

Forecast for Near Term Expansion Returns

Sales and Production Improve Significantly

Analysis and report by Ross Harvison,
chair of the ISM-Houston Business Survey Committee

ross.harvison@intuitivum.com 713-702-1088

(Houston, Texas) – According to Houston area Supply Chain leaders, after three months of forecasting contraction following Hurricane Harvey, the Houston area economy is now poised for near term expansion. The Houston Purchasing Managers Index moved up 3.5 points to 52.8.

Six of the eight underlying indicators that make up the PMI are now pointing to economic growth. The Sales/New Orders, Production, and Purchases indices all rose sharply to 58.3, 60.6, and 59.5 respectively. The Employment and Lead Times indices fell moderately, but remained above neutral at 52.1 each. The Finished Goods Inventory Index fell significantly to 45.0, returning to forecasting expansion after only one month above neutral. This inventory indicator is inversely related to economic activity.

The remaining two indicators, Prices Paid and Purchased Goods Inventories, continue to forecast potential contraction near term. Both fell moderately, with the Prices Paid and Purchased Inventory indices coming in at 59.7 and 46.4 respectively. The Prices Paid index is inversely correlated with economic activity during most of the economic cycle.

On an industry specific basis, Manufacturing, Midstream Operations, EPC (Engineering, Procurement, and Construction), Professional Services, and Health Care are now forecasting expansion. While oil prices are up, Oil & Gas continues to show potential contraction. All other sectors reported near neutral.

INDICES AT A GLANCE

Index	Nov	Oct	Change	Track	Rate	Trend*
Houston PMI	52.8	49.3	3.5	Expanding	Fr. Cont.	1
Sales/New Orders	58.3	49.0	9.3	Rising	Fr. Falling	1
Production	60.6	52.5	8.1	Rising	Faster	3
Employment	52.1	55.2	-3.1	Rising	Slower	3
Purchases	59.5	50.5	9.0	Rising	Faster	2
Prices Paid	59.7	59.8	-0.1	Rising	Slower	5
Lead Times	52.1	53.3	-1.2	Rising	Slower	12
Purchased Inventory	46.4	48.9	-2.5	Falling	Faster	2
Finished Goods Inventory	45.0	56.0	-11.0	Falling	Fr. Rising	1

* Months on current track



Commodities Reported Up in Price: Custom pharmaceuticals; turbines, pumps and compressors; copper wire and cable; carbon steel and alloy pipe; ready mix concrete; fabricated structural steel; electrical equipment; wireline; MRO materials

Commodities Reported Down in Price: Office supplies; computers and computer components; oil country tubular goods

Commodities Reported in Short Supply: IV fluids and other supplies; OEM tubing manufactured in Puerto Rico; craft labor

WHAT OUR RESPONDENTS ARE SAYING AND SUMMARIES BY SECTOR

Oil and Gas Exploration, and Key Support Services:

- Overall, respondents in this sector reported moderate contraction; the employment, purchases, and inventory indices were below neutral; other indices were near neutral

Engineering and Construction:

- We continue to see an increase in interest for North American projects
- Overall, respondents in this area reported modest expansion; the sales/new orders index showed growth at an accelerated pace; the prices paid index increased further

Manufacturing - Durable Goods:

- This sector reported modest improvement this month with the production and sales indices reported as expanding; the finished goods inventory index rose

Manufacturing - Non-Durable Goods:

- More demand in the 4th quarter than the typical 4th quarter softness
- Overall, respondents in this area reported significant improvement; the production, sales, and employment indices were up; the finished goods inventory index was down

Professional Services:

- Business activity picked up as oil prices rose and 2017 comes to a close
- The labor pool continues to run high with limited opportunities for supply chain management professionals
- Overall, respondents in this area reported the sales/new orders index as up; all other indicators were reported near neutral

Health Care:

- Hurricane repairs are complete and operations have returned to normal
- Hiring continues to be conservative; budgets are being managed with higher scrutiny
- This sector reported just above neutral again this month; the purchases index was up

ISM-Houston

Business Report

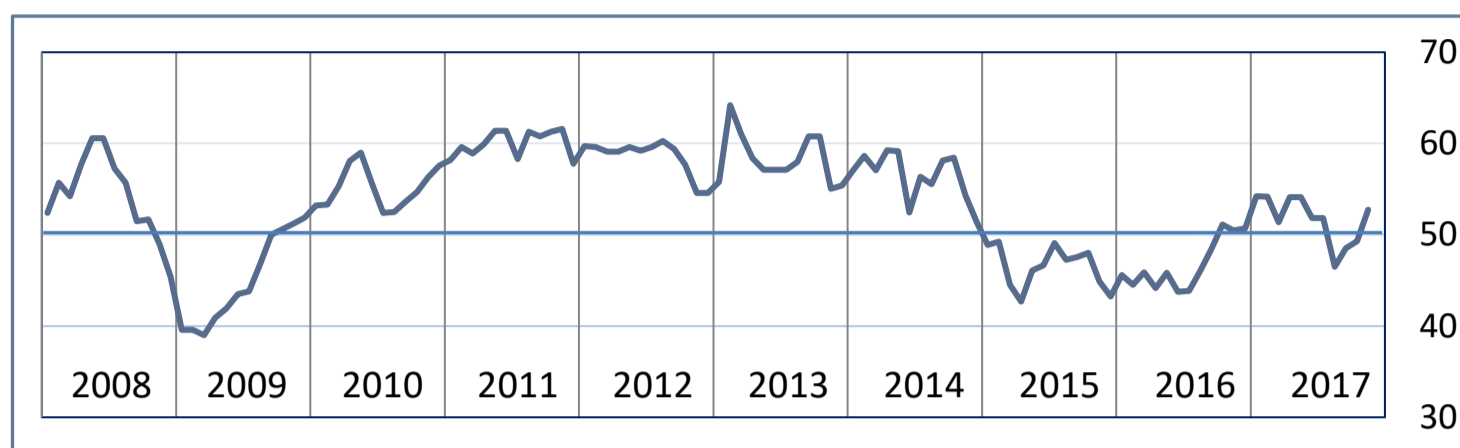


ISM—Houston, Inc.

November 2017

Houston PMI Trend

The Houston PMI indicates likely shifts in economic activity three or four months in advance. Readings over 50 generally indicate expansion over the near term; readings below 50 show coming contraction.

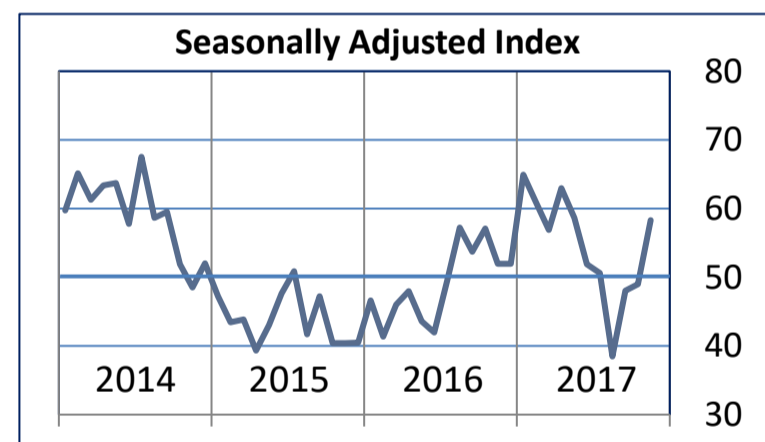


Trend of Underlying Indicators

The Houston PMI is based on diffusion indices for eight underlying indicators as shown below. The net value of each of these indicators is simply the percentage of respondents who cite a positive shift from the previous month minus the percentage who cite a negative shift. The diffusion index is calculated based on the percent of respondents reporting higher results plus one-half of those responding the same with a seasonal adjustment based on an X12 ARIMA forecast using the previous 12 years data. Seasonally adjusted values above 50 for the Sales/New Orders, Production, Employment, Purchases, Lead Times and Purchased Inventory indicators point towards expansion and values below 50 signal contraction. The Prices Paid and Finished Goods Inventory indicators are inversely correlated to economic activity, meaning that values below 50 point to expansion and values above point to contraction.

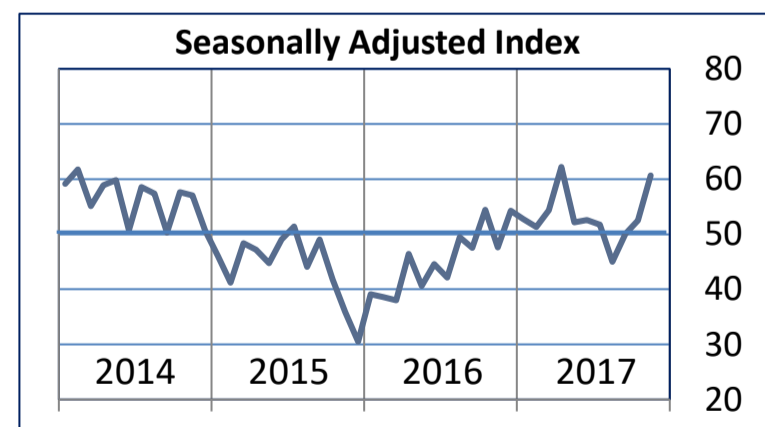
Sales/New Orders

	% Higher	% Same	% Lower	Net	Index	
Jun/17	13	78	9	4	51.9	The sales/new orders index rebounded during the month as manufacturing, EPC, and professional services firms noted significant improvement. Oil & gas and midstream operations reported as flat month to month.
Jul/17	12	78	10	2	50.6	
Aug/17	2	74	24	-21	38.5	
Sep/17	20	56	24	-4	48.1	
Oct/17	4	89	7	-3	49.0	
Nov/17	21	70	9	12	58.3	



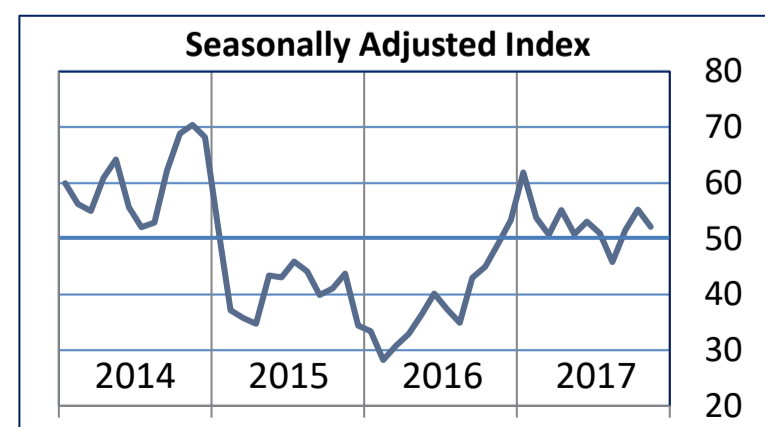
Production

	% Higher	% Same	% Lower	Net	Index	
Jun/17	5	93	2	4	52.6	The production index also moved up appreciably. Manufacturing and midstream operations showed strong gains. All other sectors reported as unchanged overall.
Jul/17	5	92	3	2	51.7	
Aug/17	2	87	11	-8	45.0	
Sep/17	20	61	19	1	50.0	
Oct/17	5	94	1	5	52.5	
Nov/17	21	78	1	20	60.6	



Employment

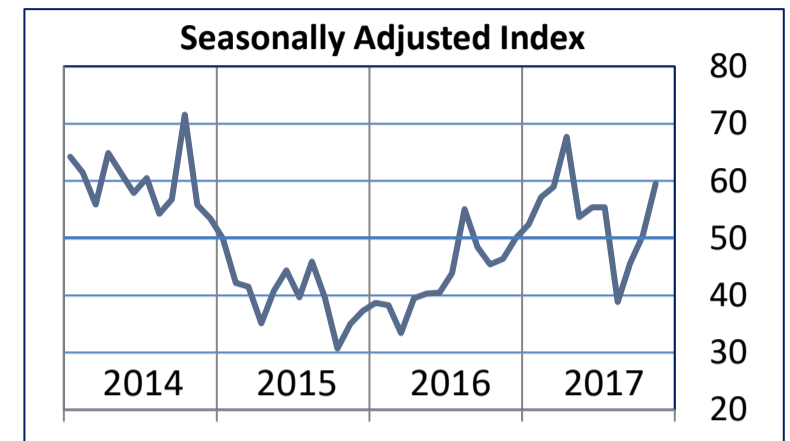
	% Higher	% Same	% Lower	Net	Index	
Jun/17	15	81	4	11	53.1	The employment index fell marginally, but remained above neutral. Manufacturing and midstream operations showed improvement. Oil & gas reported modest losses. All other sectors reported near neutral.
Jul/17	15	72	13	2	50.9	
Aug/17	12	70	18	-6	45.8	
Sep/17	26	52	22	4	51.5	
Oct/17	17	77	6	11	55.2	
Nov/17	19	63	18	1	52.1	



Purchases

	% Higher	% Same	% Lower	Net	Index
Jun/17	17	75	8	9	55.4
Jul/17	16	73	11	5	55.4
Aug/17	6	68	26	-20	38.8
Sep/17	21	55	24	-3	45.7
Oct/17	8	82	10	-3	50.5
Nov/17	28	61	11	17	59.5

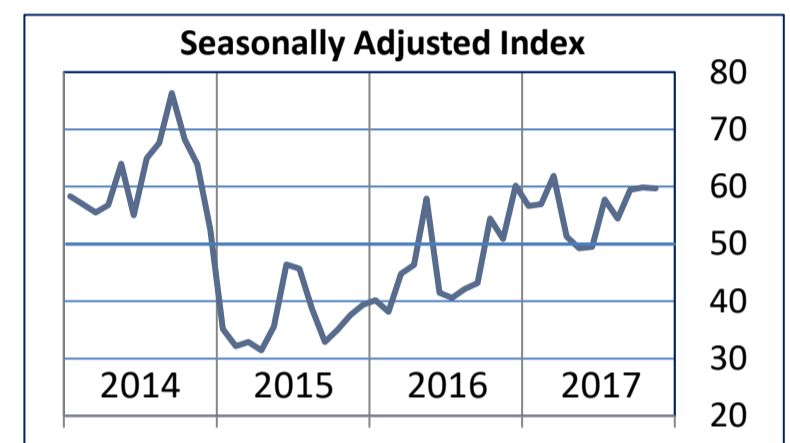
The purchases index also rose markedly. Non-durable goods manufacturing and midstream operations reported the greatest number of price increases. All other industries reported near neutral.



Prices Paid

	% Higher	% Same	% Lower	Net	Index
Jun/17	5	87	8	-2	49.5
Jul/17	12	86	2	10	57.8
Aug/17	9	89	2	7	54.4
Sep/17	32	53	15	17	59.5
Oct/17	19	80	1	19	59.8
Nov/17	19	80	1	18	59.7

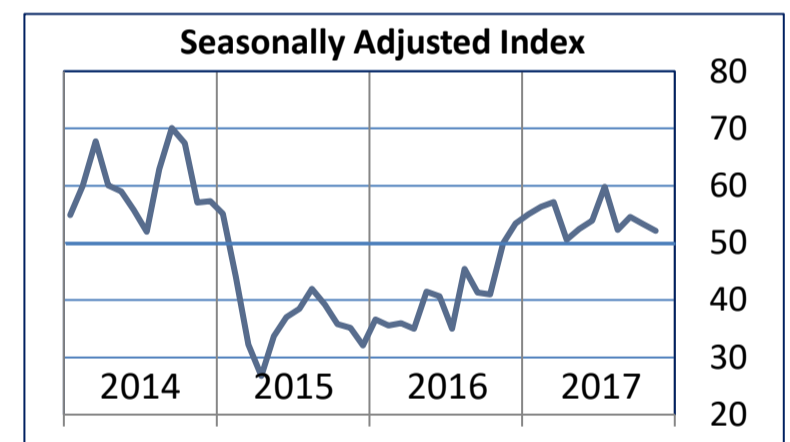
The prices paid index showed continued upward pricing pressure. EPC firms and durable goods manufacturing reported the largest number of increases. Most other sectors were near neutral.



Lead Times

	% Higher	% Same	% Lower	Net	Index
Jun/17	12	86	2	10	53.9
Jul/17	23	75	2	21	59.8
Aug/17	5	93	2	2	52.3
Sep/17	21	64	15	6	54.5
Oct/17	6	93	1	5	53.3
Nov/17	4	95	1	3	52.1

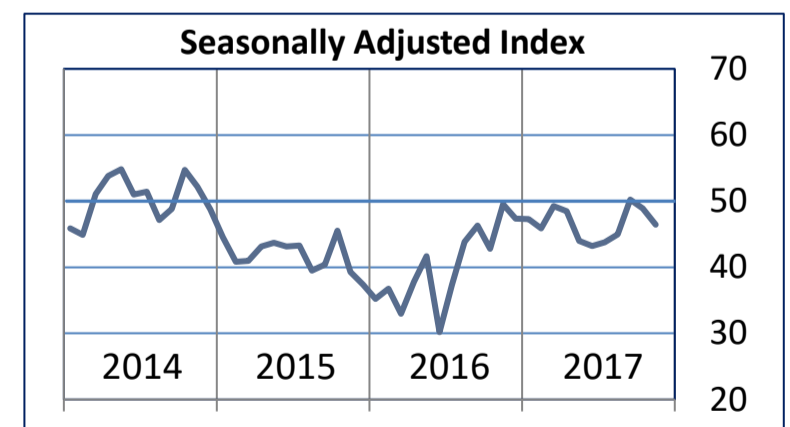
The lead times index was relatively unchanged, staying just above neutral. No industry reported significant month to month changes overall.



Purchased Inventory

	% Higher	% Same	% Lower	Net	Index
Jun/17	2	86	12	-10	43.2
Jul/17	0	89	11	-11	43.8
Aug/17	2	87	11	-8	44.9
Sep/17	15	64	21	-6	50.3
Oct/17	1	90	9	-8	48.9
Nov/17	4	81	15	-11	46.4

The purchased goods inventory index contracted modestly during the month, with most sectors reporting near neutral. Durable goods manufacturing reported the greatest decline.



Finished Goods Inventory

	% Higher	% Same	% Lower	Net	Index
Jun/17	5	86	9	-3	49.6
Jul/17	5	87	8	-3	48.3
Aug/17	2	90	8	-6	47.5
Sep/17	16	62	22	-6	49.0
Oct/17	8	87	5	3	56.0
Nov/17	2	87	11	-9	45.0

The finished goods inventory index returned to below neutral after one month showing increases. Non-durable goods manufacturing reported the highest number of inventory reductions.

