

# ISM-Houston Business Report

## February 2022



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, economic activity in Houston expanded in February at a similar rate to the previous month. The ISM-Houston PMI diffusion index fell minimally. Non-manufacturing activities expanded at a modestly slower rate while manufacturing activities expanded at a significantly faster pace during the month.

The Houston Purchasing Managers Index fell 0.1 points to 59.5 during the month. Strength in the sales/new orders, employment, and lead times indices are responsible for the continued indication of economic growth. These indicators have the strongest direct correlation with economic activity in Houston. The sales/new orders index rose 0.8 points to 58.3, the employment index rose 0.6 points to 60.5, and the lead times index fell 3.3 points to 62.9. The Finished goods inventory index, the underlying indicator that has the strongest inverse correlation with economic activity, fell 0.7 points to just below neutral at 49.3, giving a very small indication of expansion.

As noted last month, ISM-Houston is now reporting separate indices for manufacturing and non-manufacturing industries in addition to the overall Houston Purchasing Managers Index. The HPMI forecast has been eliminated from this report. The Houston Manufacturing PMI rose a strong 7.3 points to 64.6, pointing to very strong expansion. The non-manufacturing PMI fell a modest 1.6 points to 58.4 showing a slightly lower expansion signal for the industries in this sector.

On an industry specific basis, oil & gas, healthcare, professional and management services, manufacturing, construction, and trade and transportation reported strong expansion. Leisure and hospitality, and real estate reported near neutral month over month.

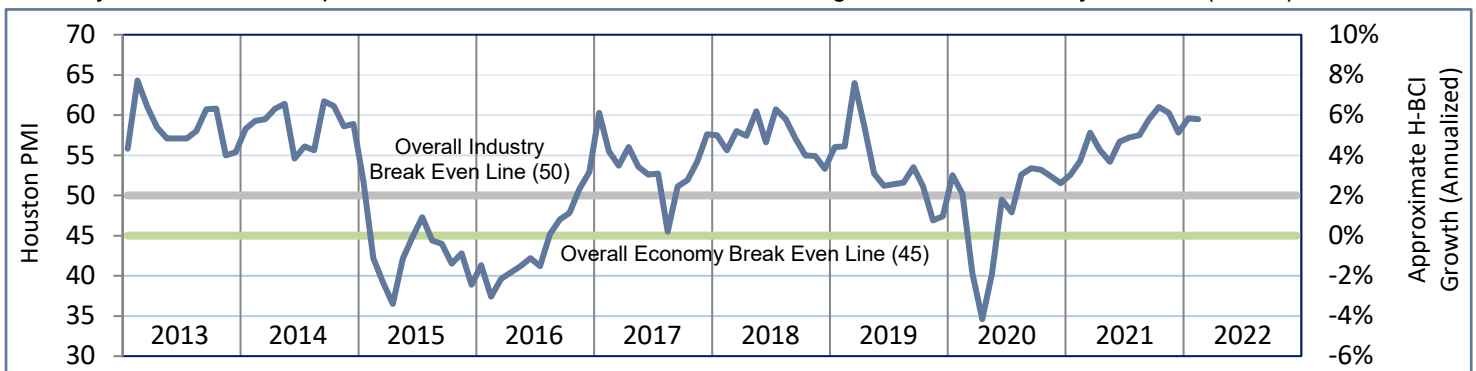
### Indices at a Glance

Index	Feb	Jan	Change	Track	Rate	Trend*
Houston Overall PMI	59.5	59.6	-0.1	Expanding	Slower	19
Houston Manufacturing PMI	64.6	57.3	7.3	Expanding	Faster	15
Houston Non-Manufacturing PMI	58.4	60.0	-1.6	Expanding	Slower	19
Sales/New Orders	58.3	57.5	0.8	Rising	Faster	21
Production	52.4	53.7	-1.3	Rising	Slower	21
Employment	60.5	59.9	0.6	Rising	Faster	13
Purchases	55.3	58.1	-2.8	Rising	Slower	6
Prices Paid	68.7	67.1	1.6	Rising	Faster	18
Lead Times	62.9	66.2	-3.3	Rising	Slower	23
Purchased Inventory	50.2	51.1	-0.9	Rising	Slower	3
Finished Goods Inventory	49.3	50.0	-0.7	Falling	Fr. Neutral	1
Overall Houston Economy				Expanding	Slower	21

\* Number of months on current track

### Houston PMI Trend

Houston PMI readings over 50 generally indicate that respondents see their activities as expanding. An HPMI above 45 normally 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:** Medical and surgical supplies; consulting services, skilled, unskilled, professional, and technical labor; drilling rigs, oil country tubular goods (OCTG); crude oil, motor fuels, natural gas; ethane, propane, butane, isobutane, natural gasoline, natural gas liquids; propylene, ethylene oxide derivatives, propylene oxide derivatives, toluene, xylene, styrene, chemicals; polyethylene, polypropylene; gold, platinum, and rhodium for catalysts; aluminum, copper, nickel; carbon and alloy steel products, carbon and alloy valves, heat exchangers, transformers, lumber; computer hardware, process automation equipment, software; marine, rail, and truck transportation

**Down in Price:** Fracking sand; containerized freight from Asia

**In Short Supply:** Medical fluids and solutions; skilled labor, rig labor, light industrial labor, IT Professionals; drilling rigs, oil country tubular goods (OCTG); silicon sealants, chemicals; carbon, stainless and high alloy valves; computer hardware and other equipment with semiconductors; marine transportation

### What Our Respondents Are Saying

#### Oil and Gas Exploration, and Key Support Services:

- Elevated fuel costs are expected to cause domino inflation across the supply chain, with energy and fuel prices as key components to manufacturing and logistics
- We are seeing continued price escalations and longer lead times
- Increased activity due to higher oil prices and higher costs are making it difficult to keep expenses within budget
- *This sector strengthened again this month with the production, employment, purchases, prices paid, and lead times indices continuing to show considerable strength*

#### Construction:

- Potential impacts from the war in the Ukraine are unknown; energy prices are expected to increase significantly
- *This sector reported modestly lower growth; the employment, purchases, and prices paid indices remained strong while the lead times index fell to near neutral*

#### Durable Goods Manufacturing:

- As a manufacturer of equipment for the energy industry, we expect our business activity and sales to increase throughout the course of the year; there will be ongoing challenges with inflation and extended material lead times
- *This sector improved significantly to show strong growth; the sales and employment indices joined the prices paid and lead times indices to show strength while the production and purchases indices fell to near neutral, the inventory indices fell to below neutral*

#### Non-durable Goods Manufacturing:

- We are seeing significant pressure on feedstock prices due to increased crude oil prices
- *This sector strengthened considerably during the month; the sales/new orders and purchases indices joined the production, employment, prices paid, and lead times indices well above neutral; the inventory indices fell back below neutral*

#### Trade, Transportation, and Warehousing:

- Business is being rationalized to our most profitable products
- *This sector showed strong expansion again this month; the employment index joined the sales/new orders and lead time indices in expanding at a fast pace; all other indicators came in near neutral*

#### Real-Estate Services:

- Rising interest rates have not affected home sales
- *This sector continued to expand at a modest pace with the prices paid and lead times indices reported as well above neutral; all other indices were reported near neutral*

#### Professional and Business Services:

- Demand for talent continues to increase while supply of talent remains flat at best; this is driving up the cost of labor across all skill levels as companies are having to pay more to attract and retain talent
- The Great Resignation is real as employees are quitting jobs in record numbers; this trend is expected to continue into 2023
- We are seeing a depletion of available talent in the market place; demand has picked up significantly in last 2 months
- Direct hire and hourly workers are demanding more compensation and getting it; average is about 10 percent higher
- Hold on to your seats if the energy companies think it is time to spend capital
- *This sector reported expansion at a strong pace again this month with the sales/new orders, employment, prices paid, and lead times indices pointing to rapid expansion; the purchases index fell to neutral*

#### Leisure and Hospitality

- *Activity in this sector remained just above neutral during the month with all indices reported near neutral*

### What Our Respondents Are Saying (Continued)

#### Health Care

- We continue to be impacted by shortages in the market place; many products still on allocation and organizations are now relying on their secondary and tertiary alternative products; the Clinical Value Analysis teams are very busy evaluating a wide range of products to ensure they meet the necessary clinical requirements
- *This sector continued to report expansion at a high rate with strength in the sales/new orders, employment, purchases, prices paid, and lead times indices*

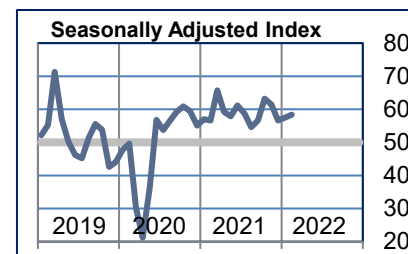
### Trend of Underlying Indicators

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 modestly due to strengthening in both durable and non-durable goods manufacturing. This index continued to show strength in the non-manufacturing sectors as well.

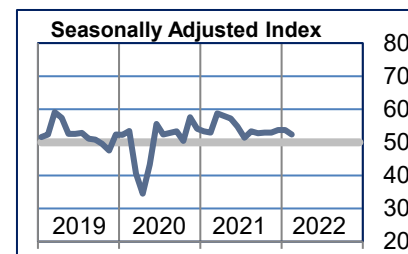
	Higher	Same	Lower	Net	Index
Sep/21	15%	84%	1%	14%	56.7
Oct/21	23%	75%	2%	21%	63.2
Nov/21	17%	82%	1%	16%	61.4
Dec/21	12%	82%	6%	6%	56.6
Jan/22	18%	80%	2%	16%	57.5
Feb/22	21%	78%	1%	20%	58.3



#### Production Index

The production index fell modestly during the month with durable goods manufacturing falling to near neutral. Non-durable goods manufacturing and oil & gas continue to report considerable strength in this index.

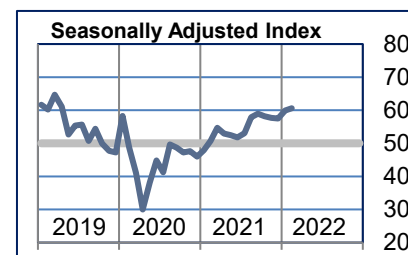
	Higher	Same	Lower	Net	Index
Sep/21	10%	86%	4%	6%	52.7
Oct/21	10%	86%	4%	6%	52.9
Nov/21	7%	92%	1%	6%	53.0
Dec/21	8%	90%	2%	6%	53.7
Jan/22	10%	89%	1%	9%	53.7
Feb/22	7%	92%	1%	6%	52.4



#### Employment Index

The employment index rose modestly again during the month. Durable goods manufacturing joined, professional and business services, health care, oil & gas, construction, and non-durable goods in reporting above neutral.

	Higher	Same	Lower	Net	Index
Sep/21	19%	80%	1%	18%	58.9
Oct/21	21%	73%	6%	15%	58.2
Nov/21	20%	74%	6%	14%	57.7
Dec/21	16%	82%	2%	14%	57.5
Jan/22	18%	81%	1%	17%	59.9
Feb/22	21%	78%	1%	20%	60.5



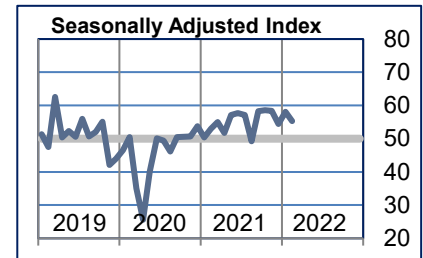
# ISM-Houston Business Report

## February 2022

### Purchases Index

The purchases index continued to indicate strength. Non-durable goods joined health care, oil & gas, construction, transportation, warehousing, and professional and business services to show strength. Durable goods fell to near neutral.

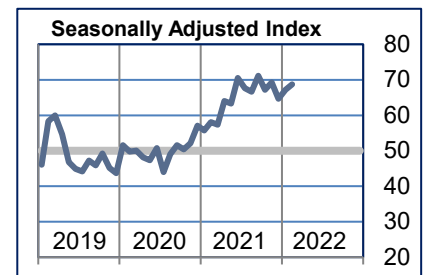
	Higher	Same	Lower	Net	Index
Sep/21	22%	78%	0%	22%	58.3
Oct/21	20%	78%	2%	18%	58.6
Nov/21	16%	82%	2%	14%	58.4
Dec/21	8%	88%	4%	4%	54.4
Jan/22	20%	79%	1%	19%	58.1
Feb/22	11%	88%	1%	10%	55.3



### Prices Paid Index

The prices paid index rose modestly during the month. Almost all sectors continued to report this index as expanding at a rapid pace.

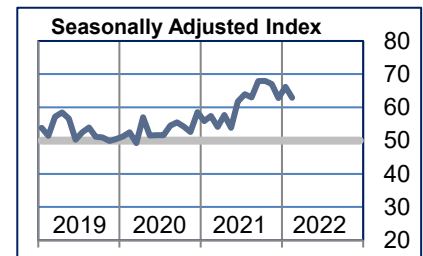
	Higher	Same	Lower	Net	Index
Sep/21	42%	58%	0%	42%	71.1
Oct/21	39%	61%	0%	39%	67.1
Nov/21	37%	62%	1%	36%	69.2
Dec/21	26%	72%	2%	24%	64.7
Jan/22	36%	63%	1%	35%	67.1
Feb/22	39%	60%	1%	38%	68.7



### Lead Times Index

The lead times index fell during the month but remained well above neutral. Most sectors reported this index as continuing to expand at a rapid pace. Trade, transportation, and warehousing reported below neutral again this month.

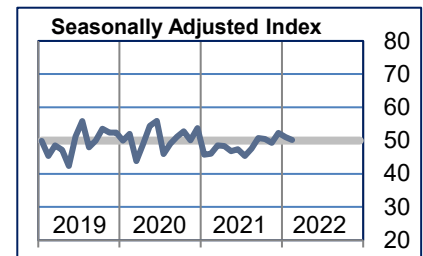
	Higher	Same	Lower	Net	Index
Sep/21	36%	64%	0%	36%	67.9
Oct/21	35%	64%	1%	34%	68.0
Nov/21	35%	62%	3%	32%	67.1
Dec/21	26%	70%	4%	22%	62.8
Jan/22	32%	64%	4%	28%	66.2
Feb/22	31%	65%	4%	27%	62.9



### Purchased Inventory Index

The purchased inventory index fell modestly to remain just above neutral. Trade, transportation, and warehousing reported these inventories as expanding while oil & gas and manufacturing reported them as falling.

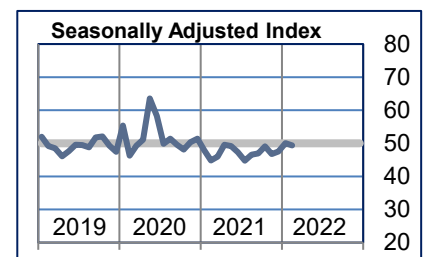
	Higher	Same	Lower	Net	Index
Sep/21	2%	96%	2%	0%	50.8
Oct/21	2%	95%	3%	-1%	50.4
Nov/21	2%	95%	3%	-1%	49.3
Dec/21	2%	97%	1%	1%	52.3
Jan/22	9%	90%	1%	8%	51.1
Feb/22	7%	90%	3%	4%	50.2



### Finished Goods Inventory Index

The finished goods inventory index fell to just below neutral. Manufacturing joined new home construction to report this index as contracting at a rapid pace. Trade, transportation, and warehousing reported these inventories as rising.

	Higher	Same	Lower	Net	Index
Sep/21	0%	92%	8%	-8%	47.0
Oct/21	0%	93%	7%	-7%	49.1
Nov/21	1%	93%	6%	-5%	46.8
Dec/21	1%	95%	4%	-3%	47.5
Jan/22	8%	89%	3%	5%	50.0
Feb/22	6%	89%	5%	1%	49.3



### 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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