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Illinois Tool Works (ITW) EQ Update-12/18 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 raising our earnings quality rating on ITW to a 3+ (Minor Concern) from a 3- (Minor Concern.

After reviewing the 10-K, we are raising our rating based on the following:

- Inventory days (DSI) rose by 5 days compared to the 12/17 period. While a 5-day increase always warrants attention, a review of the components of inventory in the 10-K indicates that the buildup has been more focused in raw materials and work-in-process which is consistent with management's explanation of rising costs which are now falling into finished goods. While rising costs building up in inventory foreshadows higher COGS in the future, the company's use of FIFO accounting for the bulk of its inventories coupled with a relatively fast inventory turn (60 days) reduces our concern that there is a pent-up wave of higher costs about to hit the income statement.

- Receivables days (DSO) growth flattened in the 12/18 quarter and deferred revenue posted a slight increase which reduces concern regarding revenue recognition.

- We note that while the dividend consumes less than 50% of free cash flow, the buyback consumes well more than the remainder. A lower share count added about 2.5% to EPS growth in the 12/18 quarter. With debt-to-EBITDA below 2, this is not an immediate concern, but we note this is not a sustainable trend in the long-run.

Inventory DSIs Are Rising, but Most of the Increase Is in Raw Materials and WIP

We noted in our original review of the fourth-quarter that inventories have continued to increase with DSIs rising 5 days over the 12/17 quarter. Management stated in the conference call that this was due to rising materials costs, but we were concerned by the sudden year-over-year increases in DSI in the last two quarters. The following table shows the components of inventory on a days of cost of sales basis:

	12/31/2018	9/28/2018	6/30/218	03/31/2018
Raw Materials DSI	13.3	13.3	11.9	12.0
In-Process DSI	4.1	4.5	4.3	4.6
Finished Goods DSI	18.6	18.5	17.4	18.1

	12/31/2017	09/30/2017	06/30/2017	03/31/2017
Raw Materials DSI	11.7	11.4	11.5	11.2
In-Process DSI	3.5	3.7	3.5	3.7
Finished Goods DSI	17.7	17.9	17.5	17.8

If inventory is rising due to increasing costs, we would expect to see the increase begin in raw materials and work-in-process and work its way into finished goods. This is what we see in the above table which gives credence to management's explanation of the inventory increase and decreases our concern that the increase in DSI is a result of a buildup in inventory.

ITW uses FIFO accounting for about 80% of its inventory which means it is largely expensing older, lower-cost inventories first. The rise in inventory is obviously foreshadowing rising cost which will be reflected in COGS going forward, and a 5-day increase in DSI always warrants some attention. However, since the company turns its inventory about every 60 days, there is not a huge lag between the original purchasing of raw materials and expensing, so we do not expect an unexpected rise in the cost of goods in the upcoming quarters.

Accounts Receivable Days

We cited the 3-day increase in accounts receivable days (DSO) in the 9/18 quarter. However, DSO growth was flat in the in the 12/18 period. In addition, deferred revenue days of sales

at the end of the year were slightly up compared to the year-ago level further reducing any concern about revenue recognition.

Cash Flow Still Not Covering Buyback and Dividend

The following table shows the calculation of free cash flow after the buyback and dividend:

	12/31/2018	12/31/2017	12/31/2016
T12 Operating Cash Flow	$2,811	$2,402	$2,302
T12 Capex	$364	$297	$273
T12 Free Cash Flow	$2,447	$2,105	$2,029
T12 Dividends	$1,124	$941	$821
Dividend % of FCF	45.9%	44.7%	40.5%
T12 Net Stock Repurchases	$2,000	$1,000	$2,000
Cash After Buyback	-$677	$164	-$792

We can see that the company's dividend consumes less than 50% of free cash flow, but the generous buyback consumes well more than the balance. With debt to EBITDA below 2x, this is not an immediate problem. However, the lower share count added about 2.5% to EPS growth in the period which is not a sustainable long-term trend.

Explanation of EQ Rating Scale

Rating	Description
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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