BEHIND THE NUMBERS
EARNINGS QUALITY & DIVIDEND SUSTAINABILITY RESEARCH

BTN Research

Jeff Middleswart
jmiddleswart@btnresearch.com

Bill Whiteside, CFA
bwhiteside@btnresearch.com

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SBA Communications Corp (SBAC)- SELL

We are starting SBAC at a 2- (Weak) rating on Earnings Quality and a SELL rating for the stock. The areas of contention are obvious such as it's a REIT that pays no dividend and it has a debt load of 7.4x EBITDA. Debt is an area that investors are often overly benign about or overly concerned with and it is difficult to time when the change in sentiment could happen – ask Valiant Pharmaceuticals investors. Taking on debt and rolling it over is a key part of SBAC's operating model to generate its growth. Some areas of accounting policy are actually conservative and definitely higher quality than its peers. We'd give it a higher EQ score if it didn't owe so much debt and used cash flow toward debt reduction instead of buying back its stock at all-time highs.

The stock is 23x AFFO (Adjusted Funds From Operation of $7.38 per share). Every 20bp of higher debt costs, would cut 17-cents off AFFO per share (about 2.3%) and SBAC has $500 million to $2 billion of debt coming due each year so there is exposure to rising rates. The company touts growth rates of 8%-10% per share, but much of that is due to acquisitions and share repurchases. Organic growth is closer to 4%-5% via rent increases, additional rent from clients adding more systems to existing towers, less the churn. The basic problem we see is rising interest rates alone can hurt cash flow growth at SBAC. If they divert cash flow toward debt over share repurchases, growth slows further. A lower growth rate could bring down the valuation multiple and with this much debt, the equity will be penalized much more from that reassessment:

- Many of the Non-GAAP metrics used to measure results have some short-comings. We believe several ongoing costs and required capital spending should not be left out.

- Growth via acquisition is expensive. Without making acquisitions and building new towers, growth at SBAC is about 3 percentage points lower.

- Cash flow from overseas is not fully available to service debt. SBAC does not repatriate earnings from foreign operations. SBAC reports net debt to EBITDA of 7.4x, but over 16% of the EBITDA is overseas. The effective debt ratio rises for every dollar not available from full company EBITDA. We think the ratio may be above 8x.

- The debt and interest expense are in US Dollars, but with a rising percentage of EBITDA in foreign currencies especially in Brazil – FX is a wildcard here.

- When isn't buying stock viewed as a good use of capital at SBAC? They issued shares to make an acquisition in 2017 at $130/share but also paid $160-$170 per share for repurchases.

- Shareholders are unlikely to receive a dividend in the near future with large NOLs shielding income from REIT required payouts.

- Acquisition accounting is more conservative than peers – 15-year depreciation lives vs. 20 and all intangibles are amortized over 15-years too.

The Basic Cash Flow and Growth Model

	3Qs 2018	3Qs 2017	2017	2016	2015
Cash Ops	$624	$592	$819	$743	$723
Capital Exp.	$105	$106	$147	$140	$209
Acquisitions	$404	$161	$442	$277	$610
Free Cash Flow	$115	$324	$230	$326	($95)
Repurchases	$454	$523	$855	$546	$601

The company does not pay a dividend even though it is a REIT. It has $1 billion in past Net Operating Losses (NOLs) that can be used to offset income and shield it from the REIT requirements of paying out 90% of its income. The company generates positive income in the $100-$130 million range. So, under the current situation, investors are unlikely to receive a dividend for probably 6-8 more years.

The company is not able to cover all its spending now. Acquisitions are a regular use of capital and they help drive growth. SBAC breaks down its sources of growth in its supplemental financial reports. For 2018, the company expects 6.9% revenue growth comprised primarily of 2.3% from acquisitions and new construction, 3.6% from colocation (adding more equipment to existing towers), and 1.4% for rent escalations net of churn offset by some FX headwinds.

In addition, the company's share count is declining with the repurchases. That is driving growth per share. Looking at the company's reported AFFO per share, it has been rising at nearly 10% y/y in the last four quarters. Adjusting for the growth due to lower share count, the growth is closer to 5%-6%.

On the surface, SBAC does not generate enough cash flow to internally fund its basic model. In order to generate 10% growth, it needs to buy back shares and make acquisitions. Eliminating those two items, the underlying growth rate falls to about 4%. Are investors going to pay 23x for 4% growth? We'd argue that is unlikely. Moreover, if the company diverted $500 million from acquisitions and repurchases toward a dividend, the yield would only be 2.4% on current prices. Even that may not be enough to support the current stock price.

Some of the Non-GAAP Metrics Used to Measure SBAC's Results Appear Too High

We have no problem with a company adding more information and data to enable investors to more fully understand the operating results. However, we do have a problem when the metrics omit ongoing payments. SBAC uses two non-GAAP metrics – AFFO and Adjusted EBITDA.

The company is better than other REITs we have seen. SBAC does report maintenance capital spending as a deduction to AFFO. However, it does not include capital spending related to colocation, new building, or acquisitions. Those are sort of key in our view because those payments made in cash the prior year are creating the higher cash flow this year. If that spending did not occur, reported results would already be lower. At a minimum, the colocation upgrade spending should be deducted as that is being viewed as part of the organic growth. Here are some of the other components to capital spending at SBAC. We agree that refurbishing the headquarters is more of a one-time item and left that out of 2015:

	2017	2016	2015
New Building	$69	$69	101
Upgrades	$43	$38	$61
Maintenance	$30	$28	$29
Gen. Corp	$5	$5	$5
Cap Exp	$147	$140	$196

The company is only deducting maintenance and general corporate spending in AFFO.
In addition, the company prepays many ground leases and amortizes the cost over time. In AFFO, it is adding that expense back as a non-cash item. We would argue that it certainly was a cash expense and it is a recurring item. It should also not be added back in our view. Here is what the company spent in this area in recent years. Some of that is new construction related, but others are extending current leases and may also include buying land under existing sites.

	2017	2016	2015
Land Buyouts	$49	$62	$84
Extending Ground Leases	$19	$14	$16
Acquisitions	$67	$76	$100

The same with non-cash compensation. Employees are being paid with stock and the company is obviously paying cash every year to repurchase shares and prevent dilution. That is a recurring cash item too when considering the full situation.

AFFO is essentially defined as net income plus depreciation and amortization to become FFO – Funds from Operation. That FFO then gets non-cash adjustments made and one-time items are added or subtracted along with a maintenance capital spending to reach AFFO:

	3Qs 2018	2017	2016
FFO	$492	$745	$709
AFFO	$655	$841	$745

We think a case can be made to subtract acquisition-related costs and decommissioning costs as those occur every year too. However, if we only include ground leases, full compensation paid, and the upgrade capital spending, already AFFO declines about 13%.

	3Qs 2018	2017	2016
AFFO	$655	$841	$745
Ground Lease	$20	$31	$35
Non-cash Comp.	$32	$38	$33
Augment/Upgrades	$35	$43	$38
Adj. AFFO	$567	$728	$639

Now the company's cash flow looks a little lower and the multiple goes to 26.5x AFFO for 4-5% growth.

EBITDA is a similar metric that also adds back interest expense among other non-cash items. It also does not factor in any capital spending. We are going to argue that the ground leases and equity compensation are recurring expenses and should not be added back to EBITDA.

	TTM 9/18	2017	2016
EBITDA	$1,312	$1,240	$1,148
Ground Lease	$28	$31	$35
Non-cash Comp.	$41	$38	$33
Adj. EBITDA	$1,243	$1,171	$1,080

That's not a huge change, but SBAC uses EBITDA to calculate its debt ratios. They report that Net debt to EBITDA is currently 7.4x. They deduct all cash from the debt of $9.8 billion and divide by the $1.3 billion in EBITDA. We are going to argue that EBITDA should be $1.24 billion. We are also going to argue that of the $160.9 million in cash it is netting against debt, $24.5 million is restricted and in escrow accounts to pay property taxes and leases. So, we are going to use a net debt figure of $9.69 billion and EBITDA of $1.24 billion, which makes the ratio 7.8x.

Other Issues with Debt

When debt levels are at 7.4x EBITDA and adjusting for some minor recurring costs it is approaching 8x, investors should be concerned about how much flexibility SBAC has. We would argue that repaying debt will start to become a bigger use of internally generated cash flow sooner than later. That would have negative implications for acquisitions and growth as well as share repurchases. The adage about debt as a problem for a stock is "Investors don't care about it until they do." Thus, we cannot time when investors may have greater concern. But the problems could develop in the near-term.

The first problem we see is a sizeable portion of the debt rolls over each year. The AFFO we outlined above has already enjoyed lower interest rates to help bolster results:

	2017	2016	2015
Debt	$9,405	$8,875	$8,555
Debt growth	6.0%	3.7%	8.7%
Int. Expense	$324	$329	$322
Int. Exp. Growth	-1.7%	2.1%	10.2%

The company has called out lower interest rates as a help for the decline in interest expense in 2017 even as the debt figure grew. That's reversing now:

	3Qs 2018	3Qs 2017	3Qs 2016
Debt	$9,829	$9,050	$9,031
Debt growth	8.6%	0.2%	6.4%
Int. Expense	$278	$237	$251
Int. Exp. Growth	17.2%	-5.4%	5.3%

Already, SBAC is seeing higher interest rates impact results and that is how interest expense rose 17.2% vs 8.6% debt growth in 2018. That should continue to be an issue as SBAC is still issuing more debt since its cash flow is not covering the acquisitions, capital spending, and share repurchases. Also, there is a sizeable amount of scheduled maturities in the coming years, these exclude quarterly term loan payments:

Maturities	in millions
2019	$920
2020	$500
2021	$700
2022	$2,260
2023	$1,335

The interest rates on the next three maturities are 2.898%, 3.156%, and 2.877%. We would not be surprised at all if the rates on new debt and rolled over debt increases for SBAC. That is going to hurt reported AFFO and free cash flow. Both can be cut by 10% if the average interest rate rises about 80-85bp. Assuming the term loan is refinanced before 2025, the entire debt load will need to be refinanced by 2024. This could be a significant headwind. Assuming debt becomes $10-$11 billion, SBAC could see interest expense of $440-$594 in a few years assuming a 100-200bp increase vs. $324 million in 2017. AFFO is about $800-$900 million so a potential $150-$200 million headwind from rising interest expense could be significant and cause investors to look at the debt more closely.

The company has already taken the steps to issue shorter-term debt to save on interest expense. And, it has already issued several debt offerings secured by the cash flow of specific pools of towers. If the term length is extended on roll-over or less securitization is used – those could pressure rates upward too. Their unsecured 5-year senior notes were issued at 4.875% vs. 5-year securitized tower notes issued at about 3%. In other words, the bump in rates could be steep.

We also noticed that like American Tower, SBAC does not expect to repatriate foreign earnings. From the 10-K:

> *"The Company does not expect to remit earnings from its foreign subsidiaries. Undistributed earnings of the Company's foreign subsidiaries amounted to approximately $102.2 million at December 31, 2017. Those earnings are considered to be permanently reinvested and the Company could be subject to withholding taxes payable to various foreign countries."*

It has intercompany notes set up whereby the foreign operations can pay interest and principal that matches up with scheduled corporate debt servicing. However, in the case of countries like Brazil – the largest foreign subsidiary – it doesn't collect revenues in US dollars.

> *"For the year ended December 31, 2017, approximately 18.6% of our total cash site leasing revenue was generated by our international operations, of which 13.6% was generated in non-U.S. dollar currencies, including 12.7% which was denominated in Brazilian Reals."*

Thus, there is exposure to FX swings. These are real costs for SBAC that appear often. The company's review is that a 10% move in the Brazilian Real costs it about 2.8% of operating income. In recent years, the amount of FX going through the income statement has been about +/- $10 million in operating income plus depreciation:

FX Impact	3Qs 2018	2017	2016
Revenue	-$21	$17	-$10
Op Inc + Dep.	-$12	$10	-$6

The bigger issue we see is leaving the profits in foreign markets, then the amount of consolidated cash flow being viewed as available to service the debt is overstated. For the nine months ended 9/30 for 2018, domestic site leasing produced $787.2 million in operating income + depreciation. The international site leasing produced $153.4 million. Of the total company, the international produced 16.5% of this proxy for EBITDA. Those operations are paying their intercompany notes which is servicing some of the corporate debt. But all the EBITDA is not going toward that and the surplus is not coming back to the US. So, when SBAC touts that it has $1.3 billion in EBITDA to service debt – that may be overstating the figure.

We do not have the numbers necessary to completely fill in this picture. It's not 16.5% of EBITDA, but what if it's 5%? That would be $66 million. Suddenly, net debt to EBITDA is 7.8x instead of 7.4x. Adjusting for the items such as ground leases that we did above along with a 5% of EBITDA – the ratio becomes 8.2x.

In our view, the effective leverage here is higher than it appears, and it already looks high. We think the company has two potential headwinds in rising interest expense sapping

AFFO and potentially needing to divert free cash flow toward debt repayment, which would reduce growth. Under either situation, we believe the multiple on the stock declines and it could take years for SBAC to reach 5x debt to EBITDA like its competitors have.

The Share Repurchases

Management is very clear with its use of capital. It sees growth via acquisition as important, intends to shield income with NOLs to avoid paying a dividend, and repurchase shares when cheap. Two references from the 10-K:

> *"The amount of future distributions will be determined, from time to time, by the Board of Directors to balance our goal of increasing long- term shareholder value and retaining sufficient cash to implement our current capital allocation policy, which prioritizes investment in quality assets that meet our return criteria, and then stock repurchases, when we believe our stock price is below its intrinsic value.*
>
> *Stock Repurchase Program. We currently utilize stock repurchases as part of our capital allocation policy when we believe our share price is below intrinsic value. We believe that share repurchases, when purchased at the right price, will facilitate our goal of increasing our Adjusted Funds From Operations per share."*

Our first question is, "does the stock look cheap?" It's 23x cash flow! In 2017, the company issued shares at basically $130 per share to make an acquisition. Now, it's buying shares at $170 because $170 is cheap? When we adjust the AFFO for items like ground leases and non-cash compensation, we think the cash yield here is under 4% at the current stock price. Yet the repurchases remain heavy despite the rising stock price:

	3Qs 2018	2017	2016	2015
Avg Share	$160-170	$110-160	$100	$110
Repurchase	$454	$855	$546	$601

As we noted earlier, share repurchases and acquisitions are fueling AFFO per share growth of about 10%. Without these items, growth here is closer to 4%. That is not going to justify the valuation of 23x cash flow.

What this looks like is some of the MLPs from 2015-17. Organic growth is very modest, but with good counterparties and no income taxes, the cash flow can support a high debt load and a large dividend (in the case of SBAC – a large share repurchase program). However, growth requires heavy capital investment and there's no spare free cash flow so that means raising more external capital. That raises the cash needs and in order to keep the stock prices high – the MLPs continually boosted their dividends, pushing up cash needs again.

That model didn't work very well when the stock prices were retreating with oil and the MLPs were still needing to raise capital to complete new projects. If they didn't fund the growth, the shares were repriced lower to reflect a decreasing growth rate.

SBAC has some of those same issues. The debt cost may increase faster than organic growth and crimp cash flow. Debt is higher than the peers – 7.4x EBITDA (or closer to 8x by our adjustments) vs. 5.0x at American Tower and 5.1x at Crown Castle. If they stop repurchasing shares, the AFFO/share growth slows further, and the valuation of the stock may decline. It is also why we believe more of the capital spending should be viewed as required, which lowers AFFO for this company. If they make it truly discretionary such as new builds, upgrades, or even some of the acquisitions and not spend it– the overall growth rate slows and that becomes a negative catalyst for the stock.

Acquisition and Depreciation Accounting is More Conservative than Peers

One area that we did like to see with SBAC is they stand out with more conservative assumptions on assets. It depreciates towers and related PP&E over 3-15 years. By comparison, Crown Castle is at 20 years or the term of the ground lease. American Tower uses up to 20 years. This actually punishes SBAC's income more. It has been reporting periods of falling depreciation due to equipment values being fully expensed:

> *"Depreciation, accretion, and amortization expense increased $4.9 million for the year ended December 31, 2017, as compared to the prior year. On a constant currency basis, depreciation, accretion, and amortization expense decreased $2.5 million. These changes were primarily due to a decrease in domestic site leasing depreciation associated with assets that became fully depreciated since the prior year period, partially offset by additional international site leasing depreciation associated with an increase in the number of towers we acquired and built since January 1, 2016.*

Depreciation, accretion, and amortization expense increased $5.8 million for the three months ended 9/30/2018. On a constant currency basis, depreciation, accretion, and amortization expense increased primarily due to an increase in the number of towers we acquired and built since July 1, 2017, partially offset by the impact of assets that became fully depreciated since the prior year period."

It would not impact EBITDA or AFFO which add back depreciation. Given that SBAC does not intend to pay a dividend and is offsetting income with NOL's to avoid paying one, we believe that by having a larger depreciation expense actually helps management with that goal as more depreciation lowers income.

All three of the tower companies make acquisitions and end up with sizeable intangible assets as well. Both Crown Castle and American Tower put some of the intangibles into goodwill which is not amortized. Only SBAC amortizes all of its intangibles and does so over 15 years. Again, this does not hurt AFFO or EBITDA, but is a more conservative accounting policy than the others.

More on Senior Housing

We follow Welltower (WELL) and Healthcare Services Group (HCSG) in this area, but overall, we despise this whole sector. There has simply been too much supply built more than 10-years (and often 20 years) before it's needed. The property investments in this group are sold on the idea that rent goes up every year so do cash flows. Instead, rents seem to be continually renegotiated down as customers run into problems from low occupancies. The property companies are announcing more deals where they will not receive contracted rent payments with an annual escalator – but will instead participate in the upside and downside of operating these centers and be exposed to low occupancies, maintenance costs, and capital improvement spending.

Last week, another operating company - Senior Care Centers filed bankruptcy. The CEO, Michael Beal became the latest customer of companies like WELL, Ventas, and Sabra to blame high rent expense: "As the entire industry has seen, the leases associated with the communities have become cost-prohibitive. This kind of action [bankruptcy] is absolutely necessary to address those costly leases while continuing to care for our patients and residents."

The other thing to keep in mind with Senior Care is it operates in Texas and Louisiana where job growth has been strong, warm weather is common, plus there's no income tax in Texas. If Texas facilities cannot pay the rent, there are still problems in this industry in our view. Welltower does not have exposure to Senior Care, but Healthcare Services Group did. Sabra, a competitor to Welltower, owns 38 of the 100 Senior Care properties and announced it is selling them for $385 million to a private equity investor.

Welltower also announced that Qatar's Investment Authority bought a $300 million interest in the company and an option to partner on specific future deals. The debate will continue between bulls and bears. In our view, the bulls are far too early, and the operating results reflect low ROI and more continuing problems for several more years. Cash needs are rising as Welltower must fund more operating costs and capital spending for properties to keep them attractive to even hold occupancy flat. Even Welltower believes that the high rate of churn among residents makes it difficult to ever realize much rent growth from existing residents.

Johnson Controls (JCI) EQ Review Update-9/18 Quarter

Current EQ Rating*	Previous EQ Rating
3-	3-

*For an explanation of the EQ Review Rating scale, please refer to the end of this report

We are maintaining our rating on Johnson Controls (JCI) at 3- (Minor Concern).

JCI reported adjusted EPS of $0.93 in the 9/18 quarter, in-line with consensus expectations.

We continue to see minor non-operational benefits to earnings in the fourth fiscal quarter:

- Warranty accruals fell again in the quarter, adding about a penny to EPS.

- Unbilled receivable DSOs rose to 11.5 from 10.2 last year. Given that unbilled receivables are subject to a great deal of management estimation any increase should always be noted. However, given this increase was not out-of-line with recent experience we are not overly concerned and will continue to monitor going forward.

- While deferred revenue declined sequentially on an absolute and days of sales basis, the year-over-year trend remains intact. Again, this account should be monitored for indications of a decline.

- The annual allowance for doubtful accounts fell 30 bps to 2.4% largely due to a reserve adjustment. However, last year's amount was lifted by an acquisition and the adjustment could have been impacted by bringing the acquired reserves in-line with existing operations. It would take about 1.5 cps to bring the allowance percentage back up to the year-ago level which is not material to annual EPS. Given we can't tell if any one quarter received a material boost, we are not overly concerned by the decline.

Warranty Accruals Still Declining

In our review of the 6/18 quarter, we pointed out that JCI reversed an unusually large amount of the warranty accrual back into earnings and estimated this added a little over a penny to EPS in the quarter. However, this amount was key, as it accounted for all of the reported upside in adjusted EPS versus the consensus. While warranty expense in the 9/18 quarter did not register as dramatic a decline as the 6/18 quarter, it still fell by about $9 million year-over-year as shown in the following table:

	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Beginning Warranty Balance	$399	$400	$415	$409
Accruals for warranties during the period	$84	$66	$75	$84
Accruals from acquisitions & divestitures	-$1	$1	$0	$0
Accruals from pre-existing warranties	-$2	-$16	-$5	-$3
Settlements made in cash	-$85	-$47	-$88	-$77
Currency translation	-$3	-$5	$3	$2
Ending Warranty Balance	$392	$399	$400	$415
Warranty Reserve % of T 12 Sales	1.2%	1.3%	1.3%	1.4%

	9/30/2017	6/30/2017	3/31/2017	12/31/2016
Beginning Warranty Balance	$392	$371	$370	$374
Accruals for warranties during the period	$91	$69	$70	$82
Accruals from acquisitions & divestitures	$5	$7	-$4	-$1
Accruals from pre-existing warranties	$1	-$3	$4	-$6
Settlements made in cash	-$81	-$53	-$73	-$73
Currency translation	$1	$1	$4	-$6
Ending Warranty Balance	$409	$392	$371	$370
Warranty Reserve % of T 12 Sales	1.4%	1.4%	1.4%	1.6%

Due to lower warranty accruals and recent accrual reversals, the warranty reserve as a percentage of sales has now fallen to 1.2% at the end of the 9/18 quarter, down from 1.4% a year ago and down 40 bps from the 8-quarter high of 1.6%. We note that on a trailing 4-quarter basis, the cash outflow for warranty payments was $297 million versus net accruals of $284 million. This does not indicate that the company is grossly under-reserving for warranties. However, the timing of warranty accruals and reversals in the last two quarters has benefitted reported EPS. In the case of the 9/18 period, the $10 million decline in net accruals added about a penny to EPS.

Receivables and Deferred Revenues Growth Rates Look Reasonable

We have noted in previous reviews that JCI's deferred revenue balance was declining sequentially. However, we were not overly concerned given that it was still increasing on a year-over-year basis. Deferred revenue includes not only amounts that were collected prior to being recognized on the income statement, but also other items including warranty reserves and battery core returns. The company does not itemize the deferred revenue account but does break out "billings in excess of costs and earnings" which is the true deferred revenue component relating to percentage-of-completion accounting. We show trends in this account along with accounts receivable and costs and earnings in excess of billings (unbilled receivables) in the table below:

	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Sales	$8,370	$8,120	$7,475	$7,435
Reported Accounts Receivable	$7,065	$6,895	$6,679	$6,731
Reported DSOs	77.0	77.5	81.5	82.6
Costs & Earnings in Excess of Billings (in A/R)	$1,054	$1,025	$1,065	$975
Days of Sales	11.5	11.5	13.0	12.0
Billings in Excess of Costs & Earnings (in Deferred Revenue)	$535	$545	$565	$567
Days of Sales	5.8	6.1	6.9	7.0

	9/30/2017	6/30/2017	3/31/2017	12/31/2016
Sales	$8,136	$7,683	$7,267	$7,086
Reported Accounts Receivable	$6,666	$6,443	$6,094	$6,057
Reported DSOs	74.8	76.5	76.5	78.0
Costs & Earnings in Excess of Billings (in A/R)	$908	$951	$863	$812
Days of Sales	10.2	11.3	10.8	10.5
Billings in Excess of Costs & Earnings (in Deferred Revenue)	$451	$448	$472	$462
Days of Sales	5.1	5.3	5.9	5.9

Observations:

- Accounts receivables DSOs jumped by 2.2 days in the period. This by itself is not a major concern. The company notes in its liquidity section in the 10-K filing that receivable increased due to strong organic sales growth.

- However, over half the increase in the overall DSO was due to a 1.3-day increase in the "costs & earnings in excess of billings" component of receivables. This amount represents unbilled receivables resulting from the company recognizing revenue under longer-term contracts that it has not been contractually allowed to bill. These amounts warrant particular scrutiny given their reliance on estimates and the potential for manipulation. The jump from 10.2 days of sales to 11.5 indicates growth out-of-line with revenue but is not yet alarming when considering the volatility of the measure over time. Nevertheless, this remains a key trend to watch going forward.

- "Billings in excess of costs & earnings" is reported in the deferred revenue account. While it has declined on a sequential basis, the trend of year-over-year increases remained intact. We will continue to monitor this going forward as well.

Allowance for Doubtful Accounts Down

JCI does not disclose the allowance for bad debt on a quarterly basis. However, balance sheet in the 9/18 10-K shows that the allowance fell to $177 million at 9/18 from $182 million on 9/17. The allowance as a percentage of gross receivables fell to 2.4% from 2.7% a year ago. We can get a little more clarity from the company's 10-K disclosure showing the development of the account over the last three years which we show in the table below:

	2018	2017	2016
Beginning Balance	$182	$173	$70
Provision Charged to Expenses	$40	$39	$45
Reserve Adjustments	-$24	-$9	-$8
Charged Off	-$21	-$41	-$25
Acquisition		$18	$91
FX		$2	
Ending Balance	$177	$182	$173

We see the reason the account declined was not a cut to provision expense, but rather a reserve adjustment which wrote $24 million of the reserve back into earnings during the year. However, we also see that not only did charge-offs improve during the year, but last year's allowance was boosted from an acquisition. Therefore, some of the reserve adjustment was likely due to bringing reserves at the acquired business in-line with the company's current reserve level.

It would take about 1.5 cps in accruals to bring the reserve back up to the year-ago level. Regardless, we would not consider this to be material on an annual basis and it is impossible to tell if a particular quarter could have benefitted from a cut. As such, we are not overly alarmed by this.

Air Products & Chemicals (APD) EQ Review Update-9/18 Quarter

Current EQ Rating*	Previous EQ Rating
3-	4-

*For an explanation of the EQ Review Rating scale, please refer to the end of this report

We are lowering our rating on Air Products & Chemicals (APD) to a 3- (Minor Concern) from a 4- (Acceptable)

APD reported adjusted EPS of $2.00 in the 9/18 quarter, in-line with consensus estimates. There were 5 cps in non-GAAP adjustments made which included a pension settlement, tax reform items and a charge from a change in inventory method.

We noted a couple of specific items in the fourth fiscal quarter that prompted us to reduce the rating.

- Changes in estimates related to the company's use of percentage-of-completion accounting added $13 million to operating profits in the 9/18 quarter versus $2 million in the year-ago period. The $11 million improvement would have added about 4 cps to EPS in a quarter where earnings were in-line with estimates.

- APD changed its method of inventory accounting to 100% FIFO (first-in, first out). This resulted in a $24.1 million benefit to the quarter. The company adjusted this amount out of its non-GAAP earnings. Likewise, growth in adjusted inventory days looks good after adjusting for the change.

Changes in Estimates for Percentage-of-Completion Accounting

APD utilizes the percentage-of-completion method when accounting for equipment sales contracts. The company describes the utilization of the method in its 10-K as follows:

> *"Revenue from equipment sale contracts is recorded primarily using the percentage-of-completion method. Under this method, revenue from the sale of major equipment,*

such as LNG heat exchangers and large air separation units, is primarily recognized based on costs incurred to date compared with total estimated costs to be incurred. We estimate the profit on a contract as the difference between the total estimated revenue and expected costs to complete the contract and recognize the profit over the life of the contract.

Accounting for contracts using the percentage-of-completion method requires management judgment relative to assessing risks and their impact on the estimate of revenues and costs. *Our estimates are impacted by factors such as the potential for incentives or penalties on performance, schedule and technical issues, labor productivity, the complexity of work performed, the cost and availability of materials, and performance of subcontractors.* ***When adjustments in estimated total contract revenues or estimated total costs are required, any changes in the estimated profit from prior estimates are recognized in the current period for the inception-to-date effect of such change.*** *When estimates of total costs to be incurred on a contract exceed estimates of total revenues to be earned, a provision for the entire estimated loss on the contract is recorded in the period in which the loss is determined."*

APD disclosed the following quarterly impact from changes to estimates related to percentage-of-completion accounting:

	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Gain/(Loss) From Change in % of Completion Estimates	$13	$15	$10	$0

	9/30/2017	6/30/2017	3/31/2017	12/31/2016
Gain/(Loss) From Change in % of Completion Estimates	$2	$15	$12	-$2

We can see that the 9/18 quarter profit benefitted from a $13 million change in estimates compared to just $2 million last year. Regardless of whether the change in estimates is warranted, we view the larger benefit as a non-operational gain without which EPS would have been about 4 cps lower.

Inventory Change to FIFO

We have previously complimented APD on its use of the LIFO (last-in, first-out) inventory valuation for its US gas business. However, on July 1, the company moved all of its inventories to the FIFO (first-in, first-out) method as discussed in the following disclosure from the 10-K filing for the fiscal year ended 9/18:

> *As discussed in Note 1, Major Accounting Policies, we changed our accounting method for U.S. inventories from a LIFO basis to a FIFO basis effective 1 July 2018. As of 30 September 2017, inventories valued using the LIFO method comprised approximately 49% of consolidated inventories before LIFO adjustment. Liquidation of LIFO inventory layers prior to our change in accounting policy in fiscal year 2018 and in fiscal years 2017 and 2016 did not materially affect the results of operations. We did not restate prior period financial statements for the change in U.S. inventories as the impact was not material.* ***Instead, the Company applied the accounting change as a cumulative effect adjustment to cost of sales in the fourth quarter of fiscal year 2018. This change increased inventories by $24.1 at 1 July 2018 and increased pre-tax income from continuing operations by $24.1 for the quarter and fiscal year ended 30 September 2018.***

FIFO is consistent with international accounting standards and it does make for consistent treatment for all segments. However, we still frown on the switch to FIFO, especially in times of rising costs. Matching older, lower-cost inventories with current sales prices results in artificially higher profits if costs are rising

With this in mind, let's look at inventory DSIs over the last eight quarters:

	9/30/2018	6/30/2018	3/31/2018	12/31/2017
COGS	$1,566	$1,545	$1,507	$1,572
Inventory	$396	$322	$340	$347
COGS YOY growth	1.3%	4.0%	7.3%	19.4%
Inventory YOY growth	18.1%	9.8%	5.3%	5.0%
Inventory DSIs	23.1	19.0	20.6	20.2

	9/30/2017	06/30/2017	3/31/2017	12/31/2016
COGS	$1,545	$1,486	$1,404	$1,317
Inventory	$335	$293	$323	$331
COGS YOY growth	14.7%	12.6%	15.7%	1.6%
Inventory YOY growth	31.5%	-52.0%	-50.3%	-50.3%
Inventory DSIs	19.8	18.0	21.0	22.9

If we adjust the 9/18 inputs for the $24.1 million reduction in COGS and subsequent increase to inventory, we get an adjusted DSI figure of 21.4 compared to the non-adjusted 23.1. That brings the year-over-year increase to DSI down to 1.6 which is not concerning.

Campbell Soup (CPB) EQ Review Update-10/18 Quarter

Current EQ Rating*	Previous EQ Rating
3-	3+

*For an explanation of the EQ Review Rating scale, please refer to the end of this report

We are lowering our rating on Campbell Soup (CPB) from a 3+ (Minor Concern) to a 3- (Minor Concern).

CPB reported adjusted EPS of $0.79 per share, down 14% from a year ago but 10 cps better than what analysts were expecting. The $0.79 was also penalized by 4 cps from a change in revenue recognition accounting which accelerated the recognition of promotional expense. This is expected to penalize profits in the first half of the fiscal year but turn positive in the back half with an immaterial impact on the full fiscal year. The quarter was also hit by 3 cps in higher costs from production issues at its Findlay plant. Still, management affirmed its full-year guidance.

We note that CPB is a turnaround story and for the immediate future its stock price has been and will likely continue to be driven more by headlines about its relationship with activist investor Third Point and the planned divestiture of its international business. Large structural transactions will make the company's reported earnings volatile and difficult to analyze the impact of quality of earnings issues. With that in mind, we note the following observations about the quarter:

- While clouded by recent acquisitions, working capital trends remain positive with no obvious concerns regarding receivables, inventories and payables.

- CPB recorded an increase of $140 million of goodwill related to the 3/28/18 Snyder's-Lance acquisition to offset, among other things, a $134 million decline in the estimated value of trademarks and $52 million in customer relationships. This represents over 2% of the acquisition price and we wonder if this is foreshadowing a future write-down of this goodwill.

- The restructuring charges are expanding. CPB has undergone several phases of restructurings over the years which continually get extended and expanded. The estimate for total costs stated in the 7/18 10-K was $570-$605 million. This was increased to $640-$685 in the 10/18 10-Q. Large, expanding charges always cast doubt on the quality of adjusted EPS numbers as ongoing operating expenses can be shuffled into the charges and dismissed.

Explanation of EQ Rating Scale

6- "Exceptionally Strong"	Indicates uncommonly conservative accounting policies to the point that revenue and earnings are essentially understated relative to the company's peers. Higher possibility of reporting positive earnings surprises
5- "Strong"	Indicates the company has no areas of concern with its reported results and we see very little risk of the company disappointing due to recent results being overstated from aggressive reporting in recent periods.
4- "Acceptable"	Indicates the company may have exhibited a minor "red flag", but the severity of the issue is not yet a concern. Minimal risk of an earnings disappointment resulting from previous earnings or cash flow overstatement
3- "Minor Concern"	Indicates the company has exhibited either a larger number of or more serious warning signs than companies receiving a 4. The likelihood of an immediate earnings or cash flow disappointment is not considered to be high, but the signs mentioned deserve a higher degree of attention in the future.
2- "Weak"	Indicates the company's recent reported results have benefitted materially from aggressive accounting. Follow up work should be performed to determine the nature and extent of the problem. There is a possibility that upcoming results could disappoint as the impact of unsustainable benefits disappears.
1- "Strong Concerns"	Indicates that the company's recent results are significantly overstated and that we view a disappointment in upcoming quarters is highly likely.

In addition to the numerical rating, the EQ Review Rating may also include either a minus or plus sign. A minus sign indicates that our analysis shows the overall earnings quality of the company has worsened since the last review and there is a possibility the numerical rating will fall should the problem continue into the next quarter. Likewise, a positive sign indicates that the overall earnings quality is improving, and the company may see an upgrade in its numerical rating should the trend continue.

Key Points to Understand About the EQ Score

The EQ Review Rating is much more than a blind, quantitative scoring method. While we utilize proprietary adjustments, ratios, and methods developed over decades of earnings quality analysis, the foundation of all of our analysis is reading recent SEC filings, press releases, conference call transcripts and in some cases, conversations with managements.

The EQ Review Rating is not comparable to a traditional buy/sell rating. The Rating is intended to specifically convey the extent to which reported earnings may be over/understated. Fundamental factors such as forecasts for future growth, increasing competition, and valuation are not reflected in the rating. Therefore, a high score does not in itself indicate a company is a buy but rather indicates that recent results are a good indication of the underlying earnings and cash generation capacity of the company. A low score (1-2) will likely result in us performing a more thorough review of fundamental factors to determine if the company warrants a full-blown sell recommendation.

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