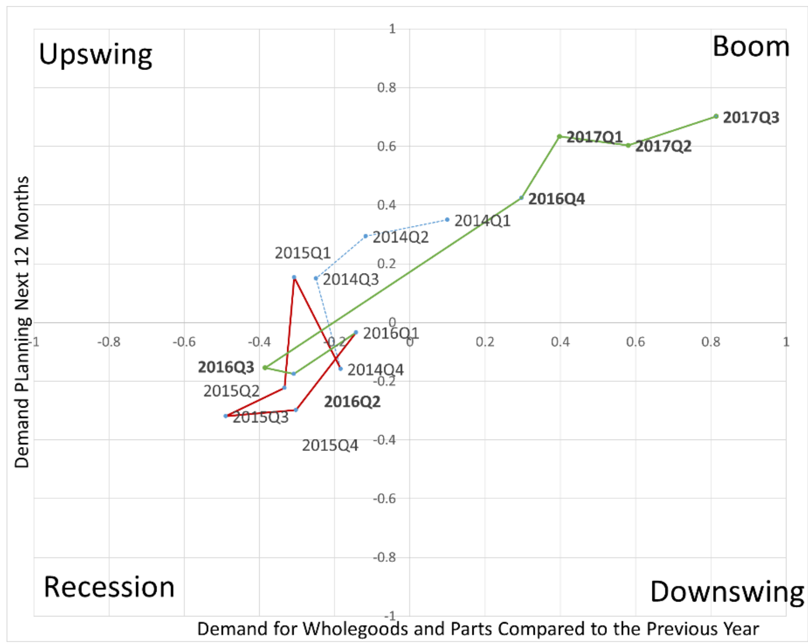
AEM ASSOCIATION OF EQUIPMENT MANUFACTURERS

Agriculture Industry Conditions Survey - North America

Thank you for participating in the Q3 2017 North American Agricultural Industry Conditions Survey. The survey is based on Net Rising Indexes. We take the positive answers and detract the negative ones, creating a net rising index. Anything below zero means a market contraction, anything above growth. The stronger the contraction or growth, the stronger the market consensus. If you have any comments or questions, please email Benjamin Duyck at bduyck@aem.org.

Summary

Demand over the last 12 months and planning for the next 12 months continue to improve as new orders grow, production is rising and work backlog increases. Members are indicating inventories are low for some, but for most, they are just right. Based on the comments our members provided, optimism remains strong. More and more manufacturers are increasing their workforce to meet this renewed demand. Additionally, the recently passed Tax Reforms doubled the deductible amount under section 179 and reinstated the 100% bonus depreciation, which would boost larger purchases of machinery. On the right, you can see that survey takers are indicating that the industry is in a boom cycle. We have been experimenting with a new graph that tracks our business cycle by comparing the NRI for demand over the last 12 months and demand expected for the next 12 months.



A good insight in the boost of optimism across survey participants can be derived from the comments:

2018 is shaping up to be a strong year for agriculture. Our open orders are stronger than normal.

Hay equipment will be in strong demand in 2018.

Ag component market is growing modestly, driven primarily by short-liner demand AG market rising

Another good crop adding to higher current stock levels already doesn't bode well for improving grain pricing

Dealer inventories are lower, new equipment orders are up, but will the retails to the end user increase? Not Yet...

Demand is increasing and supply will be under pressure for 2018

Heating up

New orders and backlog have been much better than anticipated.

Outlook for next 12 months looks better than the past 3 years

Overall all the market seems to be improving slightly but with smaller margins farmers need to choose their investments wisely so not all manufacturers will benefit immediately

The market for attachments has been fairly steady.

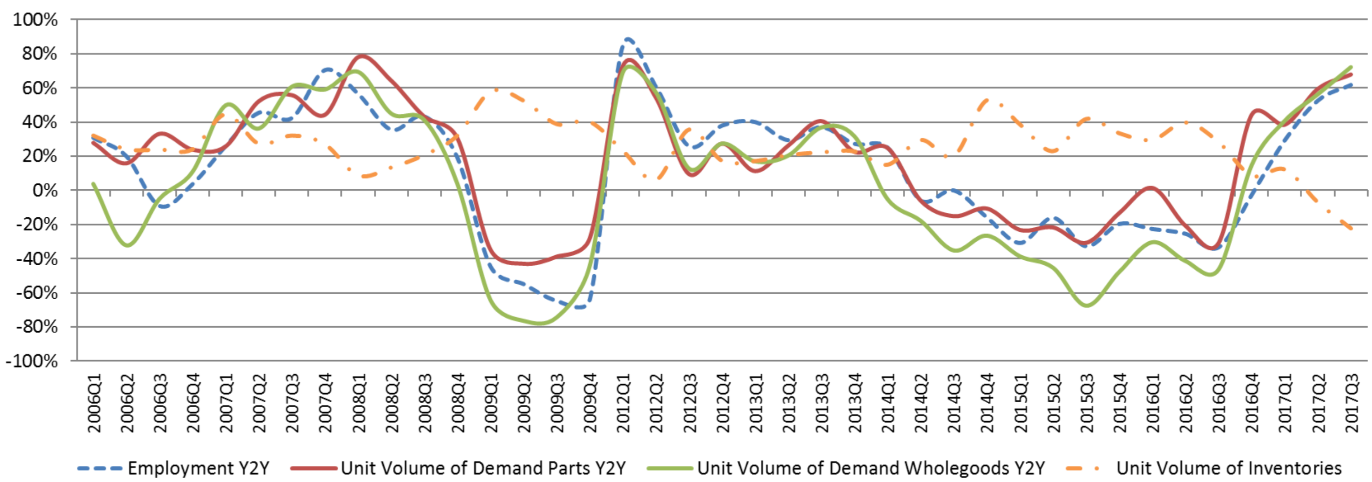
The market is picking up with Ag dealers buying more of our equipment. I think this is driven primarily by dealers moving their inventory and need new inventory to sell.

We are generally expecting things to trend upwards, although these days you can't count on anything. We feel confidence is up higher than the data to back it up.

Demand

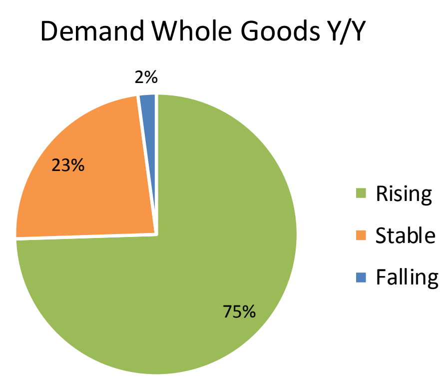
The Net Rising Index (NRI) for Unit Volume of Demand (Wholegoods) year over year came in around 72.3, up from 56.5 in Q2 2017 and -46.2 in Q3 2016. This is the 4th consecutive quarter of year over year growth following an AG downturn that lasted almost 3 years. Only 23 percent of respondents felt that demand for Wholegoods remained stable. The NRI for Unit Volume of Demand (Parts) year over year also grew and came in at 68.1, up from 59.7 in Q2 2017 and -30.8 in Q2 2016. Our demand question inquired about demand as a whole, which includes new orders alongside production and shipments.

Net Rising Index - Demand, Employment and Inventories



This survey represents member perceptions and is naturally tied to optimism. Based on the broader increases in U.S. business confidence, it would be prudent to assume that this newfound optimism is also tied to the current Administrations' ability to deliver on regulatory and tax reform. As we previously explained, the NRI's only measure member consensus on the market direction. For more detailed information, we should look at the individual product categories.

Equipment Type	Last 12 Months*			
	Wholegoods		Comp / Attachm.	
Components	↑	6-10%	↑	6-10%
Equipment for soil working, seeding, fertilizing,	↑	16-20%	↑	1-5%
Harvesting equipment	↑	6-10%	↑	6-10%
Irrigation & sprayers	↑	>20%	↑	1-5%
Lawn and Garden	→	Stable	↑	6-10%
Livestock equipment	N/A		↑	16-20%
Loaders / material handlers	↑	11-15%	↓	1-5%
Other	↑	1-5%	↑	1-5%
Tractors	↑	6-10%	↑	1-5%
Trailers / transportation equipment	↑	6-10%	N/A	
Grand Total	↑	6-10%	↑	6-10%

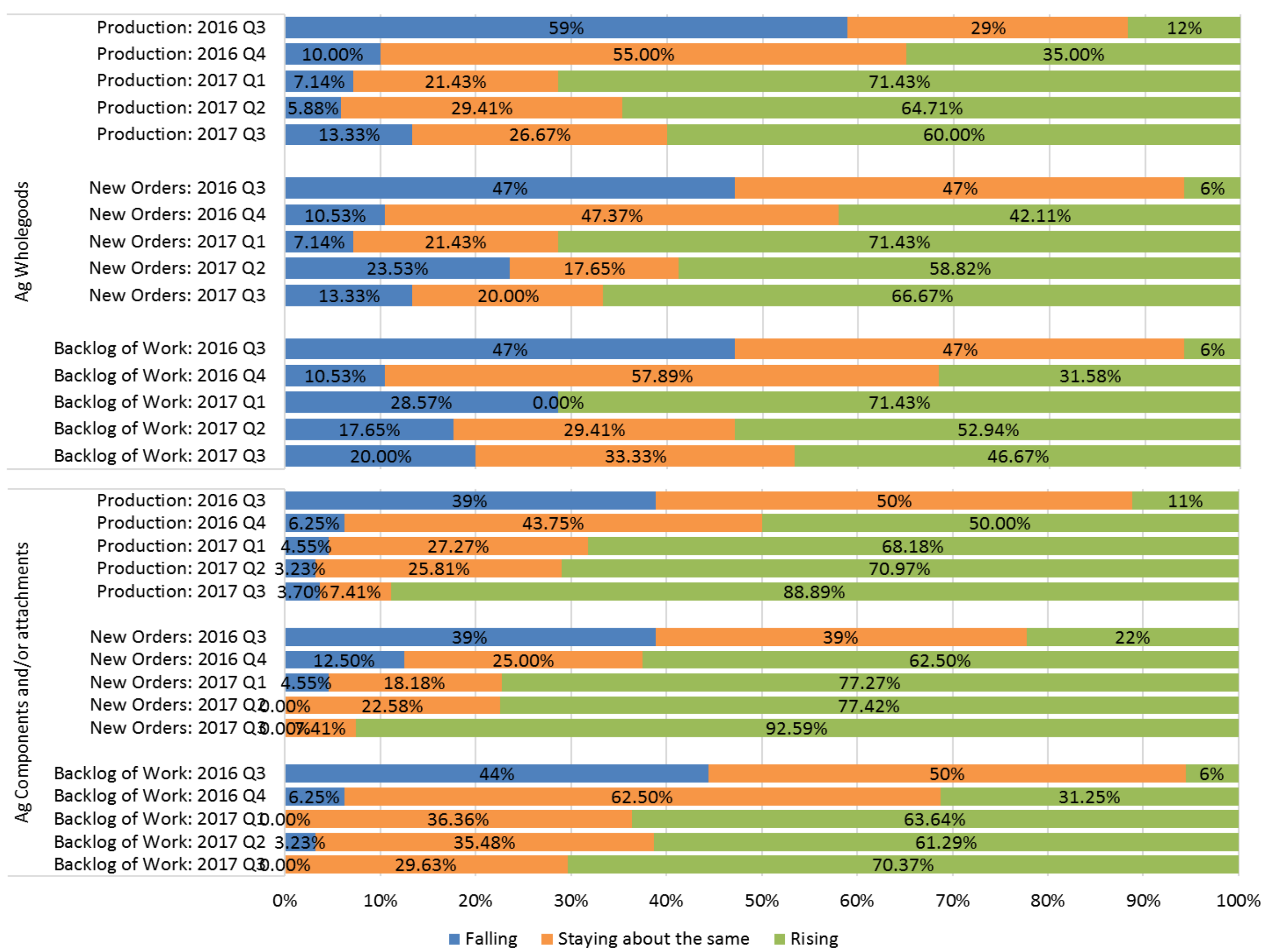


New Orders, Production and Work Backlog

To get a better understanding of what the manufacturers are experiencing, AEM started asking the survey respondents for more information regarding demand, such as New Orders, Production and Backlog of Order levels. The growth in demand as indicated by the positive NRI, is supported by an influx of new orders. As new orders come in, production is increasing, but not at a fast enough rate, causing backlog to increase as well.

New orders, production and work backlog for Ag Wholegoods continue to grow, albeit at a slightly slower rate than Q2 or Q1 of 2017. For components and attachment growth in new orders, production and work backlog continues to grow. As we move through the quarters, we can still see the contrast with Q3 of 2016.

New Orders, Production and Work Backlog



Inventories

The NRI for Unit Volume of Inventories Quarter over Quarter came in at 0, up from -10.53 in Q2 2017 and -2.56 in Q3 2016. About 56 percent of respondents felt that inventories remained the same over the past three months. There was no significant difference between the Components and/or Attachments and Wholegoods sub-segments. Overall, at the manufacturer level 69 percent of respondents felt that inventories were about right, while 26.7% felt they were too low.

The NRI for Dealer Inventories came in around -16.28, down from -8.93 in Q2 2017, but up from -23.1 in Q3 2016. 65 Percent felt they had remained unchanged. When asked, about 65 percent also felt they were just about right. Two members did comment that dealers seem to be moving their inventories lower, which is key to clear clogged pipelines.

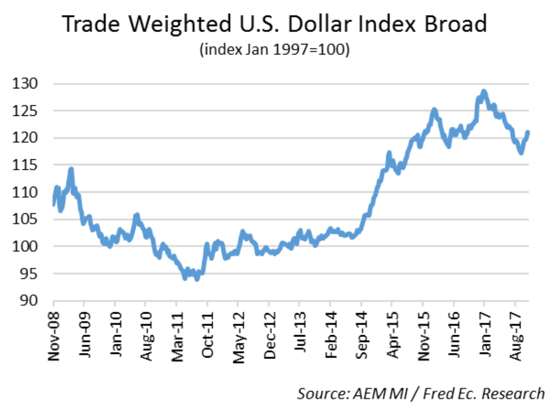
Overall it seems that growing new orders, increasing production, and a growing backlog of work combined with inventories that are stable or too low indicates that production is outrunning supply. There is always a chance that supplies are not being ordered fast enough due to the somewhat uncertain future, but this is not reflected in the planning scenario of the survey respondents.

Employment

The Net Rising Index for Employment year over year came in at 61.7, up from 52.5 in Q2 2017 and -33.3 in Q3 2016. This is the highest level of consensus for growth in employment levels since 2012. We expected this run up in hiring as more and more manufacturers are ramping up production to meet demand. With backlogs growing, we would expect this NRI to remain positive and elevated. 38.3 Percent of respondents felt that employment levels had remained the same. While the NRI was positive for both sub-segments, it came in stronger for Ag Components and/or Attachments (74.1) than for Ag Wholegoods (40). Shortages in skilled (79.1%) and unskilled labor (27.9%) remain the number one and two shortage reported by survey takers.

Exports

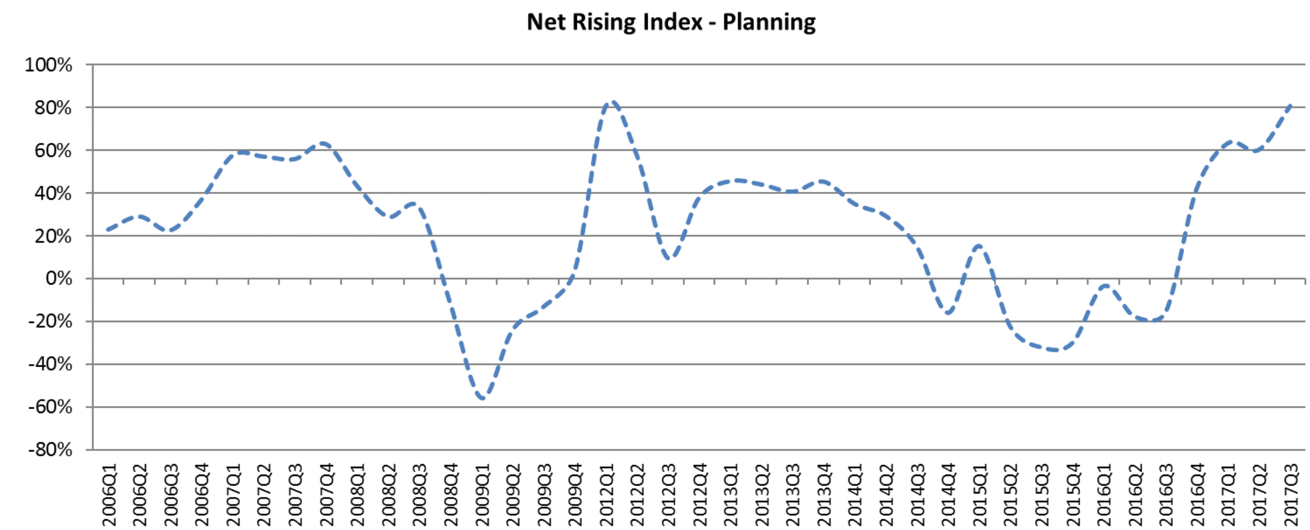
The NRI for Exports year over year came in at 37.2, up from 18.9 in Q2 2017 and -15.38 in Q3 2016. This marks the 4th quarter of positive NRI's for Exports year over year. While no respondents indicated that export levels were decreasing, about 37.2 percent of respondents felt that they had remained stable. 25.6 Percent of respondents do not export. There were no significant differences between the Wholegoods and Components and/or Attachment sub-segments.



According to the Census Bureau, exports of U.S.-made agricultural equipment were up 7.9% in the first half of the year compared to the same period in 2016, coming in at about $4.7bn shipped to global markets. .Strong growth was experienced in exports to Canada, Australia and interestingly Russia, while exports to Chine declined by almost a quarter. Improvements in exports are driven by a pick-up in the global markets and a slight softening in the strenght of the U.S. dollar.

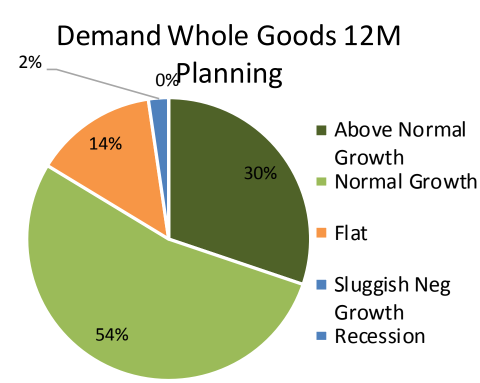
Planning Scenario

The NRI for Planning for the next 12 months came in at 81.4, up from 60.4 in Q2 2017 and -15.4 in Q3 2016. Optimism about the future continues to increase. There is no significant difference found between the sub-segments. Member comments reflect this optimism.



We do want to reiterate that these results are not forecasts of the industry. They are member perceptions. What is the difference you may ask? Well, simply put, forecasts are statistical calculations to figure out future sales through the impact indicators have had on sales in the past. Member perceptions do not include these statistical calculations. However, they do avoid the trap where the past dictates the future.

Equipment Type	Next 12 Months*			
	Wholegoods		Comp / Attachm.	
Components	↑	6-10%	→	Stable
Equipment for soil working, seeding, fertilizing,	↑	11-15%	↑	6-10%
Harvesting equipment	↑	6-10%	↑	6-10%
Irrigation & sprayers	↑	6-10%	↑	6-10%
Lawn and Garden	↑	11-15%	↑	1-5%
Livestock equipment	N/A		↑	11-15%
Loaders / material handlers	↑	1-5%	↑	1-5%
Other	↑	1-5%	↑	1-5%
Tractors	↑	6-10%	↑	6-10%
Trailers / transportation equipment	↑	6-10%	N/A	
Grand Total	↑	6-10%	↑	6-10%

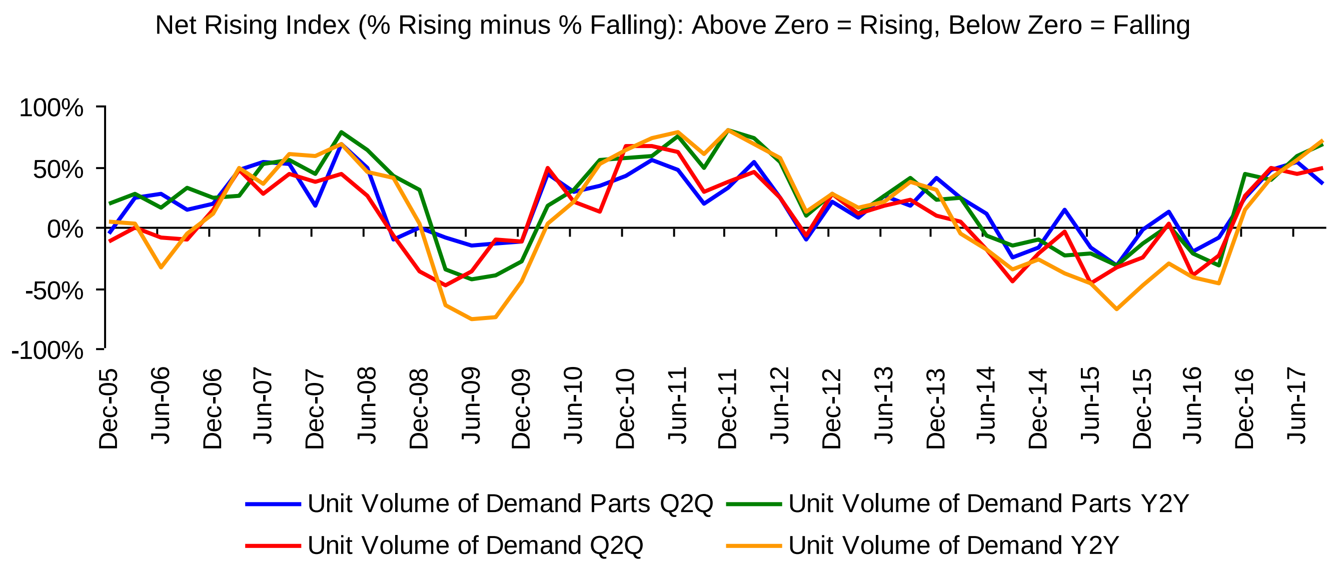


Agriculture Industry Conditions Survey - North America

Overview of NRIs

Net Rising Indexes	2017Q3	Q/Q	2017Q2	Y/Y	2016Q3
Unit Volume of Demand Q2Q	48.94	↑	43.55	↑	-23.08
Unit Volume of Demand Y2Y	72.34	↑	56.45	↑	-46.15
Planning Scenario	81.40	↑	60.38	↑	-15.38
Unit Volume of Demand Parts Q2Q	36.17	↓	54.84	↑	-7.69
Unit Volume of Demand Parts Y2Y	68.09	↑	59.68	↑	-30.77
Unit Volume of Inventories Q2Q	0.00	↑	-10.53	↑	-2.56
Unit Volume of Inventories (high-low)	-22.22	↓	-7.02	↓	28.21
Unit Volume of Inventories Dealer Q2Q	-16.28	↓	-5.45	↑	-23.08
Unit Volume of Inventories Dealer (high-low)	-13.33	↓	-8.93	↓	10.26
Exports Q2Q	34.38	↑	14.29	↑	-3.23
Exports Y2Y	37.21	↑	18.87	↑	-15.38
Employment Q2Q	48.94	↑	42.37	↑	-12.82
Employment Y2Y	61.70	↑	52.54	↑	-33.33
Wages Q2Q	25.53	↑	22.03	↑	15.38
Capital Spending Q2Q	46.51	↑	40.74	↑	-10.26
Prices Charged Q2Q	32.56	↑	24.07	↑	7.69
Prices Paid Materials Q2Q	62.79	↑	50.00	↑	17.95
Profit Margins Q2Q	13.95	↑	12.96	↑	-28.21
Exhibition Participation	4.65	↓	9.43	↑	-17.95
Credit Issues Customers	11.60	↓	17.00	↓	17.90
Credit Issues Suppliers	2.30	↑	1.90	↑	2.60

Unit Volume of Demand



47/48 Compared with the same quarter last year, the unit volume of demand for my company's whole goods/capital equipment has been:

74.5% ± 12.5% *Rising*
23.4% ± 12.1% *Staying about the same*
2.1% ± 4.1% *Falling*

47/48 Compared with the previous quarter, the unit volume of demand for my company's whole goods/capital equipment has been:

55.3% ± 14.2% *Rising*
38.3% ± 13.9% *Staying about the same*
6.4% ± 7.0% *Falling*

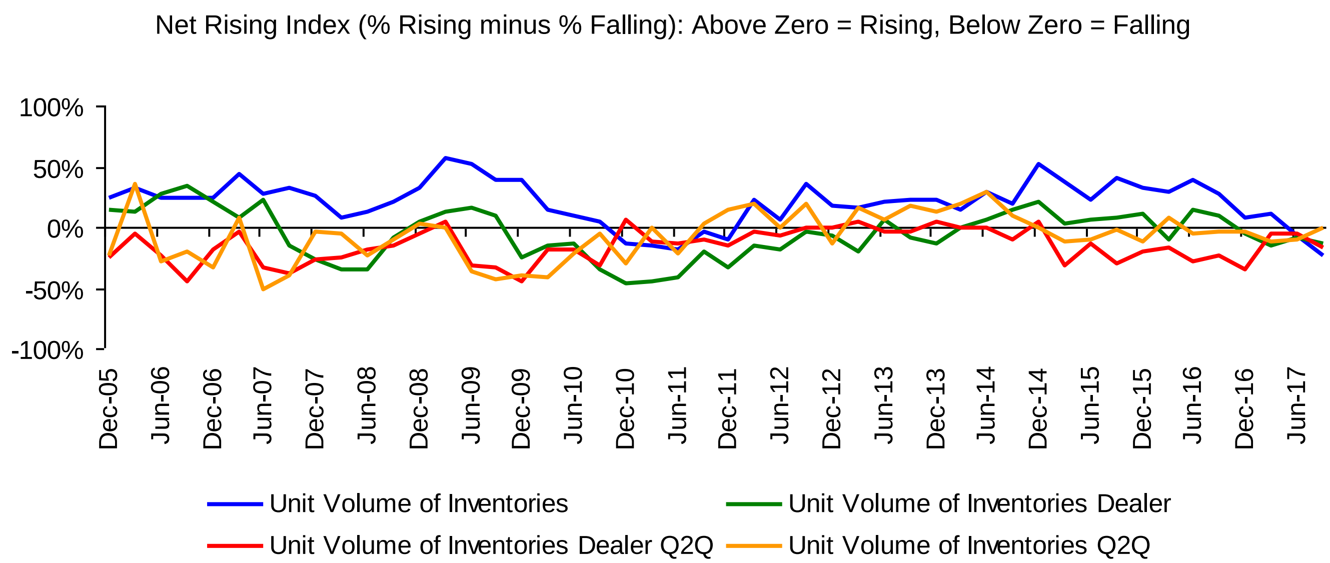
47/48 Compared with the same quarter last year, the unit volume of demand for my company's parts and supplies has been:

70.2% ± 13.1% *Rising*
27.7% ± 12.8% *Staying about the same*
2.1% ± 4.1% *Falling*

47/48 Compared with the previous quarter, the unit volume of demand for my company's parts and supplies has been:

46.8%	*± 14.3%*	*Staying about the same*
44.7%	*± 14.2%*	*Rising*
8.5%	*± 8.0%*	*Falling*

Unit Volume of Inventories



45/48 Over the past three months, my company's unit volume inventory has been:

55.6%	± 14.5%	*Staying about the same*
22.2%	± 12.1%	*Falling*
22.2%	± 12.1%	*Rising*

45/48 At the present time, my company's unit volume of inventories is:

68.9%	± 13.5%	*About right*
26.7%	± 12.9%	*Too low*
4.4%	± 6.0%	*Too high*

45/48 At the present time, my dealers' unit volume of inventories is:

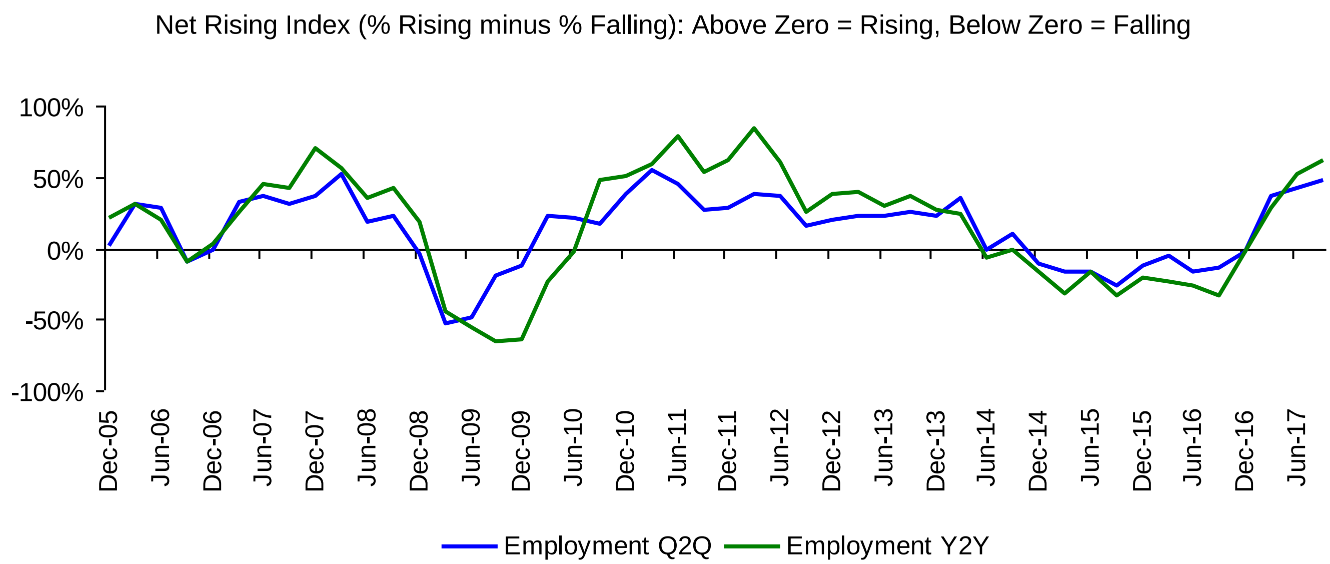
64.4%	± 14.0%	*About right*
24.4%	± 12.6%	*Too low*
11.1%	± 9.2%	*Too high*

43/48 Over the past three months, my dealers' unit volume inventory has been:

65.1%	± 14.2%	*Staying about the same*

25.6% ± 13.0% Falling
9.3% ± 8.7% Rising

Employment



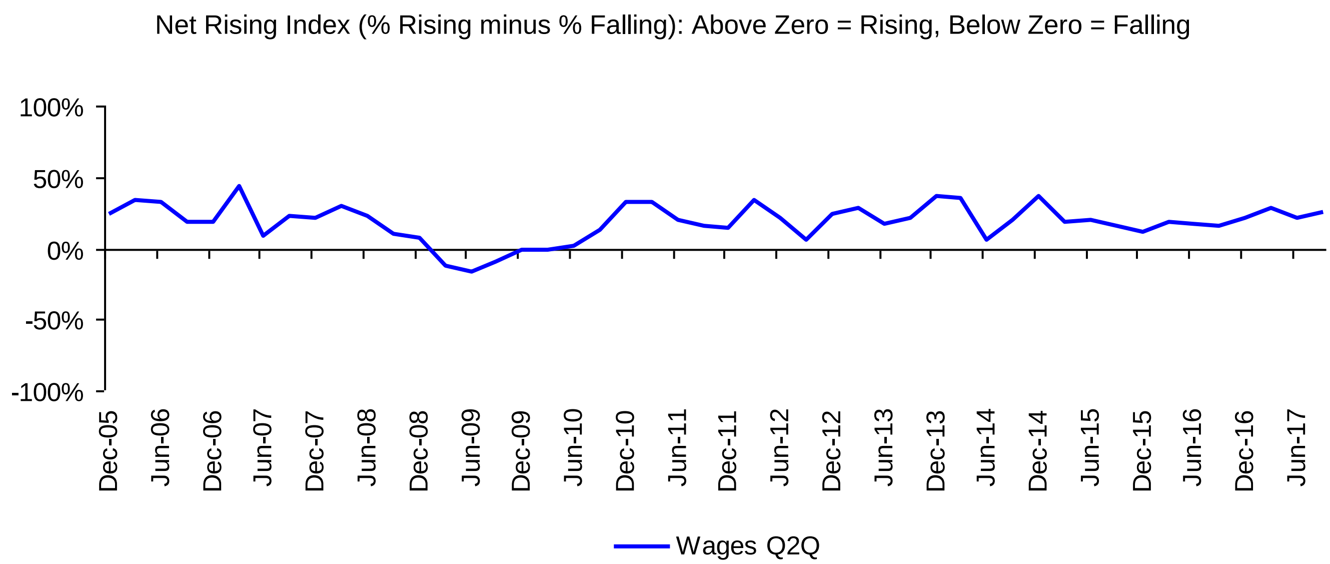
47/48 Compared with the same quarter last year, my company's employment has been:

61.7% ± 13.9% Rising
38.3% ± 13.9% Staying about the same

47/48 Compared to the previous quarter, my company's employment has been:

51.1% ± 14.3% Staying about the same
48.9% ± 14.3% Rising

Wages

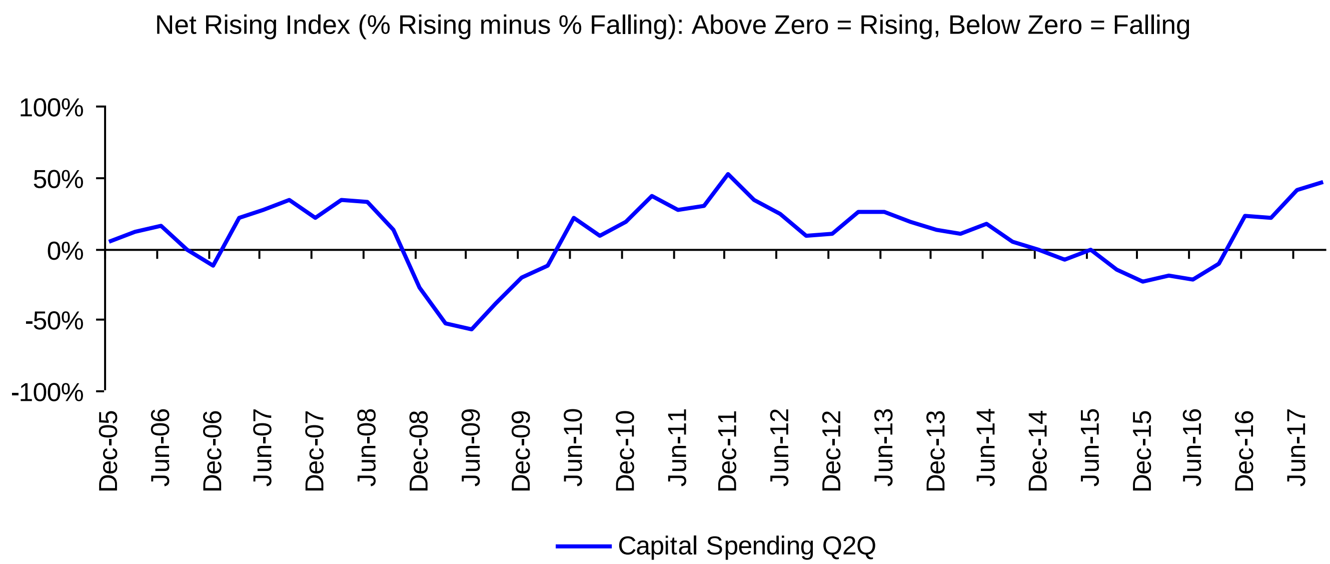


47/48 Over the past three months, the wage rates and salaries my company pays have been:

74.5% ± 12.5% *Staying about the same*

25.5% ± 12.5% *Rising*

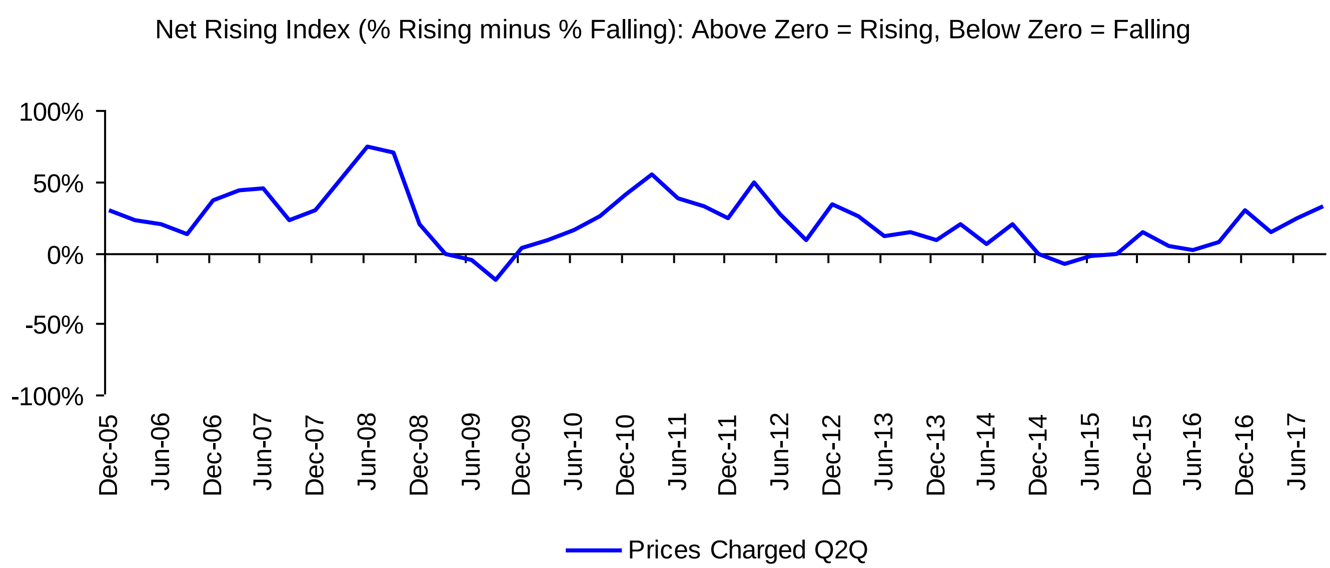
Capital Spending



43/48 Capital Spending Over the past three months, measured in constant dollars, my company's capital spending has been:

51.2%	± 14.9%	*Rising*
44.2%	± 14.8%	*Staying about the same*
4.7%	± 6.3%	*Falling*

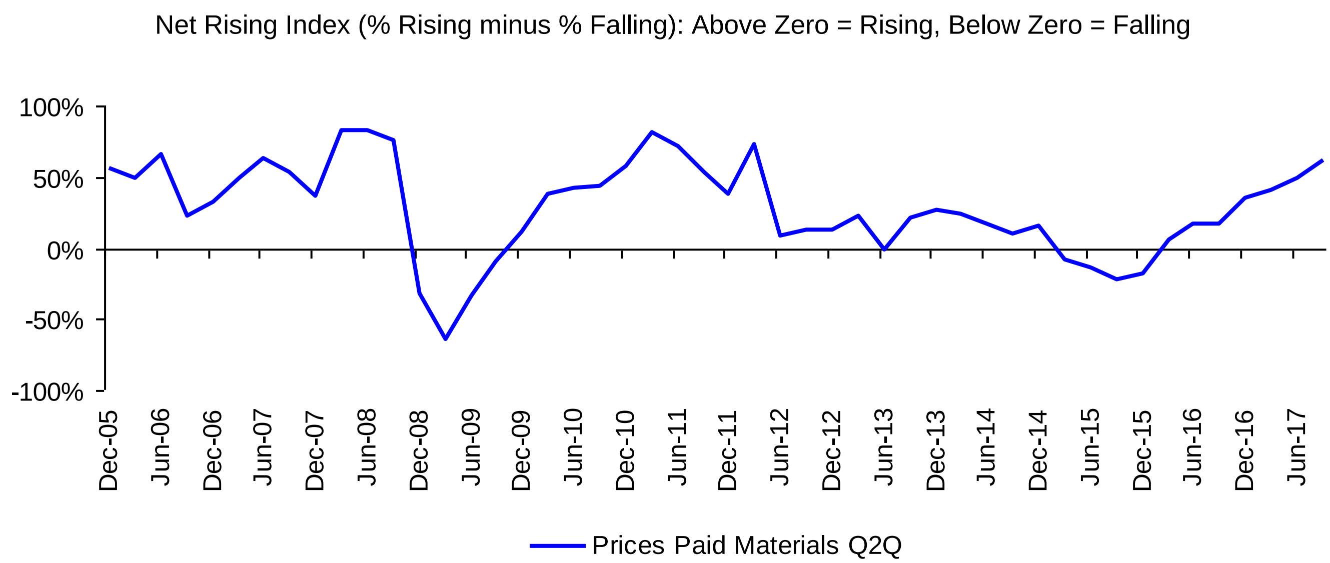
Prices Charged



43/48 Over the past three months, the prices my company charges for its goods or services output have been:

67.4%	± 14.0%	*Staying about the same*
32.6%	± 14.0%	*Rising*

Prices Paid

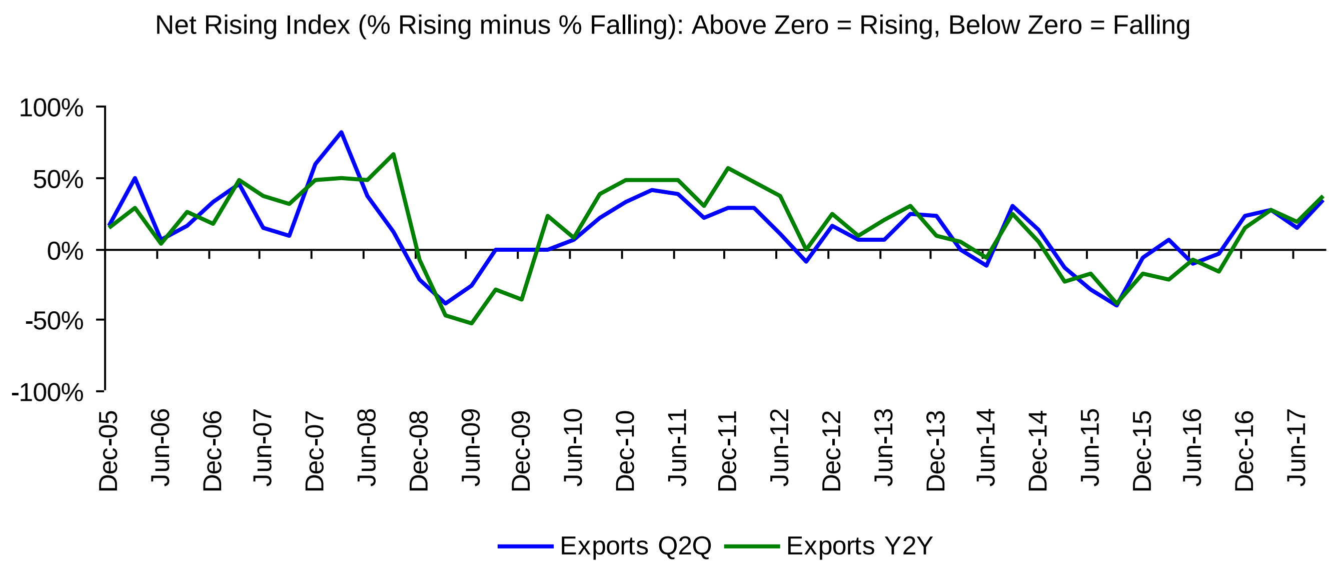


43/48 Over the past three months, the prices my company pays for materials used as inputs have been:

62.8% ± 14.4% *Rising*

37.2% ± 14.4% *Staying about the same*

Exports



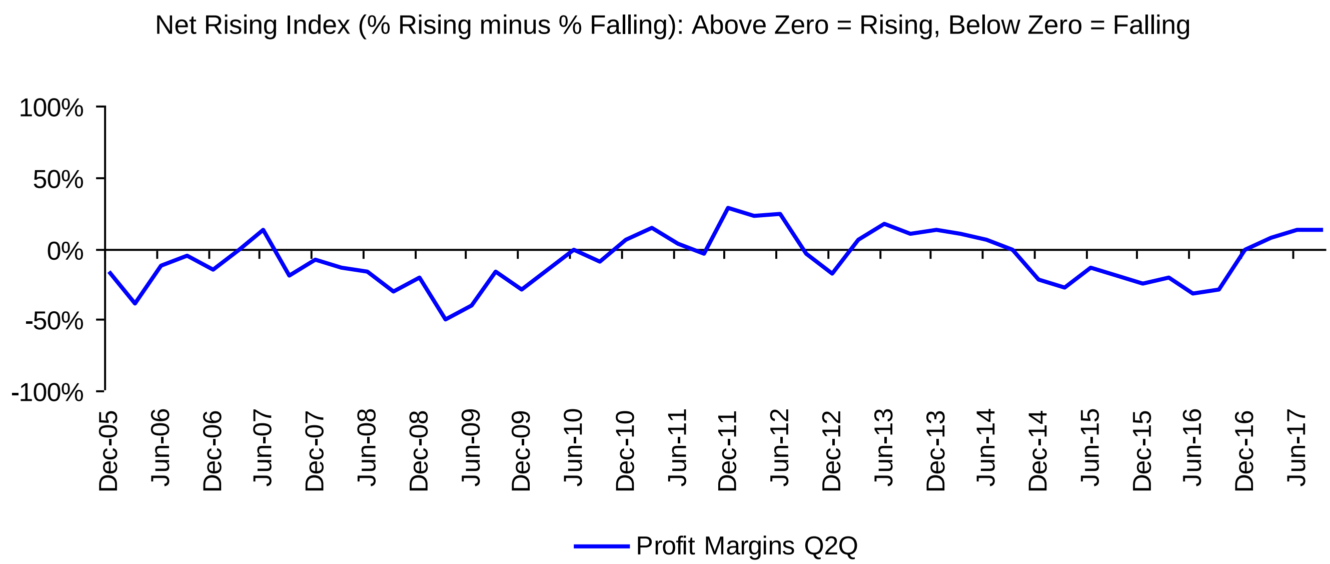
43/48 As compared with the same quarter last year, my company's exports have been:

37.2%	± 14.4%	*Rising*
37.2%	± 14.4%	*Staying about the same*
25.6%	± 13.0%	*We do not export*

32/48 As compared with the previous quarter, my company's exports have been:

65.6%	± 16.5%	*Staying about the same*
34.4%	± 16.5%	*Rising*

Profit Margins



43/48 Over the past three months, my company's profit margins have been:

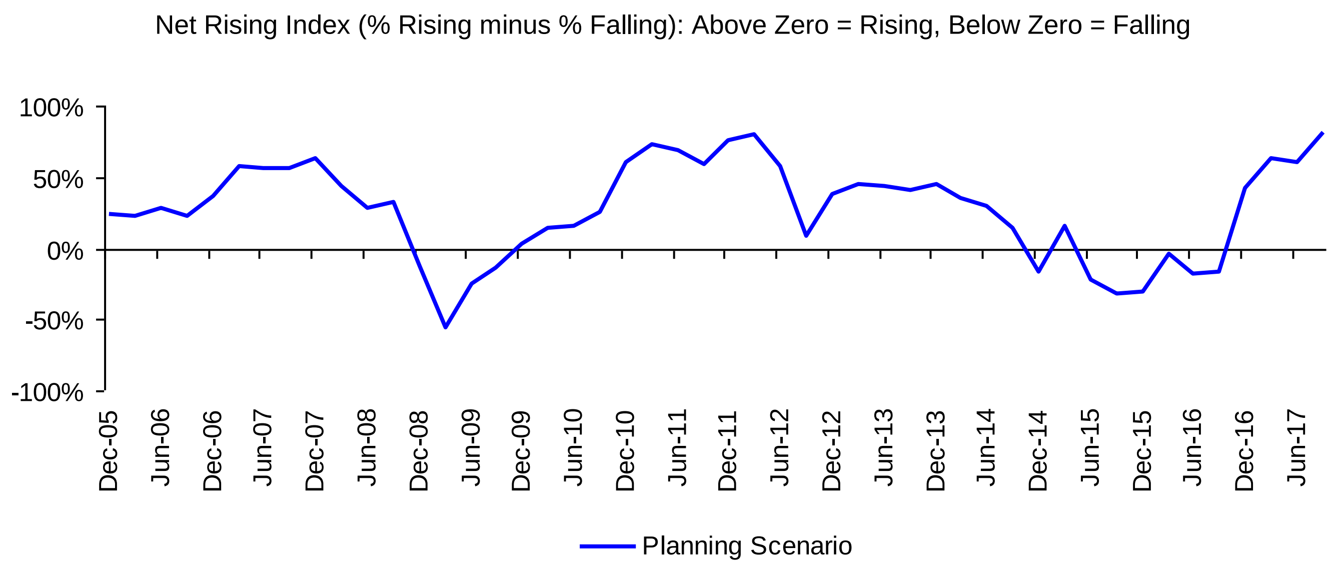
53.5%	± 14.9%	*Staying about the same*
30.2%	± 13.7%	*Rising*
16.3%	± 11.0%	*Falling*

Shortages

43/48 Over the past three months, my company has experienced shortages in the following items:

79.1%	± 12.2%	*Skilled Labor*
27.9%	± 13.4%	*Unskilled Labor*
25.6%	± 13.0%	*Intermediate Inputs (partially processed goods components)*
14.0%	± 10.4%	*Raw Material Input*
11.6%	± 9.6%	*No shortages have been experienced*
2.3%	± 4.5%	*Don't know*

Planning Scenario



43/48 Planning Scenario Which of the following scenarios now best describes the outlook underpinning your firm's business plan for the next 12 months?

53.5%	± 14.9%	*Normal Growth*
30.2%	± 13.7%	*Above Normal Growth*
14.0%	± 10.4%	*Flat*
2.3%	± 4.5%	*Sluggish Negative Growth*

Credit

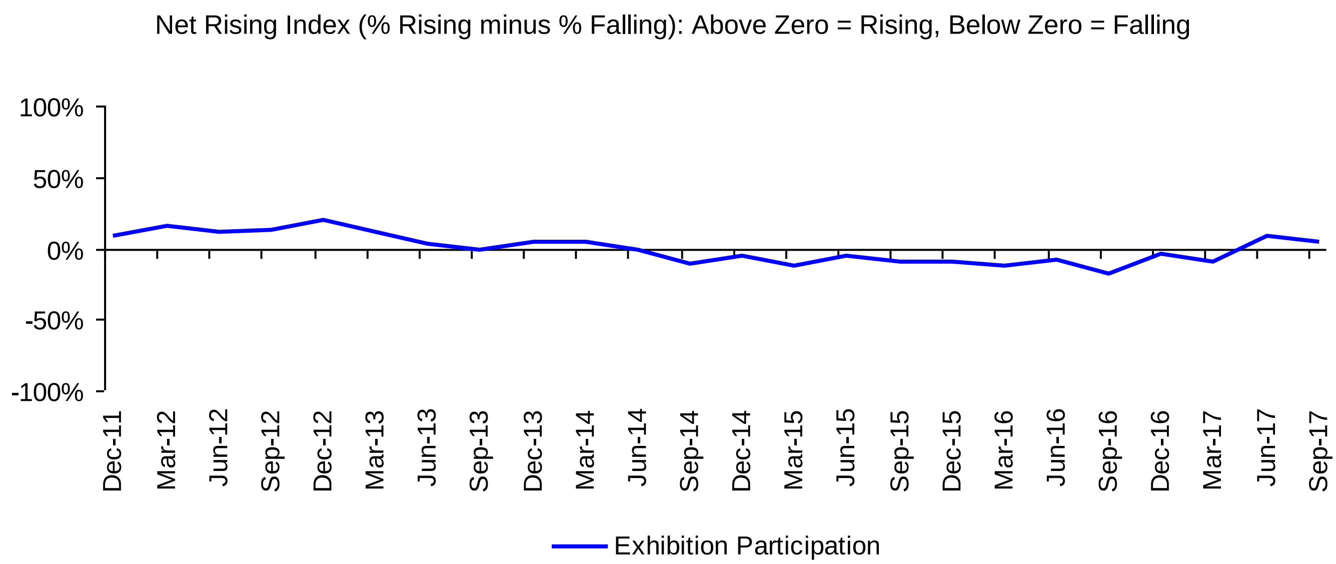
43/48 Are you hearing of problems with obtaining credit from customers?

88.4%	± 9.6%	*No*
11.6%	± 9.6%	*Yes*

43/48 Are you hearing of problems with obtaining credit from suppliers?

97.7%	± 4.5%	*No*
2.3%	± 4.5%	*Yes*

Exhibition Participation



43/48 Planned Participation in Trade Shows Compared with the same quarter last year, my company's level of planned participation as an exhibitor at trade shows has been:

76.7%	± 12.6%	*Staying about the same*
14.0%	± 10.4%	*Rising*
9.3%	± 8.7%	*Falling*

Miscellaneous

13/48 Comments:

2018 is shaping up to be a strong year for agriculture. Our open orders are stronger than normal. Hay equipment will be in strong demand in 2018.

Ag component market is growing modestly, driven primarily by short-liner demand

AG market rising

Another good crop adding to higher current stock levels already doesn't bode well for improving grain pricing

Dealer inventories are lower, new equipment orders are up, but will the retails to the end user increase? Not Yet...

Demand is increasing and supply will be under pressure for 2018

Heating up

New orders and backlog have been much better than anticipated.

Outlook for next 12 months looks better then the past 3 years

Overall all the market seems to be improving slightly but with smaller margins farmers need to choose their investments wisely so not all manufacturers will benefit immediately

The market for attachments has been fairly steady.

The market is picking up with Ag dealers buying more of our equipment. I think this is driven primarily by dealers moving their inventory and need new inventory to sell.

We are generally expecting things to trend upwards, although these days you can't count on anything. We feel confidence is up higher than the data to back it up.

12/48 What market intelligence would you like AEM to provide, that we aren't providing now?

Access to more forecasting, not just reports of others' opinions, but AEMs expert opinion.

Additional data that assists with forecasting

I would like to see more on dealer new and used inventory.

Just faster results from this survey.

Large international AG Show in US like Agritechnica or EIMA in Europe

market trends

More vehicle platform specific market data available free on the website to member firms.

no requests

none at this time

Our product lines are too small for you to obtain meaningful numbers.

Overall market size by regions (North America, South America, Europe, etc.) for tractors and attachments, with as much breakdown as possible, e.g.,

Overall units sold in the market by sector

Demographics

48/48 My company is primarily:

- 56.3% ± 14.0% *Ag Components and/or attachments*
- 33.3% ± 13.3% *Ag Wholegoods*
- 4.2% ± 5.7% *Other*
- 4.2% ± 5.7% *Publisher/Service Provider*
- 2.1% ± 4.0% *Ag Publisher/Service provider*