

ISM-Houston Business Report

September 2020



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 expanded in September for the fourth month led by improving expansion in non-manufacturing activities. Manufacturing activities contracted at a very slow pace again this month.

The Houston Purchasing Managers Index rose a modest 0.8 points to 53.4 during the month. Two of the three underlying indicators that have a strong direct correlation with the economy, sales/new orders and lead times, pointed to stronger expansion this month. The third, employment, is still giving a weak signal for contraction. The sales/new orders index rose 2.7 points in September to 59.2. The lead times index also rose 1.0 points to 55.5. The employment index fell 1.0 points to 48.7. The underlying indicator that has the strongest inverse correlation with economic activity, finished goods inventory, fell 1.8 points this month to 49.6, giving a modest expansion signal.

The three-month forecast for the Houston PMI rose 0.6 points to 54.1. This was driven by strengthening in the sales/new orders, production, prices paid indices, and lead times indices. These indices have a strong direct correlation with economic activity at the three-month forecast horizon.

On an industry specific basis, wholesale trade joined real estate, accommodations and foods services, transportation, and health care reporting expansion. Durable goods manufacturing and professional services reported contraction. All other sectors reported near neutral. The three-month forecast predicts modest improvement for all sectors assuming the severity of the COVID-19 pandemic will not worsen during this time frame.

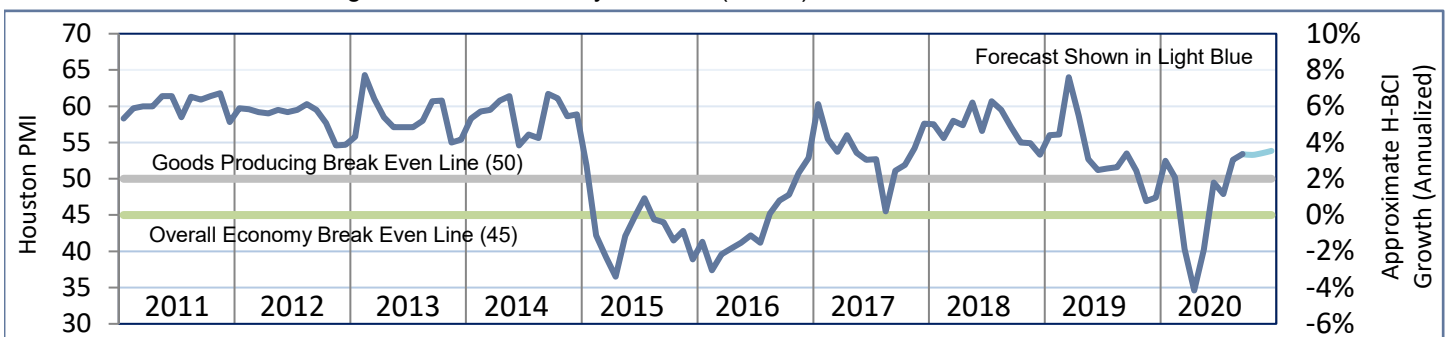
Indices at a Glance

Index	Sep	Aug	Change	Track	Rate	Trend*
Houston Overall PMI - Current	53.4	52.6	0.8	Expanding	Faster	2
Houston Overall PMI - 3M Forecast	54.1	53.5	0.6	Expanding	Faster	4
Sales/New Orders	59.2	56.5	2.7	Rising	Faster	4
Production	53.3	52.8	0.5	Rising	Faster	4
Employment	48.7	49.7	-1.0	Falling	Faster	8
Purchases	50.5	46.1	4.4	Rising	Fr. Falling	1
Prices Paid	51.5	49.0	2.5	Rising	Fr. Falling	1
Lead Times	55.5	54.5	1.0	Rising	Faster	6
Purchased Inventory	51.2	49.0	2.2	Rising	Fr. Falling	1
Finished Goods Inventory	49.6	51.4	-1.8	Falling	Fr. Rising	1
Overall Houston Economy				Expanding	Faster	4

* Number of months on current track

Houston PMI Trend

Overall economic activity in Houston expanded in September. 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: Liquid bulk and containerized ocean freight; air freight; palladium and rhodium for catalysts; copper and nickel for industrial applications; copper wire and cable; natural gas[†]; ethylene; ethylene oxide and propylene oxide derivatives; polyethylene and polypropylene; acetone

Down in Price: Contract and direct hire labor rates; fabricated structural steel, alloy and carbon pipe; transformers and electrical equipment; heat exchangers; compressors and ANSI pumps; lumber; silver for catalysts; crude oil and refined products; natural gas[†] and natural gas liquids; ethane, propylene, glycol ethers and glycerin

In Short Supply: Valve castings

What Our Respondents Are Saying

Oil and Gas Exploration, and Key Support Services:

- US and Texas rig counts are now increasing after hitting recent memory lows over the summer
- Texas oil well permitting activity has increase over the last several months
- Expect further job reductions
- Currently working on 2021 reduced budget
- Looks like we will be staying near \$40/bbl for some time
- *This sector returned to near neutral this month with the sales, production, and employment indices reporting at neutral; the prices paid and lead times indices pointed to further contraction; the purchases index came in above neutral*

Construction:

- Production crews at most suppliers have returned to the work front and fewer people overall are working remotely
- Lumber prices are starting to moderate after moving up significantly in late August
- *This sector moved to indicating modest expansion during the month with most respondents reporting near neutral and new home construction continuing to indicate high new order rates; the sales and lead times indices came in above neutral; the employment and purchases indices continue to be reported as contracting overall*

Durable Goods Manufacturing:

- Business is improving for us
- We have yet to see sales pick up even though we are hearing that our clients have increased their rigs in the field
- *This sector reported continued contraction; the sales index was reported near neutral again during the month; the purchases and lead times indices return to neutral; the production and employment indices continue to be reported well below neutral*

Non-durable Goods Manufacturing:

- Gulf storms provided some disruption during the month, but business conditions overall were similar to last month
- Finally seeing price strengthening for almost all polyethylene and polypropylene grades
- *This sector report near neutral again this month; the production and lead times indices pointed to expansion; the employment and prices paid indices reported as contracting; all other indices were near neutral*

Transportation:

- Airport passenger traffic continues to increase
- *This sector reported expansion overall again this month with the sales, employment, purchases, and the lead times indices all indicating expansion; other indices were near neutral*

Financial Services and Real-estate:

- New home sales and starts continue to be strong
- *This sector reported modestly above neutral overall again this month with the sales index pointing to expansion*

Professional Services:

- There is no shortage of qualified people looking for jobs regardless of functional expertise
- We eagerly wait for next year and hope that the energy sector will see better times towards the end of 2021
- We continue to see layoffs and bankruptcy's
- A reset in salary compensation occurred over the last five months; in general, salaries in the energy sector are 20% lower than this time last year; we anticipate that this reality will set in soon on those looking for work and they will settle for much less compensation than they received in the past
- *This sector, while still showing continued contraction, recovered to just below neutral; the sales index was at neutral, while the employment and prices paid indices continue to point to significant contraction*

What Our Respondents Are Saying (Continued)

Health Care:

- This sector reported continued strength with sales, employment, purchases, prices paid, and lead times all pointing to expansion

Accommodations and Food Services:

- Following the number of COVID cases in Houston closely to see if the trend continues down or follows the increases that we appear to be seeing nationally

- This sector continues to report expansion from the very low performance noted earlier in the year

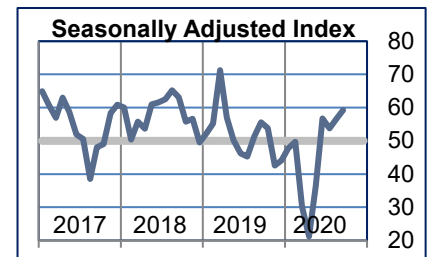
Trend of Underlying Indicators

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 rose again this month. Construction, wholesale trade, transportation, real estate, accommodations and food services, and health care all showed expansion. All other sectors were near neutral.

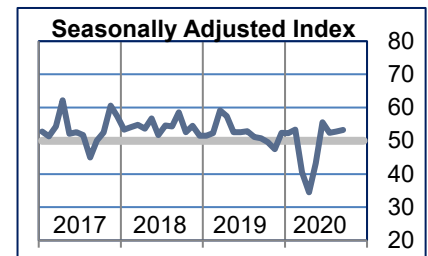
	Higher	Same	Lower	Net	Index
Apr/20	5%	34%	61%	-56%	21.2
May/20	18%	40%	42%	-24%	36.4
Jun/20	36%	39%	25%	11%	56.8
Jul/20	18%	72%	10%	8%	53.7
Aug/20	20%	74%	6%	14%	56.5
Sep/20	26%	69%	5%	21%	59.2



Production Index

The production index increased modestly. Non-durable goods manufacturing was the only sector to report significant strength. Durable goods manufacturing reported further weakness.

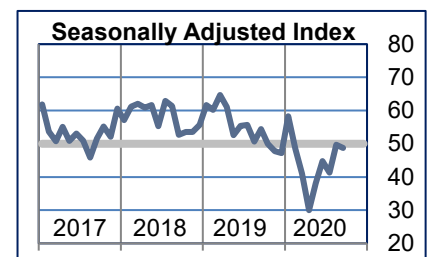
	Higher	Same	Lower	Net	Index
Apr/20	1%	70%	29%	-28%	34.5
May/20	6%	75%	19%	-13%	43.2
Jun/20	14%	80%	6%	8%	55.5
Jul/20	9%	88%	3%	6%	52.4
Aug/20	10%	85%	5%	5%	52.8
Sep/20	10%	87%	3%	7%	53.3



Employment Index

The employment index fell modestly. Transportation, health care, and accommodations and food services reported strength. Manufacturing, professional services, and construction reported weakness.

	Higher	Same	Lower	Net	Index
Apr/20	2%	59%	39%	-37%	30.0
May/20	2%	74%	24%	-22%	38.1
Jun/20	7%	79%	14%	-7%	44.8
Jul/20	2%	78%	20%	-18%	41.3
Aug/20	9%	78%	13%	-4%	49.7
Sep/20	9%	79%	12%	-3%	48.7



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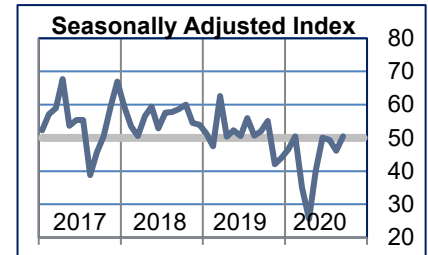


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Purchases Index

The purchases index returned to neutral. Health care, transportation, and wholesale trade reported strength. Construction, reported continued weakness. O&G and manufacturing joined all other sectors near neutral.

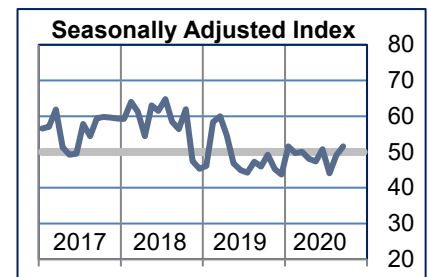
	Higher	Same	Lower	Net	Index
Apr/20	1%	51%	48%	-47%	25.6
May/20	13%	53%	34%	-21%	40.2
Jun/20	12%	74%	14%	-2%	50.1
Jul/20	7%	84%	9%	-2%	49.4
Aug/20	6%	83%	11%	-5%	46.1
Sep/20	15%	75%	10%	5%	50.5



Prices Paid Index

The prices paid index rose to just above neutral. O&G, professional services, and non-durable goods manufacturing reported this index as contracting. Health care, durable goods, wholesale trade, and real estate reported it as expanding.

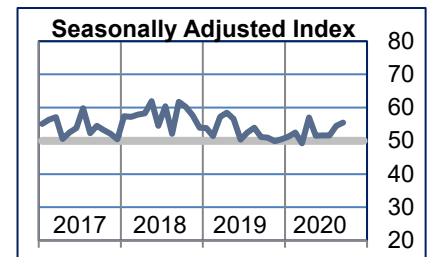
	Higher	Same	Lower	Net	Index
Apr/20	15%	68%	17%	-2%	48.1
May/20	11%	74%	15%	-4%	47.4
Jun/20	12%	74%	14%	-2%	50.7
Jul/20	8%	72%	20%	-12%	44.0
Aug/20	8%	80%	12%	-4%	49.0
Sep/20	11%	80%	9%	2%	51.5



Lead Times Index

The lead times index rose to indicate modestly longer delivery times. Construction, non-durable goods manufacturing, transportation, and health care reported this index as expanding. All other sectors came in at neutral.

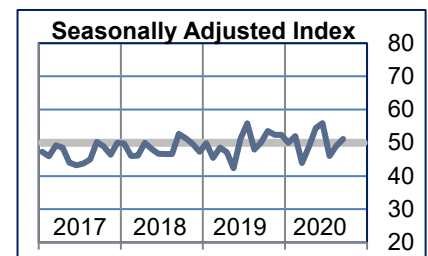
	Higher	Same	Lower	Net	Index
Apr/20	24%	66%	10%	14%	57.1
May/20	16%	75%	9%	7%	51.5
Jun/20	9%	84%	7%	2%	51.7
Jul/20	4%	94%	2%	2%	51.7
Aug/20	12%	85%	3%	9%	54.5
Sep/20	13%	86%	1%	12%	55.5



Purchased Inventory Index

The purchased goods inventory index rose to above neutral. Durable goods manufacturing, wholesale trade, and transportation reported these inventories as expanding. O&G and construction reported them as contracting.

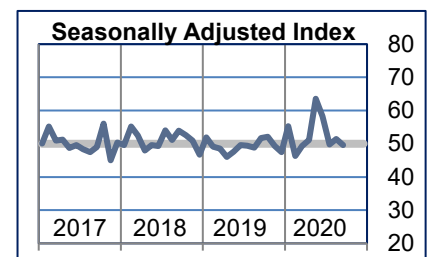
	Higher	Same	Lower	Net	Index
Apr/20	15%	69%	16%	-1%	49.0
May/20	20%	71%	9%	11%	54.4
Jun/20	15%	82%	3%	12%	55.9
Jul/20	1%	91%	8%	-7%	46.0
Aug/20	2%	93%	5%	-3%	49.0
Sep/20	6%	88%	6%	0%	51.2



Finished Goods Inventory Index

The finished goods inventory index fell to just below neutral. Durable goods manufacturing reported these inventories as contracting. All other sectors reported them near neutral.

	Higher	Same	Lower	Net	Index
Apr/20	16%	68%	16%	0%	51.1
May/20	30%	67%	3%	27%	63.6
Jun/20	15%	84%	1%	14%	58.3
Jul/20	5%	90%	5%	0%	49.8
Aug/20	6%	93%	1%	5%	51.4
Sep/20	5%	87%	8%	-3%	49.6



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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