable state laws and regulations, these activities promoting the Company's products may include, but are not limited to point-of-sale and merchandise placement, samples, product displays, promotional programs at retail locations and meals, travel and entertainment. Amounts paid to customers in connection with these programs that were recorded as reductions to net revenue or as advertising, promotional and selling expenses totaled \$75.2 million, \$55.5 million and \$51.8 million in fiscal year 2019, 2018 and 2017, respectively. Estimates are based on historical and projected experience for each type of program or customer and have historically been in line with actual costs incurred.

assumptions that affect the timing and amounts of revenue and liabilities recorded. Actual promotional discounts owed and paid have historically been in line with allowances recorded by the Company, however, the amounts could differ from the estimated allowance.

Customer incentives and other payments are made primarily to Distributors based upon performance of certain marketing and advertising activities. Depending on applicable state laws and regulations, these activities promoting the Company's products may include, but are not limited to point-of-sale and merchandise placement, samples, product displays, promotional programs at retail locations and meals, travel and entertainment. Amounts paid to customers in connection with these programs in fiscal years 2019, 2018 and 2017 were \$31.2 million, \$21.0 million and \$21.6 million, respectively. In fiscal 2019, 2018 and 2017, the Company recorded certain of these costs in the total amount of \$21.6 million, \$13.9 million, and \$15.3 million, respectively, as reductions to net revenue. Costs recognized in net revenues include, but are not limited to, promotional discounts, sales incentives and certain other promotional activities. Costs recognized in advertising, promotional and selling expenses include point of sale materials, samples and media advertising expenditures in local markets. These costs are recorded as incurred, generally when invoices are received; however certain estimates are required at period end. Estimates are based on historical and projected experience for each type of program or customer and have historically been in line with actual costs incurred.

In connection with its preparation of financial statements and other financial reporting, management is required to make certain estimates and assumptions regarding the amount, timing and classification of expenditures resulting from these activities. Actual expenditures incurred could differ from management's estimates and assumptions.

Stock-Based Compensation

The Company accounts for share-based awards in accordance with ASC Topic 718, Compensation – Stock Compensation (“ASC 718”), which generally requires recognition of share-based compensation costs in financial statements based on fair value. Compensation cost is recognized over the period during which an employee is required to provide services in exchange for the award (the requisite service period). The amount of compensation cost recognized in the consolidated statements of comprehensive income is based on the awards ultimately expected to vest, and therefore, reduced for estimated forfeitures. Stock-based compensation was \$12.3 million, \$10.0 million and \$6.3 million in fiscal years 2019, 2018 and 2017, respectively.

As permitted by ASC 718, the Company elected to use a lattice model, such as the trinomial option-pricing model, to estimate the fair values of stock options.. All option-pricing models require the input of subjective assumptions. These assumptions include the estimated volatility of the Company's common stock price over the expected term, the expected dividend rate, the estimated post-vesting forfeiture rate, the risk-free interest rate and expected exercise behavior. See Note L of the Notes to Consolidated Financial Statements for further discussion of the application of the option-pricing models.

In addition, an estimated pre-vesting forfeiture rate is applied in the recognition of the compensation charge. Periodically, the Company grants performance-based stock options, related to which it only recognizes compensation expense if it is probable that performance targets will be met. Consequently, at the end of each reporting period, the Company estimates whether it is probable that performance targets will be met. Changes in the subjective assumptions and estimates can materially affect the amount of stock-based compensation expense recognized in the consolidated statements of comprehensive income.

consolidated). The comparable EBIT numbers for 2017 include standalone, consolidation scope and normalisation adjustments for Siemens Wind Power for October-March 2017.

€m	FY 17	FY 18	Var. %	Jul-Sep 18	Var. %
Group revenue	10,964	9,122	-17%	2,619	12%
WTG	9,766	7,847	-20%	2,207	10%
Service	1,198	1,275	6%	411	28%
WTG volume (MWe)	8,831	8,373	-5%	2,409	46%
Onshore	7,252	6,677	-8%	1,926	39%
Offshore	1,579	1,696	7%	483	82%
Gross profit (pre PPA, I&R)	1,308	1,233	-6%	348	555% 11.0
Gross profit margin (pre PPA, I&R)	11.9%	13.5%	1.6 p.p.	13.3%	p.p.
EBIT pre PPA, I&R costs	774	693	-11%	215	NA
EBIT margin pre PPA, I&R costs	7.1%	7.6%	0.5 p.p.	8.2%	9.0 p.p.
WTG EBIT margin pre PPA, I&R costs	5.7%	5.0%	-0.7 p.p.	4.9%	8.8 p.p.
Service margin pre PPA, I&R costs	18.5%	23.6%	5.1 p.p.	25.8%	7.2 p.p.
PPA amortization	235	306	30%	66	-40%
Integration & restructuring costs	111	176	59%	76	13%
Reported EBIT	428	211	-51%	73	NA
Reported Net Income to SGRE shareholders		70	NA NA	25	NA
Net Income per share to SGRE shareholders	0.10	NA	0.04	NA	

Note: Comparable data prior to the merger (April 3, 2017) have been calculated on a pro-forma basis, as if the merger operation had occurred before April 2017, and as appropriate, including the full consolidation of Adwen and the standalone savings and normalization adjustments. Comparisons

€ millions	
Total revenue	9,122
Adjusted EBIT as reported	693
Adjusted EBIT margin as reported	7.6%
Adjustments:	
<i>Decline in warranty expense</i>	0
<i>Reverse inventory write-back</i>	0
<i>Increase in R&D capitalization rate</i>	0
<i>Adjustment to bad debt expense</i>	0
Total adjustments	0
Analyst's adjusted EBIT	693
Analyst's adjusted EBIT margin	7.6%

figures reported individually by Gamesa and Siemens Wind Power, consolidated). The comparable EBIT numbers for 2017 include stand-alone normalisation adjustments for Siemens Wind Power for October-March 2017.

€m	FY 17	FY 18	V
Group revenue	10,964	9,122	-18.7%
WTG	9,766	7,847	-21.4%
Service	1,198	1,275	+6.5%
WTG volume (MWe)	8,831	8,373	-5.2%
Onshore	7,252	6,677	-8.3%
Offshore	1,579	1,696	+7.4%
Gross profit (pre PPA, I&R)	1,308	1,233	-5.4%
Gross profit margin (pre PPA, I&R)	11.9%	13.5%	+1.6%
EBIT pre PPA, I&R costs	774	693	-11.1%
EBIT margin pre PPA, I&R costs	7.1%	7.6%	+0.5%
WTG EBIT margin pre PPA, I&R costs	5.7%	5.0%	-1.4%
Service margin pre PPA, I&R costs	18.5%	23.6%	+5.1%
PPA amortization	235	306	+29.7%
Integration & restructuring costs	111	176	+59.1%
Reported EBIT	428	211	-50.4%
Reported Net Income to SGRE shareholders		70	
Net Income per share to SGRE shareholders		0.10	

Note: Comparable data prior to the merger (April 3, 2017) have been calculated as if the merger operation had occurred before April 2017, and as a consolidation of Adwen and the standalone savings and normalization.

Allowance Method Manipulation Example

- Sales of a new product = 1,000 per year carrying a two-year warranty
- Estimated total warranty payments (e.g., to third-parties) equal 10% of sales. Assume perfect accuracy of forecasts, i.e. cumulative payouts = 100.
- Sales and warranty claims occur evenly distributed over two years.

Year 1 - Journal entry at the time of sale:

Warranty Expense (+E, -SE)	100
Warranty Liability (+L)	100

Payment Schedule	
Yr.1	25
Yr.2	50
Yr.3	25

Year 1 - Journal entry for warranty claims:

Warranty Liability (-L)	25
Cash (or other) (-A)	25

Year 2 - Journal warranty for warranty claims

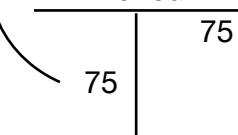
Warranty Liability (-L)	75	
Cash (or other) (-A)	75	

Payment Schedule				
	Yr1 Sales	Yr.2 Sales	Yr.3 Sales	Yr.4 Sales
Yr.1	25			
Yr.2	50	25		
Yr.3	25	50	25	
Yr.4		25	50	25

$$\begin{aligned} &= 25 \\ &= 75 \\ &= 100 \\ &= 100 \end{aligned}$$

Actual warranties;
do not affect income
in Period 2.

**Warranty Liability
in Period 2**



Estimated future
payouts (from
past sales).

Year 2 - Journal warranty for warranty claims

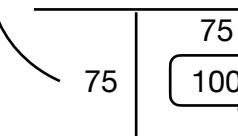
Warranty Liability (-L)	75	
Cash (or other) (-A)	75	

Year 2 - Warranty expense (correct version):

Warranty Expense (+E, -SE)	100	
Warranty Liability (+L)	100	

Actual warranties;
do not affect income
in Period 2.

**Warranty Liability
in Period 2**



Warranty expense is a backward estimate
based on estimated future warranty claims
and past accruals and payouts.

Year 2 - Journal warranty for warranty claims

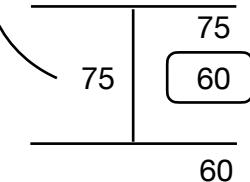
Warranty Liability (-L)	75
Cash (or other) (-A)	75

Year 2 - Warranty expense (correct version):

Warranty Expense (+E, -SE)	100
Warranty Liability (+L)	100

Actual warranties;
do not affect income
in Period 2.

**Warranty Liability
in Period 2**



Year 2 - Warranty expense (manipulated version):

Warranty Expense (+E, -SE)	60
Warranty Liability (+L)	60

Allowances that Deserve EQ Scrutiny

- Warranty liabilities
- Allowances for doubtful receivables
- Loan loss/credit loss reserves
- Allowances for sales returns
- Inventory obsolescence reserves
- Allowances for volume rebates
- Promotional allowances (for slotting fees, cooperative advertising, etc., at food and CPG companies)
- Price protection accruals

Revenue

The breakdown, by segment, of the revenue for the years ended September 30, 2018 and 2017 is as follows:

Thousands of euros	09.30.2017	09.30.2018	(9-month period)
Wind Turbines		7,847,191	5,763,818
Operation and Maintenance		1,275,081	774,380
Revenue		9,122,272	6,538,198

19. Provisions

The breakdown of current and non-current provisions as of September 30, 2018 and 2017 is as follows:

Thousands of euros	Balance at 10.01.2017	Charges (Note 29.E)	Provisions applied	Exchange differences	Other changes	Balance at 09.30.2018	Thereof non- current
Warranties	2,111,198	252,707	(461,738)	(7,219)	129,656	2,024,604	1,437,981
Order related losses and risks	570,014	3,030	(103,103)	736	(124,093)	346,584	237,708
Other	66,946	11,114	(8,011)	(3,044)	(5,563)	61,442	26,419
Total	2,748,158	266,851	(572,852)	(9,527)	-	2,432,630	1,702,108

Thousands of euros	Balance at 01.01.2017	Additions due to first-time consolidation (Note 2.E)	Charges (Note 29.E)	Provisions applied	Exchange differences	Other changes	Balance at 09.30.2017 (Note 2.E)	Thereof non- current
Warranties	1,195,593	1,067,525	299,391	(426,732)	(42,579)	-	2,111,198	1,543,545
Order related losses and risks	35,351	527,147	28,836	(18,115)	(3,206)	-	570,014	372,276
Other	16,497	55,835	4,123	(6,926)	(2,582)	-	66,946	35,302
Total	1,247,441	1,670,507	332,350	(453,773)	(48,367)	-	2,748,158	1,951,123

Warranty expense to turbine revenue in 2017:

Expected warranty expense to turbine revenue in 2018:

Discrepancy in warranty expense in 2018:

The activity's EBIT pre PPA and integration and restructuring costs declined by 29% to 393 M€, equivalent to a 5.0% margin on revenue, i.e. 0.7 percentage points below the EBIT margin pre PPA and integration and restructuring costs in FY 17²¹. The lower volume of revenue and, in particular, lower prices were again the main reasons for this reduction, which was nevertheless offset by the results of the transformation programme (aimed at achieving €2,000m in productivity improvements and synergies at group level).

Volumes in Onshore rebounded significantly in the fourth quarter (+39% YoY), after an incipient recovery in the third quarter of FY 18, while Offshore activity volume surged (+ 82% YoY), as is habitual, enabling the division to resume revenue growth for the first time since the merger. As a result, the fourth quarter ended with €2,207m in revenue, 10% above the last quarter of FY 17. The higher volume of activity and, above all once again, the transformation programme (higher productivity plus synergies) also made it possible to offset price pressure and achieve a margin of 4.9% on revenue, i.e. €109m in the quarter. The 9-percentage point year-on-year increase in EBIT pre PPA and integration and restructuring costs was boosted by the provision for inventory impairment booked in the fourth quarter of FY 17 (€134m). Excluding that impact, the margin would have improved by 2 percentage points.

Operation and Maintenance Services

€m	FY 17	FY 18	Var. %	Jul-Sep 18	Var. %
Revenue	1,198	1,275	6%	411	28%
EBIT pre PPA, I&R costs	221	300	36%	106	NA
EBIT margin pre PPA, I&R costs	18.5%	23.6%	5.1 p.p.	25.8%	7.2 p.p.
Fleet under service (MW at YE)	55,173	56,725	3%	56,725	3%

Note: Comparable data prior to the merger (April 3, 2017) have been calculated on a pro forma basis, as if the merger operation had occurred before April 2017, and as appropriate, including the full consolidation of Alstom and the standalone savings and normalization adjustments. Comparisons between these data

The breakdown of "Inventories" as of September 30, 2018 and 2017 is as follows:

Thousands of euros	09.30.2018	09.30.2017 (Note 2.E)
Raw materials and supplies	708,115	765,158
Work in progress and finished goods	815,914	1,489,573
Advances to suppliers	124,143	125,735
Inventory write-downs	(148,994)	(284,473)
Total	1,499,178	2,095,993

Cost of sales include inventories recognised as expense amounting to EUR 4,875 million and EUR 3,009 million in the years ended September 30, 2018 and 2017, respectively.

Market conditions and pricing pressure, during the year 2017, resulted in write-down of inventories amounting to EUR 134 million, mainly in the United States and South Africa, in order to mark those inventories down to their estimated realizable value. Out of this amount, approximately EUR 40 million have been reversed during 2018 mainly due to South African market's reactivation, and EUR 94 million have been applied to their purpose.

SGRE wrote inventory down by €134 million in 2017 and wrote it back €40 million of this amount in 2018. IFRS allows such recoveries of previously written down amounts. U.S. GAAP does not allow write-backs because of the straightforward way that they can be used to move expenses (manipulate income) across periods.

Write-backs are a quintessential “error-fixing” accrual accounting structure.

14. Other intangible assets

The development in the heading "Other Intangible Assets" in the Consolidated Balance Sheet in 2018 and 2017 is as follows:

Thousands of euros	Balance at 10.01.2017	Additions	Disposals	Exchange differences	Transfers	Balance at 09.30.2018
Cost						
Internally generated technology	120,795	129,084	(828)	(419)	718	249,350
Acquired technology including patents, licenses and similar rights	1,245,666	12	-	(367)	-	1,245,331
Customer relationships and order backlog	1,250,995	-	-	(52,821)	-	1,198,174
Advance payments for intangible assets	718	-	-	-	(718)	-
Total other intangible assets	2,618,194	129,096	(828)	(53,607)	-	2,692,855
Amortization and impairment						
Internally generated technology	(35,890)	(17,452)	822	83	-	(52,437)
Acquired technology including patents, licenses and similar rights	(173,217)	(172,715)	-	348	-	(345,584)
Customer relationships and order backlog	(149,834)	(132,900)	-	10,323	-	(272,411)
Total other intangible assets	(358,941)	(323,067)	822	10,754	-	(670,432)
Total other intangible assets	2,259,253	(193,971)	(6)	(42,853)	-	2,022,423

Thousands of euros	Balance at 01.01.2017	Additions through the Merger (Note 4)	Disposals	Exchange differences	Transfers	Balance at 09.30.17 (Note 2.E)
Cost						
Internally generated technology	47,260	-	73,647	(9)	(103)	-
Acquired technology including patents, licenses and similar rights	98,971	1,146,945	25	(3)	(252)	-
Customer relationships and order backlog	2,139	1,342,765	-	-	(93,909)	-
Advance payments for intangible assets	-	-	718	-	-	718
Total other intangible assets	148,370	2,489,710	74,390	(12)	(94,264)	-
Amortization and impairment						
Internally generated technology	(25,239)	-	(10,704)	5	48	-
Acquired technology including patents, licenses and similar rights	(82,151)	-	(91,135)	3	66	-
Customer relationships and order backlog	(2,139)	-	(147,697)	2	-	(149,834)
Total other intangible assets	(109,529)	-	(249,536)	8	116	-
Total other intangible assets	38,841	2,489,710	(175,146)	(4)	(94,148)	-

During 2018 and 2017, the main increase in the capitalised development costs is due to the development of new wind turbine models, software and the optimization of the components' performance for an amount of EUR 129,084 thousands in 2018 (EUR 73,647 thousands in 2017) mainly in Denmark amounting to EUR 103,989 thousands during 2018 (EUR 46,570 thousands during 2017) and in Spain amounting to EUR 23,196 thousands during 2018 (EUR 19,571 thousands during 2017).

Not capitalised research and development expenses as of September 30, 2018 amounted to EUR 166 million (EUR 141 million in the fiscal year 2017).

Capitalization ratio in 2017:

Expected capitalization in 2018:

Unexpected capitalization:

8. Trade and other receivables

The detail of "Trade and other receivables" in the Consolidated Balance Sheets as of September 30, 2018 and 2017 is as follows:

Thousands of euros	09.30.2018	09.30.2017
Trade and other receivables from third party	1,111,063	1,061,337
Trade and other receivables from related parties (Note 30)	57,188	92,838
Impairment due to uncollectible receivables	(54,333)	(73,036)
Total	1,113,918	1,081,139

Movements in the provision for the impairment of trade and other receivables were as follows:

Thousands of euros	
Balance at 10.01.2017	73,036
Reversal of unused amounts (Note 29.E)	(38,965)
Creation of provisions (Note 29.E)	22,292
Usage due to uncollectability	(222)
Exchange differences	(1,808)
Balance at 09.30.2018	54,333

Thousands of euros	
Balance at 01.01.2017	6,589
Reversal of unused amounts (Note 29.E)	(3,717)
Creation of provisions (Note 29.E)	11,374
Usage due to uncollectability	(1,662)
Additions due to first-time consolidation	62,827
Exchange differences	(2,375)
Balance at 09.30.2017	73,036

Gross receivables in 2018:

Expected allowance in 2018 using the 2017 %:

Expense adjustment:

€ millions	
Total revenue	9,122
Adjusted EBIT as reported	693
Adjusted EBIT margin as reported	7.6%
Adjustments:	
<i>Decline in warranty expense</i>	<i>-155</i>
<i>Reverse inventory write-back</i>	<i>-40</i>
<i>Increase in R&D capitalization rate</i>	<i>-28</i>
<i>Adjustment to bad debt expense</i>	<i>-20</i>
Total adjustments	-243
Analyst's adjusted EBIT	450
Analyst's adjusted EBIT margin	4.9%

WageWorks, Inc. - 2013-2017



Accounts Receivable Turnover

WAGEWORKS, INC. Consolidated Statements of Income (In thousands, except per share amounts)	Years Ended December 31, 2012 2013 2014 2015 2016 <small>(in thousands, except per share data)</small>				
	2012	2013	2014	2015	2016
Consolidated Statements of Income Data:					
Revenues	\$ 177,282	\$ 219,278	\$ 267,832	\$ 334,316	\$ 364,713
Operating expenses:					

$$\text{Accounts Receivable Turnover} = \frac{364,713}{82,579.5} = 4.42 \text{ turns}$$

Assets WAGEWORKS, INC. Consolidated Balance Sheets (In thousands, except per share amounts)	December 31, 2015 December 31, 2016	
	December 31, 2015	December 31, 2016
Current assets:		
Cash and cash equivalents	\$ 500,918	\$ 678,300
Restricted cash	332	332
Accounts receivable, net	72,271	92,888
Prepaid expenses and other current assets	13,254	19,422
Total current assets	586,775	790,942

Accounts Receivable Turnover

$$\text{Accounts Receivable Turnover} = \frac{\text{Sales Revenue}}{\text{Avg. Accounts Receivable (net)}} \\ = 4.42 \text{ turns}$$

Days Sales Outstanding (DSO):

$$\text{Days Sales Outstanding} = \frac{365}{\text{Accounts Receivable Turnover}} = 82.6 \text{ days}$$

$$\text{DSO from Annual Data} = \frac{\text{Avg. AR}}{\text{Annual Sales Revenue}} \times 365 \text{ days}$$

$$\text{DSO from Quarterly Data} = \frac{\text{Avg. AR}}{\text{Quarterly Sales Rev.}} \times 91 \text{ days}$$

WageWorks, Inc. - 2013-2017



Beginning DSO: $32/56 \times 91 = 52 \text{ days}$

Ending DSO: $151/101 \times 91 = 136 \text{ days}$

CFO

Financial Reporting

WageWorks to Restate Results, CFO Resigns

The benefits company's internal investigation found "a material weakness in its internal control over financial reporting."

Matthew Heller

April 6, 2018 | CFO.com | US

SHARE ▶ Shares G+ Share Share Tweet



+

The chief executive and the CFO of WageWorks have resigned after an internal investigation that found a "material weakness" in the employee benefits company's financial reporting.

CEO Joe Jackson and finance chief Colm Callan handed in their resignations on Thursday as WageWorks announced it would be restating its revenue and net income for two quarters of 2016, full-year 2016, and three quarters of 2017 as a result of the reporting problems.

Recommended Stories:

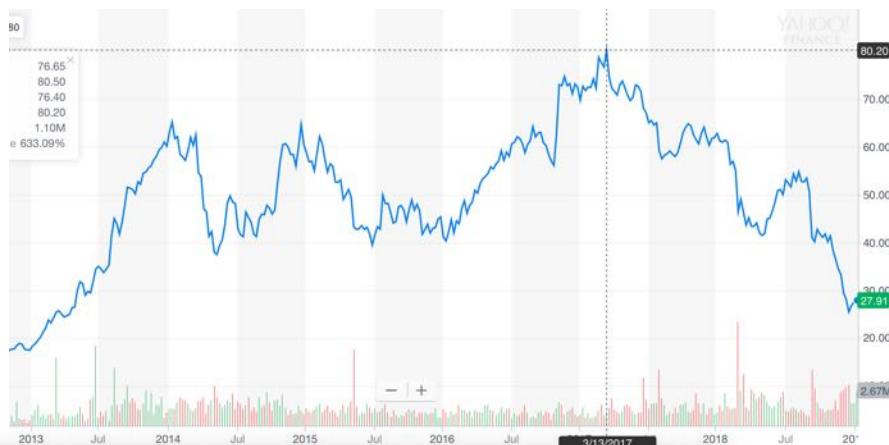
Poor Nonfinancial Reporting Tests Investors' Trust Disney Surge May Accelerate Fox Deal Closing Fox Reports Earnings Ahead of Disney Sale

"The board has concluded that the company's historical financial statements for [those periods] should be restated and such financial statements and related communications should no longer be relied upon," WageWorks said in a [regulatory filing](#).

Jackson, who has served as CEO since February 2007 and chairman of the board since December 2016, has been appointed executive chairman.

- March 3, 2018: WAGE announced an inability to timely file its 10-K within the 60 day deadline.
- April 5, 2018: Problem disclosed (but minimized); linked to revenue recognition and receivables. CFO resignation.
- Problematic time period: 2016 and the first three quarters of 2017
- June 2018: Loan agreements renegotiated with MUFG.
- September 6, 2018: CEO resigned; expanded investigation disclosed.
- October 31, 2018: KPMG replaced by BDO as auditor.

WageWorks, Inc. - 2013-2018



\$ millions	13	2014				2015				2016				2017			
Sales Rev.	56	55	54	55	63	59	68	78	85	83	83	83	87	88	89	101	
Avg. AR	32	42	45	42	49	59	60	60	67	81	92	90	89	114	127	151	
DSO	52	69	77	70	73	90	80	70	72	89	100	99	94	117	130	138	

WageWorks, Inc. - 2013-2018

Insider sales during the restatement period:

Insider	Position	Type	Shares	Price	Value	Shares Owned	% Change in Shares	Date
Edgar O. Montes	Chief Operating Officer	Exercise and SELL	(50,000)	69.25	(3,462,500)	41,895	0.00%	6/23/2017
Joseph L. Jackson	CEO	Exercise and SELL	(403,501)	69.25	(27,942,444)	97,113	0.00%	6/23/2017
Joseph L. Jackson	CEO	SELL	(91,647)	69.25	(6,346,555)	5,466	-94.37%	6/23/2017
Joseph L. Jackson	CEO	Exercise and SELL	(87,749)	72.49	(6,361,162)	51,481	0.00%	12/14/2016
Edward C. Nafus	Director	Exercise and SELL	(1,000)	74.29	(74,290)	6,500	0.00%	12/6/2016
Edward C. Nafus	Director	Exercise and SELL	(2,000)	74.34	(148,680)	6,500	0.00%	11/28/2016
Bruce G. Bodaken	Director	Exercise and SELL	(10,000)	72.88	(728,800)	6,498	0.00%	11/21/2016
Jerry Gramaglia	Director	Exercise and SELL	(21,075)	56.59	(1,192,634)	7,598	0.00%	6/1/2016
Edward C. Nafus	Director	SELL	(3,442)	56.54	(194,611)	8,000	-30.08%	5/25/2016
Joseph L. Jackson	CEO	Exercise and SELL	(96,081)	55.53	(5,335,236)	51,481	0.00%	5/24/2016
John William Larson	Director	Exercise and SELL	(49,250)	56.44	(2,779,667)	30,737	0.00%	5/12/2016
Kimberly L. Jackson	General Counsel	Exercise and SELL	(40,000)	56.55	(2,262,000)	24,624	0.00%	5/10/2016
Joseph L. Jackson	CEO	Exercise and SELL	(13,639)	46.62	(635,835)	51,147	0.00%	3/14/2016
Joseph L. Jackson	CEO	Exercise and SELL	(58,394)	47.44	(2,770,182)	51,147	0.00%	3/9/2016
Edgar O. Montes	Chief Operating Officer	Exercise and SELL	(25,000)	47.13	(1,178,340)	23,191	0.00%	3/9/2016
Joseph L. Jackson	CEO	Exercise and SELL	(6,791)	48.51	(329,403)	51,147	0.00%	3/8/2016
Bruce G. Bodaken	Director	SELL	(1,100)	48.23	(53,048)	3,056	-26.47%	2/29/2016

\$ millions	13	2014				2015				2016				2017			
Sales Rev.	56	55	54	55	63	59	68	78	85	83	83	83	87	88	89	101	
Avg. AR	32	42	45	42	49	59	60	60	67	81	92	90	89	114	127	151	
DSO	52	69	77	70	73	90	80	70	72	89	100	99	94	117	130	138	

Other Working Capital Metrics

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Avg. Inventory}}$$

$$\text{Days Sales in Inventory (DSI)} = \frac{365}{\text{Inventory Turnover}}$$

$$\text{Accounts Payable Turnover} = \frac{\text{Cost of Goods Sold}^*}{\text{Avg. Accounts Payable}} \quad * \text{or, Purchases} = \text{COGS} + \Delta \text{Inventory}$$

$$\text{Days Sales in Payables (DSP)} = \frac{365}{\text{AP Turnover}}$$

$$\text{Days Sales in Deferred Revenue (DSDR)} = \frac{\text{Deferred Revenue}}{\text{Sales Revenue}} \times 365$$