ISM-Houston Business Report

June 2020

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 June for the first time in four months. Manufacturing activity continued to contract, although at a much slower pace.

The Houston Purchasing Managers Index rose 9.3 points to 49.5 in June. Two of the three underlying indicators that have a strong direct correlation with the economy, sales/new orders and lead times, are now pointing to expansion. The third, employment, while improving significantly continues to give a strong signal for contraction. The sales/new orders index rose an additional 20.4 points this month to 56.8. The lead times index was relatively unchanged at 51.7. The employment index rose 6.7 points to 44.8. The underlying indicator that has the strongest inverse correlation with economic activity, finished goods inventory, fell 5.3 points this month to 58.3.

The three-month forecast for the Houston PMI rose 8.2 points to 53.9. This was primarily driven by improvements in the sales/new orders, production, and prices paid indices. These indices, along with the lead times index, have a strong direct correlation with economic activity at the three-month forecast horizon.

On an industry specific basis, accommodations and foods services, transportation, utilities, and health care reported expansion this month after a very weak report in May. Real estate, oil and gas, and nondurable goods manufacturing reported near neutral. Construction, durable goods manufacturing, and professional services continued to report contraction. The three-month forecast is highly uncertain as further economic improvement is dependent on the severity of the COVID-19 pandemic.

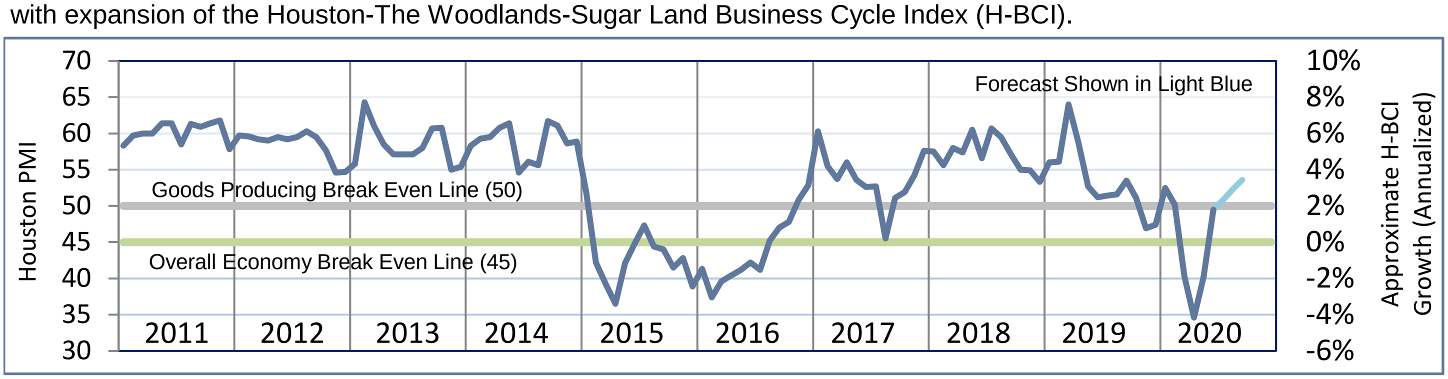
Indices at a Glance

Index	Jun	May	Change	Track	Rate	Trend*
Houston PMI - Current	49.5	40.2	9.3	Contracting	Slower	4
Houston PMI - 3 Month Forecast	53.9	45.7	8.2	Expanding	Fr. Contracting	1
Sales/New Orders	56.8	36.4	20.4	Rising	Fr. Falling	1
Production	55.5	43.2	12.3	Rising	Fr. Falling	1
Employment	44.8	38.1	6.7	Falling	Slower	5
Purchases	50.1	40.2	9.9	Rising	Fr. Falling	1
Prices Paid	50.7	47.4	3.3	Rising	Fr. Falling	1
Lead Times	51.7	51.5	0.2	Rising	Faster	3
Purchased Inventory	55.9	54.4	1.5	Rising	Faster	2
Finished Goods Inventory	58.3	63.6	-5.3	Rising	Slower	3
Overall Houston Economy				Expanding	Fr. Contracting	1

* Number of months on current track

Houston PMI Trend

Overall economic activity in Houston expanded in June for the first time in four months. 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: Personal Protective Equipment (PPE) and COVID-19 related cleaning materials; crude oil and motor fuels; propane, butanes, and natural gas liquids; ethylene, propylene, and C4 raffinates; platinum and silver for catalysts; aluminum, copper, nickel and other industrial metals; ready mix concrete; bulk and container ocean freight; software

Down in Price: Heat exchangers, pumps, compressors, turbines, carbon steel pipe, fabricated structural steel, transformers; oilfield chemicals; engineering services and drilling services

In Short Supply: PPE; COVID-19 test kits

What Our Respondents Are Saying

Oil and Gas Exploration, and Key Support Services:
- Oilfield services, materials, and commodity prices continue to be depressed in the face of pandemic related demand destruction
- We are seeing continued pressure on capital investment and employment
- U.S. oil production is down to about 11 million b/d and we don't anticipate returning to the previous peak of 13 until 2023
- Currently working on recovering lost oil production due to low prices
- Texas rig counts were flat in June
- The number of Drilled Uncompleted Wells (DUCS) is way up; completions will accelerate if crude prices stay above $40
- Requests for drilling permits in Texas increased in June, but were still less than half of last year's monthly average
- Many natural gas exports have been cancelled; inventories are rising and we may reach storage limits in the fourth quarter

Engineering and Construction:
- Oil market and COVID-19 still creating headwinds
- A large number of LNG liquefaction projects slated for final investment decision in 2020 have been delayed or deferred into late 2021 and beyond

Manufacturing:
- Business is better, but not back to normal
- Oil and gas markets are still very tight and we're not operating at full capacity

Transportation and Utilities:
- Houston area nonresidential power usage is down modestly
- There was a small decrease in imports and exports during the month; currently ramping back up
- Air passenger traffic and cargo increased on a month over month basis; still well below the same month last year
- Airlines and airports are now requiring the use of masks in equipment and terminals
- We are concerned over the potential impact of this month's increase in COVID-19 cases in Houston and nationally
- COVID-19 related materials are seeing longer lead times and price increases

Financial Services and Real-estate
- Apartment rents were modestly lower this month; new apartment construction may be greater than expected demand
- New home sales were up in June; sales accelerated late in the month; low mortgage rates are helping
- Listings of used homes are lower than this time last year
- Retail and industrial vacancy rates are relatively low but increasing

Professional Services:
- No area has a shortage of qualified people; getting the correct behavioral fit is now critical for hiring companies
- Salaries, whether hourly contracting or direct hire, are stagnate; hiring companies are recognizing that more supply than demand gives them opportunity to reduce their hiring costs
- Forecast no significant change in demand for the next 7 months, particularly in the energy or energy related sectors
- O&G company use of consultants and hiring of direct employees remains extremely low; layoffs are continuing
- Procurement activity has increased for non-employee labor spend; likely a sign that companies are using their teams to seek out direct and indirect cost savings in the staffing, professional services and consulting categories during this slow period in order to lock in lower rates that can be leveraged when business activity eventually picks up

What Our Respondents Are Saying (Continued)

Health Care:
- Even as we reopen the economy, we still have months to recover from the losses incurred during the closure

Accommodations and Food Services:
- Sales grew in June, but we are concerned about the reemergence of new COVID-19 cases
- Concerned about surge in COVID-19 cases in the Houston area; we may need to shut back down
- Employment gains made in early June are now being reversed

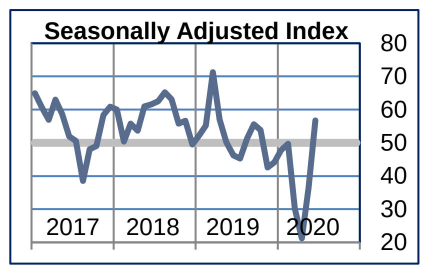
Trend of Underlying Indicators

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 rebounded in June, rising more than 20 points to show expansion. Accommodations and food services, O&G, nondurable goods manufacturing, and transportation saw the largest gains.

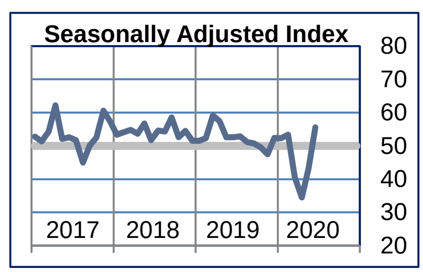
	Higher	Same	Lower	Net	Index
Jan/20	14%	71%	15%	-1%	47.7
Feb/20	17%	69%	14%	3%	49.7
Mar/20	4%	54%	42%	-38%	30.2
Apr/20	5%	34%	61%	-56%	21.2
May/20	18%	40%	42%	-24%	36.4
Jun/20	36%	39%	25%	11%	56.8



Production Index

The production index rose 12 points to return to expansion as well. Nondurable goods reported the greatest gain. Durable goods manufacturing and oil & gas continue to report this index as contracting.

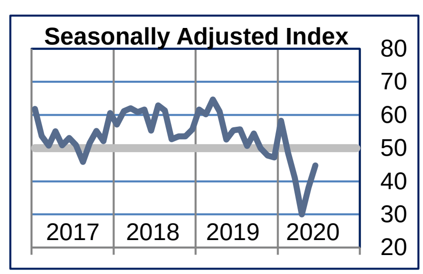
	Higher	Same	Lower	Net	Index
Jan/20	9%	87%	4%	5%	52.3
Feb/20	13%	82%	5%	8%	53.4
Mar/20	2%	77%	21%	-19%	40.6
Apr/20	1%	70%	29%	-28%	34.5
May/20	6%	75%	19%	-13%	43.2
Jun/20	14%	80%	6%	8%	55.5



Employment Index

The employment index improved by 7 points, but is still pointing to contraction. Most of the gain came from large improvements in accommodations and food services. O&G, construction, and manufacturing are below neutral.

	Higher	Same	Lower	Net	Index
Jan/20	22%	74%	4%	18%	58.3
Feb/20	3%	91%	6%	-3%	48.6
Mar/20	1%	80%	19%	-18%	41.0
Apr/20	2%	59%	39%	-37%	30.0
May/20	2%	74%	24%	-22%	38.1
Jun/20	7%	79%	14%	-7%	44.8



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ISM INSTITUTE FOR SUPPLY MANAGEMENT
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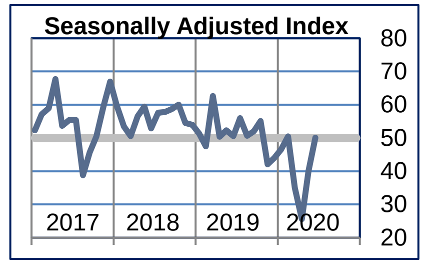
Purchases Index

The purchases index returned to neutral. Accommodations and food services, transportation, and utilities reported strength. Construction and durable goods manufacturing reported weakness.

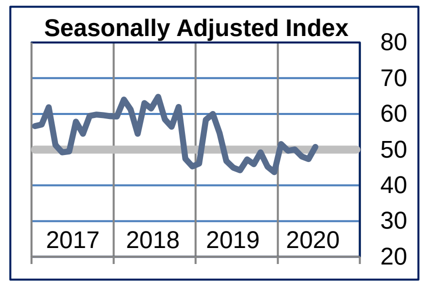
	Higher	Same	Lower	Net	Index
Jan/20	4%	88%	8%	-4%	46.5
Feb/20	9%	82%	9%	0%	50.4
Mar/20	7%	56%	37%	-30%	35.0
Apr/20	1%	51%	48%	-47%	25.6
May/20	13%	53%	34%	-21%	40.2
Jun/20	12%	74%	14%	-2%	50.1



Prices Paid Index

The prices paid index moved back above neutral. The largest number of respondents reporting increases were in health care and O&G. Nondurable goods manufacturing respondents reported this index as falling.

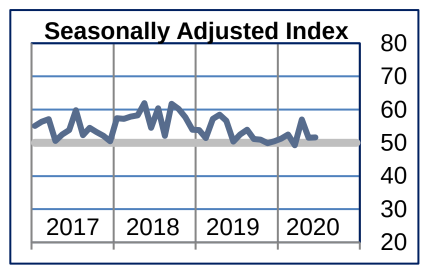
	Higher	Same	Lower	Net	Index
Jan/20	4%	95%	1%	3%	51.5
Feb/20	4%	94%	2%	2%	49.7
Mar/20	16%	74%	10%	6%	50.1
Apr/20	15%	68%	17%	-2%	48.1
May/20	11%	74%	15%	-4%	47.4
Jun/20	12%	74%	14%	-2%	50.7



Lead Times Index

The lead times index remained near neutral. Durable goods manufacturing and O&G reported this index as falling. All other sectors reported it as near or just above neutral.

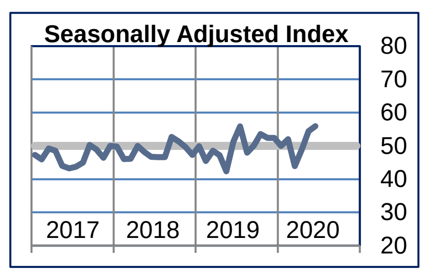
	Higher	Same	Lower	Net	Index
Jan/20	5%	92%	3%	2%	51.2
Feb/20	7%	92%	1%	6%	52.5
Mar/20	12%	78%	10%	2%	49.3
Apr/20	24%	66%	10%	14%	57.1
May/20	16%	75%	9%	7%	51.5
Jun/20	9%	84%	7%	2%	51.7



Purchased Inventory Index

The purchased goods inventory index remained above neutral. A large percentage of durable goods manufacturers continue to report increasing inventories while construction and O&G report falling levels of purchased goods.

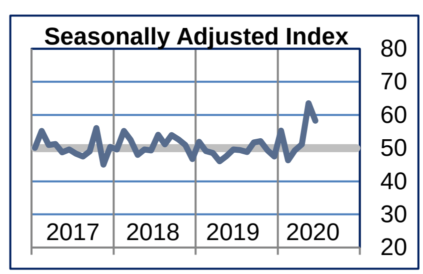
	Higher	Same	Lower	Net	Index
Jan/20	8%	88%	4%	4%	50.0
Feb/20	9%	88%	3%	6%	52.1
Mar/20	4%	80%	16%	-12%	43.9
Apr/20	15%	69%	16%	-1%	49.0
May/20	20%	71%	9%	11%	54.4
Jun/20	15%	82%	3%	12%	55.9



Finished Goods Inventory Index

The finished goods inventory index moderated 5 points. O&G reported falling inventories while durable goods reported increases. All other sectors reported near neutral.

	Higher	Same	Lower	Net	Index
Jan/20	16%	80%	4%	12%	55.3
Feb/20	5%	86%	9%	-4%	46.3
Mar/20	8%	81%	11%	-3%	49.3
Apr/20	16%	68%	16%	0%	51.1
May/20	30%	67%	3%	27%	63.6
Jun/20	15%	84%	1%	14%	58.3



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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