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BTN Earnings Quality Review

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Illinois Tool Works (ITW)

We see many positives in ITW's recent results. The company has solid organic growth and rising cash flow despite a $150 million pension contribution in 2017 which moved the plan to overfunded status. Additionally, the company will be increasing its dividend payout ratio to 50% of free cash flow from 43% two years ahead of schedule courtesy of tax reform freeing up overseas cash. Regardless, our review turned up a few red flags that warrant watching in the quarters ahead:

- Accounts receivable DSOs jumped almost three days in the 12/17 quarter versus the year-ago period. This increase could have been a material boost to sales growth.

- Inventory DSIs rose by over three days in the period. Management attributed this to matching increased orders. The fact the buildup was centered in finished goods gives more credence to that explanation.

- ITW utilizes the first-in, -first-out (FIFO) method of inventory accounting for over 75% of its inventories which could artificially benefit profits in an environment of rising raw material and labor costs.

Receivables Trending Higher

ITW's receivables have increased over the year-ago period in each of the last three quarters, as seen in the table below:

	12/31/2017	9/30/2017	6/30/2017	3/31/2017	12/31/2016	9/30/2016
Sales	$3,629	$3,615	$3,599	$3,471	$3,399	$3,495
Accounts Receivable	$2,628	$2,672	$2,629	$2,534	$2,357	$2,496
Sales YOY growth	6.8%	3.4%	4.9%	6.0%	3.8%	4.2%
Accounts Rec. YOY growth	11.5%	7.1%	9.0%	5.8%	7.0%	6.7%
Sales Seq growth	0.4%	0.4%	3.7%	2.1%	-2.7%	1.9%
Accounts Receivable Seq growth	-1.6%	1.6%	3.7%	7.5%	-5.6%	3.4%
Accounts Receivable DSOs	**66.1**	**67.4**	**66.7**	**66.6**	**63.3**	**65.2**

*Note that ITW bought the Engineered Fastener and Components business of ZF TRW on July 1, 2016. However, the above ratios are calculated on quarterly sales, so that would not have impacted any of the year-over-year comparison in the above table.

The typical seasonal pattern calls for a 5-6% sequential decline in receivables in the fourth quarter, but the 12/17 quarter saw only a 1.6% decline. This led to receivable days sales outstanding (DSO) jumping almost three days over the year-ago quarter, which is a larger jump than registered in either of the previous two quarters. Management gave no indication of the reason for the increase in the 10-K, 9/17 10-Q or fourth quarter conference call. Also, not shown in the table is the fact that DSOs for the 12/15 quarter were 61.4, giving more weight to the notion that receivables were unusually high in the 12/17 quarter. We calculate that if DSOs had remained flat with the 12/16 quarter, it could have essentially cut the company's reported sales growth in half. While some of this could simply be due to the timing of receipt of payments from customers or an acceleration of orders at the end of the quarter, the fact that the increase has persisted and worsened gives us a little more cause for concern.

Inventory Also Jumped in the Quarter

The following table shows the calculation of days of sales of inventory (DSI) for the last six quarters:

	12/31/2017	9/30/2017	6/30/2017	3/31/2017	12/31/2016	9/30/2016
COGS	$2,124	$2,094	$2,087	$2,004	$2,006	$2,027
Inventory	$1,220	$1,225	$1,199	$1,158	$1,076	$1,167
COGS YOY growth	5.9%	3.3%	6.1%	5.7%	3.3%	3.8%
Inventory YOY growth	13.4%	5.0%	4.7%	2.1%	-0.9%	1.2%
COGS Seq growth	1.4%	0.3%	4.1%	-0.1%	-1.0%	3.1%
Inventory Seq growth	-0.4%	2.2%	3.5%	7.6%	-7.8%	1.9%
Inventory DSIs	***52.4***	***53.4***	***52.4***	***52.7***	***48.9***	***52.5***

As with DSOs, the year-over-year DSI increase has persisted over the last three quarters and worsened in the 12/17 quarter. Also, like receivables, inventory typically declines 5-6% sequentially in the fourth quarter of the year but were essentially flat in 4Q'17. Unlike the receivables increase, the increase in inventory was addressed in the fourth quarter conference call by management:

> "Now, if you're really picky, if you look at Q4, we did see a slight increase in working capital and that's just to assume, support the higher demand and the increase in backlog that we are seeing in some of our businesses…
>
> …It [the inventory increase] was pretty broad based, so I think as you would expect the ones with the highest acceleration in Q4 that we just talked about had a little bit more, but overall there is some pretty good momentum across the portfolio here.
>
> …No, no this – we don't as you know most of our businesses are we get the order – today, we shift tomorrow, we've replenished inventory the following day and as demand picks up, we build more inventory. And so that's really what you are seeing. So I think it's nothing to be alarmed about."

Management is essentially contending that the observed jump in 4Q inventory levels was to support rising orders. This is a plausible explanation and further backed up by the following table:

	12/31/2017	9/30/2017	6/30/2017	3/31/2017	12/31/2016	9/30/2016
Raw Materials % of inventory	**38.1%**	37.0%	37.7%	36.9%	**37.8%**	36.8%
In-Progress % of inventory	**11.6%**	12.1%	11.6%	12.0%	**11.7%**	12.4%
Finished Goods % of inventory	**57.6%**	57.9%	57.7%	58.4%	**58.5%**	57.8%
LIFO Reserve % of inventory	-7.3%	-6.9%	-7.0%	-7.3%	-8.0%	-7.0%

As the table shows, finished goods actually fell as a percentage of total inventory while the increase was centered in raw material and work in process. This supports the notion that there is increased activity gearing up for upcoming sales rather than an unexpected buildup of completed products sitting on the shelves.

However, all this brings up another issue with inventory- the company's choice of inventory accounting method. ITW utilizes the last-in, first out (LIFO) method of inventory accounting for approximately 21% of its inventories. However, the rest is accounted for under the first-in, first-out method under which the company expenses the oldest items in inventory against current sales. The FIFO method results in higher profits during times of rising material and labor costs. Input costs are just now starting to rise meaningfully and have likely not worked their way through to finished goods to a large degree. However, it is possible that some of the disproportionate increase in raw material and work-in-progress was actually due to rising costs. This should be monitored going forward, as the more FIFO inventory balances rise during times of rising input costs, the more likely it is a company is artificially (and temporarily) benefitting from running older, lower-cost inventories through cost of sales.

Another item to watch going forward is the LIFO reserve which is shown as a percentage of total inventory in the table above. This represents the adjustment to FIFO inventories to reflect inventories that were accounted for under LIFO. During times of rising input prices, one would expect to see the LIFO reserve increasing to account for the fact that higher-cost, newer inventories have been expensed against sales and removed from inventory. If the reserve begins to decline on an absolute basis, it could be an indication the company is dipping into the LIFO reserve to artificially boost profits. We see no indication the company is doing this now, but it warrants watching.

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