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Johnson Controls (JCI)

Johnson Controls (JCI) continues to tout to investors that it will improve its cash conversion in 2018 and has targeted an 80% free cash flow conversion rate for the full year. However, this will require considerable improvement as working capital continued to expand in the 3/18 quarter. Specifically, we note:

- Reported accounts receivable days of sales rose by 5 days over the year-ago period. JCI records amounts recognized under percentage-of-completion contracts ahead of billings as part of its accounts receivable balances. This component represented about 13 days of sales in the 3/18 quarter, up from 10.8 days a year ago, so much of the overall increase in DSOs was centered with these amounts recognized prior to billing.

- By itself, an increase in amounts recognized ahead of billing would be a concern. However, deferred revenue appears to be increasing at a healthy pace which is evidence against aggressive revenue recognition. Also, billings in advance of costs and earnings recognized under percentage-of-completion contracts increased by one day over the year-ago quarter. This alleviates some of the concern from the rise in amounts recognized ahead of billings. Nevertheless, this is an area to keep a close eye on in upcoming quarters.

- Inventory DSIs jumped by 4.5 days over the 3/17 quarter which management attributed to increased production levels. Given rising price levels and a rise in backlog, we are not overly concerned that inventories are out of control, but there is certainly no evidence yet that the company is becoming better at squeezing cash out of its inventory management practices.

- Accounts payable days rose by 6 days over the year-ago level. This can largely be explained by the rise in inventories and we are not as concerned the company is playing unsustainable games to milk cash out of its suppliers. Regardless, payables are at 70+ days of COGS, and this relatively elevated level does not seem to leave

much room for cash flow improvement from that source. Therefore, future working capital improvements will have to come from the more difficult areas of receivables and inventory management.

Receivables Increasing

The following table shows JCI's accounts receivable days sales outstanding (DSO) for the last seven quarters:

	3/31/2018	12/31/2017	9/30/2017	6/30/2017	3/31/2017	12/31/2016	9/30/2016
Sales	$7,475	$7,435	$8,136	$7,683	$7,267	$7,086	$6,254
Reported Accounts Receivable	$6,679	$6,731	$6,666	$6,443	$6,094	$6,057	$6,394
Reported Receivable DSOs	81.5	82.6	74.8	76.5	76.5	78.0	93.3
Costs and Earnings in Excess of Billings	$1,065	$975	$908	$951	$863	$812	$841
Days of sales	13.0	12.0	10.2	11.3	10.8	10.5	12.3
Trade receivable DSOs	68.5	70.6	64.6	65.2	65.7	67.5	81.0

Trade receivables as reported on the balance sheet rose by 5 days over the year-ago quarter, an acceleration over the 4.6-day year-over-year increase registered in the 12/17 quarter. In addition, the company also accounts for some longer-term contracts in its Business Technologies & Solutions segment under the percentage-of-completion method. Under such contracts, JCI will recognize some revenues ahead of the contracted billing periods which it records as "costs and earnings in excess of billings." As shown in the table, those amounts rose to 13.0 days of sales in the 3/18 quarter compared to 10.8 days in the year-ago period. We note that management must utilize a certain degree of subjective judgement as to the timing of recognition of such amounts. For reference, if costs and earnings in excess of billings had remained at 12 days of sales, flat with the 12/17 quarter, it would have shaved over $80 million off of revenue in the 3/18 quarter.

We strip out the "costs and earnings in excess of billings" from the reported accounts receivable balance from the balance sheet to arrive at an implied trade receivables DSO amount in the table above. We see that even after adjustment for the increase in the excess billings amount, trade receivables DSO still jumped by almost three days in the 3/18 quarter over last year. While management addressed the increase in its 10-Q, it simply said "there has been no significant adverse change in the level of overdue receivables or changes in

revenue recognition methods." Management did mention receivables collection in the conference call but did not add much in the way of color:

> *"We did see a slight increase in inventory in Power Solutions as a result of some of the lower volumes we talked about. But they did a really nice job on the receivable front in Power Solutions and as well as the Buildings performance in receivables was strong as well.*
>
> *The reason that we've commented that this is really timing between the quarters is there is a little bit of pull-forward, I would say, on the collection of receivables, and we pulled forward a bit of our harmonization of our vendor payment terms in the Buildings business as well."*

The comments seem to imply a better job at collecting receivables. However, the increase in overall DSOs implies receivables originations are still rising along with recognition of excess billings. As we discuss in the next section, some of the concern raised by these items is alleviated by a rise in deferred revenues.

However, Deferred Revenue Is Increasing

Offsetting some of the concern with rising receivables is an apparent increase in deferred revenue. JCI only recently began breaking out deferred revenue as a separate line item on its balance sheet after previously including it in "other current liabilities." In addition, the company reports "billings in excess of costs and earnings" in a footnote related to its above-mentioned percentage-of-completion contracts. The below table breaks these amounts out on a days-of-sales basis:

	3/31/2018	12/31/2017	9/30/2017	6/30/2017	3/31/2017	12/31/2016	9/30/2016
Sales	$7,475	$7,435	$8,136	$7,683	$7,267	$7,086	$6,254
Deferred Revenue	$1,543	$1,368	$1,279	NA	NA	NA	$1,228
Deferred Revenue Days	18.8	16.8	14.3	NA	NA	NA	17.9
Billings in Excess of Costs and Earnings	$565	$567	$451	$448	$472	$462	$431
Days of sales	6.9	7.0	5.1	5.3	5.9	5.9	6.3

While we don't have a deferred revenue breakout for the 3/17 quarter to get a year-over-year comparison, the strong sequential increase in deferred revenue in the last three

quarters alleviates concern that the company is getting aggressive in recognizing its deferred revenue balances.

Billings in excess of costs and earnings represents amounts under percentage-of-completion contracts where the company has invoiced customers but has yet to recognize the associated revenues as earned. As with deferred revenue, the increase in that account both on a year-over-year basis and sequentially does not indicate aggressive revenue recognition.

Inventory Continues to Rise

The following table shows inventory days (DSIs) for the last seven quarters:

	3/31/2018	12/31/2017	9/30/2017	6/30/2017	3/31/2017	12/31/2016	9/30/2016
COGS	$5,255	$5,266	$5,623	$5,252	$4,986	$4,972	$4,566
Inventory	$3,565	$3,459	$3,209	$3,384	$3,138	$2,943	$2,888
DSIs	61.9	59.9	52.1	58.8	57.4	54.0	57.7

Inventory DSIs rose by more than 4 days from the year-ago quarter after increasing almost six days on a year-over-year basis in the 12/17 quarter. With regards to inventories, the company simply noted in the 10-Q that turnover declined due to changes in inventory production levels. Given that the company's backlog has risen and the year-over-year increase in DSIs has decelerated, we are less concerned that inventories are out of control. However, we still do not see evidence that the company is becoming more efficient at inventory management.

Accounts Payable Rising

One positive for JCI's working capital development has been the continued rise in accounts payable documented in the below table:

	3/31/2018	12/31/2017	9/30/2017	6/30/2017	3/31/2017	12/31/2016	9/30/2016
COGS	$5,255	$5,266	$5,623	$5,252	$4,986	$4,972	$4,566
Accounts Payable	$4,250	$4,020	$4,271	$3,764	$3,720	$3,453	$4,000
DSPs	73.8	69.7	69.3	65.4	68.1	63.4	79.9

Days payables (DSP) rose by almost 6 days compared to the 3/17 quarter, which was a slight deceleration from the 6.3-day year-over-year increase seen in the 12/17 quarter. Much of this increase is likely related to the increase in inventories. Therefore, we do not see this as outright squeezing of suppliers or game-playing with payable financing programs. Regardless, with payables at a relatively high level, we do not see much room for the company to be able to grow cash flow with payables management. Instead, we believe lasting cash flow improvements will need to come from the more difficult areas of receivables and inventory management.

Restructuring Programs Continue Every Year

With the Tyco merger and the Adient spin-off only two years old, we recognize that JCI has yet to "settle down" into a period of normal comparisons. As such, we are more understanding of restructuring activities and one-time expenses. However, we do note that the company literally has begun a new restructuring program in each of the last three years (the 2018 Plan, 2017 Plan and 2016 Plan). The 2018 Plan included $158 million in charges, the 2017 Plan totaled $367 million, and the 2016 Plan totaled $288 million. All the plans consisted largely of employee severance and termination benefits with smaller portions dedicated to asset impairment charges. We will be looking for the restructuring activity to decline going forward.

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