

ISM-Houston Business Report

April 2021



ISM—Houston, Inc.

Analysis and report by **Ross Harvison, CPSM**
Chair of the ISM-Houston Business Survey Committee

(Houston, Texas) – According to Houston area supply chain executives, overall economic activity in Houston continued to expand in April. The overall ISM-Houston PMI diffusion index fell modestly but remains well above neutral. Manufacturing activities expanded for the fifth month and services activities have expanded for the last nine months.

The Houston Purchasing Managers Index fell 2.2 points to 55.6 during the month. The three underlying indicators that have the strongest direct correlation with the economy (sales/new orders, employment, and lead times) continue to show significant strength. The sales/new orders index fell 6.4 points to 59.3. The employment index fell 1.7 points to 53.0, its third month indicating expansion. The lead times index rose 3.6 points to 57.7. The Finished goods inventory index, the underlying indicator that has the strongest inverse correlation with economic activity, rose 3.5 points to 49.5, continuing to indicate a modest expansion signal.

The three-month forecast for the Houston PMI was relatively flat at 57.6 points. The lower sales/new orders and production indices were offset by a rising prices paid index. These indices have a strong direct correlation with economic activity at the three-month forecast horizon.

On an industry specific basis, oil & gas, construction, manufacturing, mid-stream operations, transportation, healthcare, and leisure and hospitality reported strong expansion. All other sectors reported near neutral. The three-month forecast continues to predict further expansion, primarily due to the strength of the sales/new orders, production, and prices paid indices.

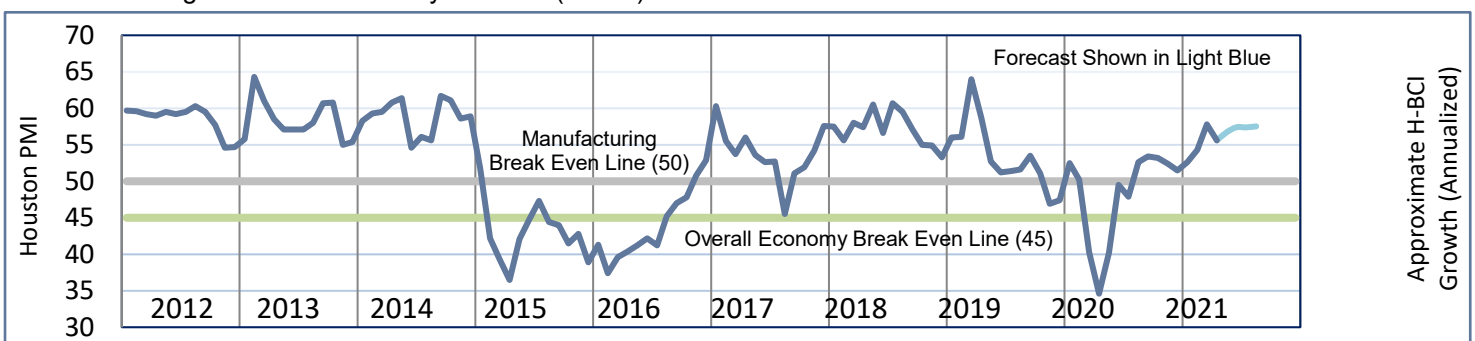
Indices at a Glance

Index	Apr	Mar	Change	Track	Rate	Trend*
Houston Overall PMI - Current	55.6	57.8	-2.2	Expanding	Slower	9
Houston Overall PMI - 3M Forecast	57.6	57.5	0.1	Expanding	Faster	11
Sales/New Orders	59.3	65.7	-6.4	Rising	Slower	11
Production	58.0	58.7	-0.7	Rising	Slower	11
Employment	53.0	54.7	-1.7	Rising	Slower	3
Purchases	51.7	55.0	-3.3	Rising	Slower	8
Prices Paid	64.0	57.3	6.7	Rising	Faster	8
Lead Times	57.7	54.1	3.6	Rising	Faster	13
Purchased Inventory	48.4	48.6	-0.2	Falling	Faster	4
Finished Goods Inventory	49.5	46.0	3.5	Falling	Slower	4
Overall Houston Economy				Expanding	Slower	11

* Number of months on current track

Houston PMI Trend

Overall economic activity in Houston expanded in April. HPMI readings over 50 generally indicate goods producing industry expansion; readings below 50 show contraction. An HPMI above 45 generally correlates with expansion of the Houston-The Woodlands-Sugar Land Business Cycle Index (H-BCI).



Commodities Reported to have Notable Price Changes or to be in Short Supply

Up in Price: Low dead space syringes; silver, alloy and carbon steel pipe, industrial metals (aluminum, copper, nickel), fabricated structural steel, heat exchangers, power transformers, copper based wire and cable, electrical equipment, ready mix concrete, lumber; software; ocean freight rates; ethane, toluene, xylene, benzene, propylene oxide and derivatives, ethylene glycols, ethylene glycol ethers, PVC resins

Down in Price: Telecommunications; propane, natural gas liquids, normal butane, isobutane, ethylene

In Short Supply: Low dead space syringes; oil country tubular goods (OCTG); alloy and carbon steel pipe, unistrut channel

What Our Respondents Are Saying

Oil and Gas Exploration, and Key Support Services:

- We are seeing indications of inflationary prices in commodities
- The employees that are exiting the company are finding very good positions in other industries, including green energy
- Texas drilling permit submittals and approvals are up this year
- U.S. and Texas rig counts are rising at a slow pace
- *This sector strengthened further during the month; the employment and prices paid indices joined the production, purchases, and lead times indices reporting well above neutral*

Construction:

- Lumber prices are at outrageous levels
- *This sector reported above neutral again this month; the sales, prices paid, and lead times indices all reported strength; all other indices reported near neutral*

Durable Goods Manufacturing:

- Material shortages continue to be a problem
- *This sector reported significant strength again this month with the sales, production, employment, purchases, prices paid, and lead times indices reporting well above neutral*

Non-durable Goods Manufacturing:

- Gulf coast refinery utilization is approaching 90% for the first time since rates fell early in the pandemic
- Polyethylene and polypropylene resin prices appear to have stabilized after increasing by 2 to 3 times since early 2020
- PVC resin prices continue to rise
- *This sector showed strength again this month with the sales/new orders, production, lead times, and finished goods inventory indices all pointing to expansion; the employment index continues to run well below neutral*

Real-Estate Services:

- New home prices are rising at a rapid pace due to higher materials costs and continued high demand
- Home starts and closings remain strong, however, we have needed to institute sales caps
- Existing home listings are rising after a significant drop off due to the storm in February; showings are up dramatically
- Office and industrial real estate vacancy rates continue to rise
- *This sector reported just above neutral with continued strength in new and existing home sales; continued weakness was reported in industrial, office, and retail real estate*

Professional and Business Services:

- Improving conditions are contingent on continued global improvement on COVID
- There is more optimism about the future that is aligned with the perception that the Pandemic is winding down
- There are more professionals looking for jobs than there are jobs available
- Salaried and hourly contractor pricing has remained at same level for the past several months
- There has been a compensation "reset" with the result being 10-20% lower salaries for those seeking employment
- *This sector reported near the same level as last month; the sales/new orders, employment, and prices paid indices continue to be reported above neutral; the purchases index fell to well below neutral; all other indices reported near neutral*

What Our Respondents Are Saying (Continued)

Leisure and Hospitality

- This sector continues to report improvement with the sales, employment, and prices paid indices pointing to strong growth

Health Care:

- This sector continues to show strength with the sales, employment, purchases, and prices paid indices in pointing to expansion; all other indices reported near neutral

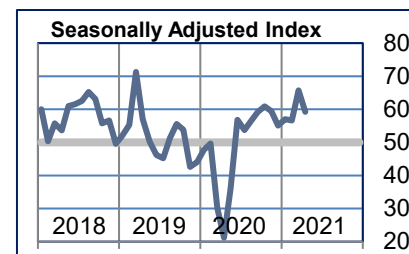
Trend of Underlying Indicators

The Houston PMI is based on diffusion indices for eight underlying indicators. The net value of each indicator 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 X13 ARIMA forecast. Values above 50 for Sales/New Orders, Production, Employment, Prices Paid, and Lead Times generally point towards expansion and values below 50 signal contraction. Note that the Prices Paid Index may not follow this trend late in an economic expansion. The Inventory measures have an inverse correlation at most forecast horizons, meaning that values below 50 point to expansion and values above point to contraction. The Purchases index is inversely correlated with economic activity at the three-month forecast horizon.

Sales/New Orders Index

The sales/new orders index continues to show strength. Oil & gas, leisure and hospitality, health care, mid-stream, manufacturing, and management services showed significant strength. Construction reported modestly above neutral.

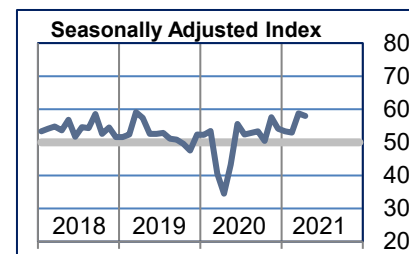
	Higher	Same	Lower	Net	Index
Nov/20	18%	78%	4%	14%	59.4
Dec/20	15%	75%	10%	5%	55.1
Jan/21	19%	80%	1%	18%	57.0
Feb/21	20%	76%	4%	16%	56.6
Mar/21	33%	66%	1%	32%	65.7
Apr/21	22%	77%	1%	21%	59.3



Production Index

The production index fell modestly. Oil & gas, manufacturing, and mid-stream operations reported significant strength. All other sectors reported near neutral.

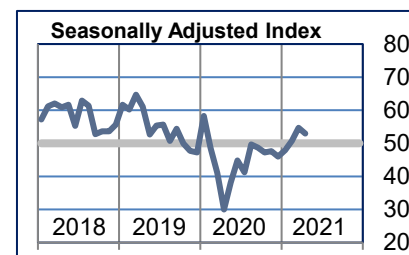
	Higher	Same	Lower	Net	Index
Nov/20	14%	86%	0%	14%	57.6
Dec/20	7%	91%	2%	5%	54.1
Jan/21	8%	92%	0%	8%	53.3
Feb/21	11%	84%	5%	6%	53.0
Mar/21	18%	82%	0%	18%	58.7
Apr/21	18%	82%	0%	18%	58.0



Employment Index

The employment index came in above neutral for the third month. Mid-stream operations and oil & gas joined durable goods manufacturing and health care reporting strength. Non-durable goods continues to report weakness.

	Higher	Same	Lower	Net	Index
Nov/20	7%	78%	15%	-8%	47.6
Dec/20	4%	83%	13%	-9%	46.0
Jan/21	6%	83%	11%	-5%	47.9
Feb/21	7%	85%	8%	-1%	50.8
Mar/21	18%	73%	9%	9%	54.7
Apr/21	19%	73%	8%	11%	53.0



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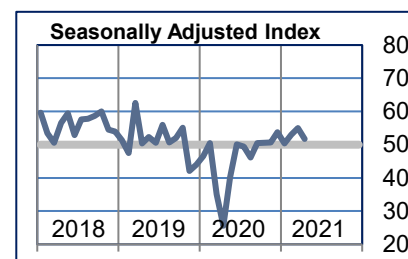


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Purchases Index

The purchases index weakened to near neutral. Health care, durable goods, mid-stream operations, transportation, and oil & gas reported this index as expanding. This index fell to well below neutral for professional services.

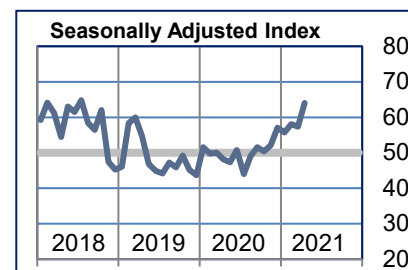
	Higher	Same	Lower	Net	Index
Nov/20	7%	85%	8%	-1%	50.7
Dec/20	10%	83%	7%	3%	53.7
Jan/21	9%	85%	6%	3%	50.4
Feb/21	12%	82%	6%	6%	53.0
Mar/21	17%	77%	6%	11%	55.0
Apr/21	14%	78%	8%	6%	51.7



Prices Paid Index

The prices paid index strengthened further. Oil & gas joined mid-stream operations, leisure and hospitality, real estate, construction, durable goods manufacturing, professional services, and health care reporting this index as expanding.

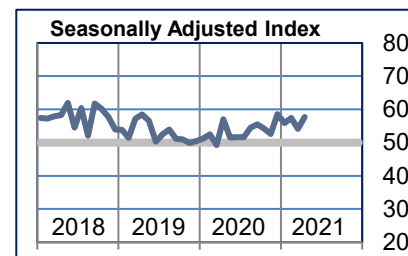
	Higher	Same	Lower	Net	Index
Nov/20	10%	82%	8%	2%	52.1
Dec/20	10%	89%	1%	9%	57.1
Jan/21	11%	89%	0%	11%	55.8
Feb/21	17%	82%	1%	16%	58.0
Mar/21	20%	79%	1%	19%	57.3
Apr/21	29%	70%	1%	28%	64.0



Lead Times Index

The lead times index is now pointing to stronger expansion. Oil & gas, construction, manufacturing, real estate, and health care reported this index as expanding. All other sectors reported near neutral.

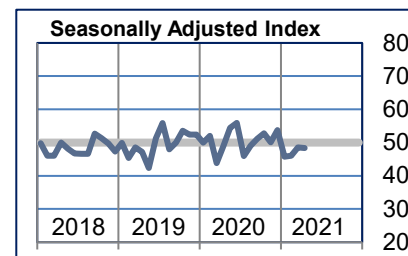
	Higher	Same	Lower	Net	Index
Nov/20	7%	90%	3%	4%	52.6
Dec/20	13%	87%	0%	13%	58.6
Jan/21	11%	89%	0%	11%	55.9
Feb/21	16%	84%	0%	16%	57.4
Mar/21	12%	88%	0%	12%	54.1
Apr/21	18%	81%	1%	17%	57.7



Purchased Inventory Index

This index was flat during the month reporting just below neutral. Oil & gas and construction reported these inventories as contracting. Non-durable goods manufacturing and mid-stream operations reported them as expanding.

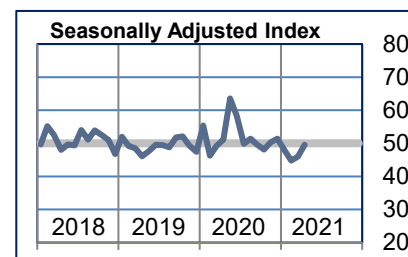
	Higher	Same	Lower	Net	Index
Nov/20	8%	85%	7%	1%	50.1
Dec/20	10%	83%	7%	3%	53.8
Jan/21	5%	89%	6%	-1%	45.8
Feb/21	1%	92%	7%	-6%	46.0
Mar/21	4%	89%	7%	-3%	48.6
Apr/21	3%	91%	6%	-3%	48.4



Finished Goods Inventory Index

The finished goods inventory index rose to just below neutral. Non-durable goods manufacturing reported these inventories as contracting. Durable goods manufacturing reported them as expanding.

	Higher	Same	Lower	Net	Index
Nov/20	12%	79%	9%	3%	50.3
Dec/20	10%	82%	8%	2%	51.4
Jan/21	6%	87%	7%	-1%	47.9
Feb/21	1%	89%	10%	-9%	44.8
Mar/21	2%	88%	10%	-8%	46.0
Apr/21	5%	88%	7%	-2%	49.5



Houston PMI Calculation Methods

The Houston Purchasing Managers Index has been included as an integral part of the ISM-Houston Business Report since the Houston chapter of the Institute for Supply Management started publication of this document in January 1995. The report and index are published monthly as the primary deliverables from a survey of Houston area Supply Chain leaders regarding the status of key activities believed to provide insight into the strength of the economy. The respondents come from diverse organizations including construction, energy, engineering, health care, durable and non-durable goods manufacturing, financial and business services, wholesale and retail trade, and utilities related companies.

The Houston Purchasing Managers Index is determined from diffusion indices of the eight indicators of economic activity covered by the ISM-Houston Business Survey and Report. These underlying indicators are sales or new orders, production, employment, purchases, prices paid for major purchases, lead times from sellers, purchased materials inventory (raw materials and supplies), and finished goods inventories. The respondents to the survey report the direction of each these activities as either up, the same or down in comparison to the previous month. An index for each of these areas is then calculated by subtracting the percentage of respondents that sight a negative shift from the percentage that sight a positive shift. For indicators that are positively correlated with economic growth, this results in an underlying index that points to expansion when it is above zero. Indicators that are negatively correlated with growth point to expansion when they are below zero.

The final Houston PMI is calculated by applying optimal regression factors to each of the eight underlying indicators noted above. These regression factors are determined using standard regression techniques comparing these underlying indicators to the Houston-The Woodlands-Sugar Land Business Cycle Index (Houston BCI), which is reported on a monthly basis by the Federal Reserve Bank of Dallas. This top-level index is converted to a 0 to 100 scale to match that of the national Purchasing Managers Index® (PMI®) which is published monthly by the Institute for Supply Management® (ISM®). Readings over 50 for the HPMI generally indicate manufacturing expansion in the Houston in the near term and readings below 50 show coming manufacturing contraction.

It is important to note that the manufacturing breakeven HPMI does not equate to the breakeven point for the overall Houston economy. ISM-Houston periodically reviews the capability of its correlations and adjusts the regression factors when appropriate. The most recent revision occurred as a result of a review undertaken during the third quarter of 2018, which determined that changes in the Houston economy over the last decade have shifted the intercept of the correlation, causing a neutral Houston PMI to no longer align with a neutral Houston BCI. A Houston PMI of 45 points now equates to a neutral Houston economy as measured by the Houston BCI. A similar offset between the National PMI and the National economy has existed for some time.

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