

# ISM-Houston Business Report

## March 2023



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 at a faster pace in March. Manufacturing sector activity returned to indicating minimal expansion while nonmanufacturing activity showed a higher expansion rate.

The Houston Purchasing Managers Index rose 2.1 points to 54.8. All three underlying indicators that have the strongest correlation with the Houston economy, sales/new orders, employment, and lead times, are now pointing to modest expansion. The sales/new orders index rose 3.3 points to 54.7, the employment index rose 3.5 points to 56.7, and the lead times index rose 1.5 points to 55.9. The finished goods inventory index, the underlying indicator that has the strongest inverse correlation with economic activity, rose 7.0 points to 56.1, giving a strong signal of potential economic contraction.

The Houston Manufacturing PMI rose 2.2 points to 50.9, giving a very weak indication of expansion. The nonmanufacturing PMI rose 2.0 points to 55.5, showing a modestly higher expansion rate for the industries in this sector.

On an industry specific basis health care, oil & gas, construction, and professional and management services reported strong expansion. Trade, transportation & warehousing reported very modest expansion. Manufacturing, leisure and hospitality, and real estate reported near neutral. No sector reported significant contraction.

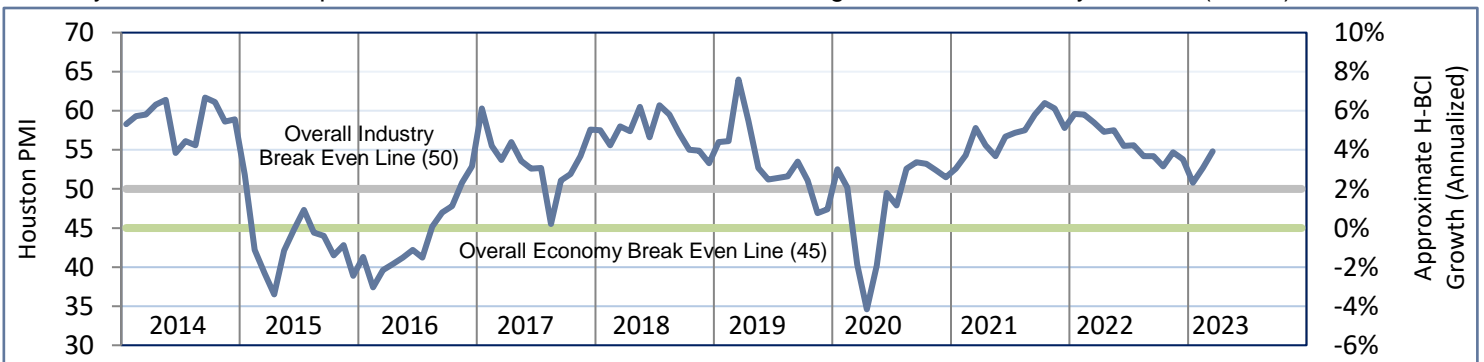
### Indices at a Glance

Index	Mar	Feb	Change	Track	Rate	Trend*
Houston Overall PMI	54.8	52.7	2.1	Expanding	Faster	32
Houston Manufacturing PMI	50.9	48.7	2.2	Expanding	Fr. Contracting	1
Houston Nonmanufacturing PMI	55.5	53.5	2.0	Expanding	Faster	32
Sales/New Orders	54.7	51.4	3.3	Rising	Faster	2
Production	53.2	51.8	1.4	Rising	Faster	3
Employment	56.7	53.2	3.5	Rising	Faster	26
Purchases	55.5	56.5	-1.0	Rising	Slower	4
Prices Paid	54.6	54.3	0.3	Rising	Faster	3
Lead Times	55.9	54.4	1.5	Rising	Faster	2
Purchased Inventory	53.4	49.6	3.8	Rising	Fr. Falling	1
Finished Goods Inventory	56.1	49.1	7.0	Rising	Fr. Falling	1
Overall Houston Economy				Expanding	Faster	33

\* 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:** Professional Services, construction labor; gasoline; acids, specialized rubber compounds, elastomers, gold and silver for catalysts; scrap steel, transformers, switchgear, electrical gear and components, software and hardware; used equipment/vehicles

**Down in Price:** Electricity, crude oil, diesel, jet fuel, propane, natural gas, natural gas liquids, butane, isobutane, natural gasoline, naphtha; propylene; rhodium, nickel, molybdenum; lumber, steel bar, some steel products; containerized ocean freight and land transportation

**In Short Supply:** Construction labor, I&E craft labor; big ticket medical equipment made with any kind of metals, imaging equipment, medical furniture; specialized rubber compounds, fluoropolymers (PFAs); transformers, switchgear, relays, breakers, switches, variable frequency drives, HVAC equipment, automation electronics, electrical gear, electrical components, semiconductors, roadway materials; vehicles

---

### What Our Respondents Are Saying

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

- Labor shortages remain in service companies supporting our operations
- Rig counts were relatively stable this month
- *This sector saw continued strong growth with the purchases index joining the production, employment, and lead times indices in showing significant strength; the prices paid index fell to join all other indices near neutral*

#### Construction:

- Mixed bag for our construction sectors, but many are still doing well
- Lead times have not gone down as anticipated in 2023 but we are hopeful for the rest of 2023
- *Performance in this sector moved to well above neutral during the month with the sales/new orders index joining the employment and prices paid indices showing significant strength*

#### Durable Goods Manufacturing:

- We are seeing some improvement
- *This sector's performance rose back above neutral with the sales/new orders and prices paid indices rebounding to significantly above neutral; the production index continues to point to greater expansion; the employment, and lead times indices remained near neutral; the inventory indices rose to well above neutral*

#### Non-durable Goods Manufacturing:

- Polymer prices were unchanged this month
- Refinery rates are increasing in preparation for the summer driving season
- *This sector's performance stayed near neutral with strength in the employment, prices paid, and lead times indices offsetting significant weakness in the sales/new orders, production, and inventories*

#### Trade, Transportation, and Warehousing:

- Containerized ocean freight prices from Asia fell again in March
- *This sector's performance fell modestly to end closer to neutral; the sales/new orders and purchases indices showed strength while the inventory indices showed weakness; all other indices reported minimally above neutral*

#### Professional and Business Services:

- We are seeing a steady leveling off of activity in the labor space
- There are only pockets of specialized roles that are in short supply but in general, people are able to find employment
- No change in wages for the last 6-8 months, but salaries and hourly pay are up 10% compared to 12-18 months ago
- Rarely do we see anyone taking a "pay cut" either when looking for a job or looking to change employers
- The market still revolves around, either directly or indirectly, the price of oil
- A stable oil price at about \$70/bbl seems to correspond to stable employment
- *This sector's performance improved again during the month with the employment, purchases, and prices paid indices reporting significant strength; the sales/new orders index remained strong as well*

### What Our Respondents Are Saying (Continued)

#### Real Estate Services:

- We saw some strengthening last month [in new housing] but are still well below last year's sales levels
- *This sector remained near neutral with housing at neutral; industrial and retail real estate remained strong*

#### Leisure and Hospitality:

- *This sector's performance remained near neutral during the month with all indices reporting at this level*

#### Health Care

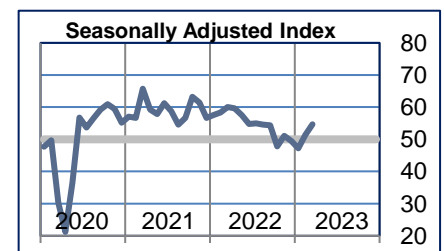
- The economy is contracting, even in healthcare; the government is about to slash reimbursement rates, so everyone is preparing for a downturn to a limited extent
- Prices are currently stable due to being in three year GPO contract
- Healthcare is experiencing a bit of a downturn in traditional acute space
- Non acute space is expanding and growing
- We are leveraging our position in the non acute space to better control pricing through aggressive sourcing
- *This sector strengthened further during the month with all indicators except purchased inventory reporting strength*

### 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 seasonal adjustments to the Sales/New Orders, Production, Employment, and Prices Paid indices 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.

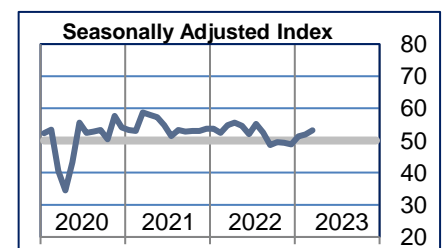
#### Sales/New Orders Index

The sales/new orders index rose further, driven by improvements in the nonmanufacturing and durable goods manufacturing sectors. Nondurable goods manufacturing continues to report significant contraction in this index.		Higher	Same	Lower	Net	Index
	Oct/22	6%	81%	13%	-7%	47.8
	Nov/22	14%	70%	16%	-2%	51.1
	Dec/22	8%	78%	14%	-6%	49.5
	Jan/23	7%	85%	8%	-1%	47.2
	Feb/23	10%	85%	5%	5%	51.4
	Mar/23	17%	76%	7%	10%	54.7



#### Production Index

The production index improved modestly led by continued strength in the nonmanufacturing and durable goods sectors. As with the sales/new orders index, nondurable goods continues to show falling production.		Higher	Same	Lower	Net	Index
	Oct/22	7%	85%	8%	-1%	49.5
	Nov/22	8%	82%	10%	-2%	49.3
	Dec/22	5%	84%	11%	-6%	48.8
	Jan/23	9%	84%	7%	2%	51.3
	Feb/23	9%	86%	5%	4%	51.8
	Mar/23	13%	80%	7%	6%	53.2



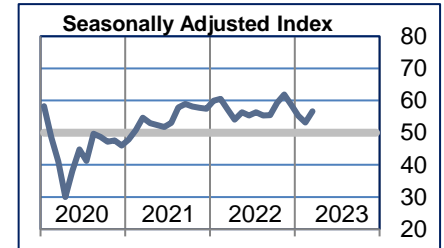
# ISM-Houston Business Report

## March 2023

### Employment Index

This index improved modestly this month with nonmanufacturing reporting faster growth. Manufacturing indicating somewhat lower expansion compared to last month with nondurable goods reporting greater strength.

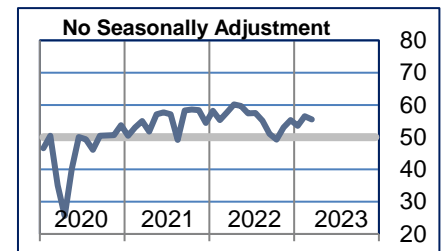
	Higher	Same	Lower	Net	Index
Oct/22	20%	78%	2%	18%	59.3
Nov/22	23%	74%	3%	20%	61.9
Dec/22	16%	81%	3%	13%	58.6
Jan/23	14%	86%	0%	14%	55.3
Feb/23	13%	81%	6%	7%	53.2
Mar/23	23%	69%	8%	15%	56.7



### Purchases Index

The purchases index was reported as rising at a similar rate to last month. Nonmanufacturing activities showed a similar level of expansion to last month while manufacturing fell to neutral.

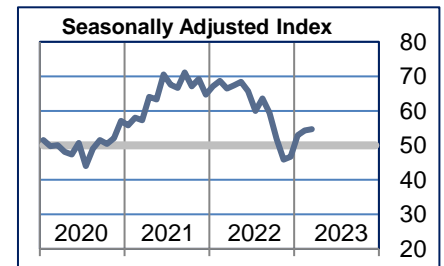
	Higher	Same	Lower	Net	Index
Oct/22	8%	81%	11%	-3%	49.2
Nov/22	14%	77%	9%	5%	53.0
Dec/22	13%	77%	10%	3%	55.3
Jan/23	10%	87%	3%	7%	53.5
Feb/23	15%	83%	2%	13%	56.5
Mar/23	16%	79%	5%	11%	55.5



### Prices Paid Index

The prices paid index was relatively unchanged with nonmanufacturing reporting expansion at a modestly lower rate while manufacturing returned to reporting expansion at a strong pace.

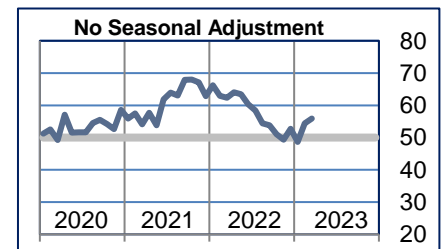
	Higher	Same	Lower	Net	Index
Oct/22	16%	72%	12%	4%	51.9
Nov/22	12%	67%	21%	-9%	45.9
Dec/22	7%	76%	17%	-10%	46.7
Jan/23	7%	91%	2%	5%	52.9
Feb/23	16%	81%	3%	13%	54.3
Mar/23	24%	69%	7%	17%	54.6



### Lead Times Index

This lead times index rose modestly. Nonmanufacturing reported a similar rate of expansion in this index while manufacturing indicated significantly higher lead times.

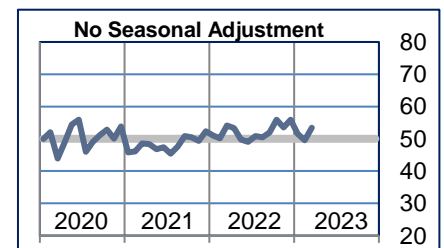
	Higher	Same	Lower	Net	Index
Oct/22	10%	80%	10%	0%	51.1
Nov/22	9%	80%	11%	-2%	49.3
Dec/22	11%	81%	8%	3%	52.7
Jan/23	4%	89%	7%	-3%	48.7
Feb/23	13%	82%	5%	8%	54.4
Mar/23	20%	71%	9%	11%	55.9



### Purchased Inventory Index

The purchased inventory index rose to back above neutral after only one month indicating contraction. Nondurable goods manufacturing report this index as contracting while all other sectors reported in as expanding.

	Higher	Same	Lower	Net	Index
Oct/22	8%	88%	4%	4%	55.9
Nov/22	9%	86%	5%	4%	53.5
Dec/22	7%	90%	3%	4%	55.9
Jan/23	4%	95%	1%	3%	51.5
Feb/23	6%	88%	6%	0%	49.6
Mar/23	10%	86%	4%	6%	53.4



# ISM-Houston Business Report

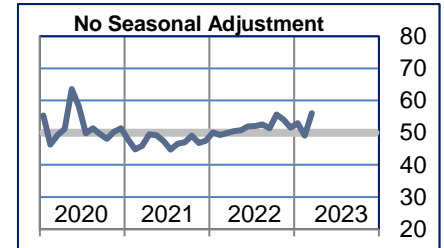
## March 2023



### Finished Goods Inventory Index

The finished goods inventory index rose to show a significant rate of expansion with both the nonmanufacturing and manufacturing sectors rising from minimal contraction to significant expansion.

	Higher	Same	Lower	Net	Index
Oct/22	11%	81%	8%	3%	55.7
Nov/22	14%	82%	4%	10%	54.1
Dec/22	10%	85%	5%	5%	51.6
Jan/23	6%	94%	0%	6%	53.0
Feb/23	5%	89%	6%	-1%	49.1
Mar/23	16%	80%	4%	12%	56.1



### 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.

### Use of ISM-Houston Business Report Content

All information contained in this report is protected by copyright laws and ISM-Houston retains all rights to this Content. ISM-Houston hereby grants you a limited, revocable license to access, print, and display this Content solely for your personal, non-commercial use. Requests for permission to reproduce or redistribute ISM-Houston Business Report Content can be made by contacting the ISM-Houston Business Survey Committee at [hpmi@ism-houston.org](mailto:hpmi@ism-houston.org).

ISM-Houston shall not have any liability, duty, or obligation for or relating to the ISM-Houston Business Report Content or other information contained herein, any errors, inaccuracies, omissions or delays in providing any ISM-Houston Business Report Content, or for any actions taken in reliance thereon. In no event shall ISM-Houston be liable for any special, incidental, or consequential damages, arising out of the use of the ISM-Houston Business Report.