FOR RELEASE Thursday, September 28, 2017 EMBARGOED FOR 10 A.M. CENTRAL TIME CONTACT: Pam Campbell 405-270-8617 Pam.Campbell@kc.frb.org

TENTH DISTRICT MANUFACTURING ACTIVITY CONTINUED TO EXPAND SOLIDLY Federal Reserve Bank of Kansas City Releases September Manufacturing Survey

KANSAS CITY, Mo. – The Federal Reserve Bank of Kansas City released the September Manufacturing Survey today. According to Chad Wilkerson, vice president and economist at the Federal Reserve Bank of Kansas City, the survey revealed that Tenth District manufacturing activity continued to expand at a solid pace and that firms remained optimistic about the future.

"Factories in the region reported another good month in September, with little impact overall from the Gulf Coast hurricanes," said Wilkerson.

A summary of the September survey is attached. Results from past surveys and release dates for future surveys can be found at www.kansascityfed.org/research/indicatorsdata/mfg.

The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, encompassing the western third of Missouri; all of Kansas, Colorado, Nebraska, Oklahoma and Wyoming; and the northern half of New Mexico. As part of the nation's central bank, the Bank participates in setting national monetary policy, supervising and regulating numerous commercial banks and bank holding companies, and providing financial services to depository institutions. More information is available online at www.kansascityfed.org.

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TENTH DISTRICT MANUFACTURING SUMMARY

Tenth District manufacturing activity continued to expand solidly in September, and expectations for future activity also remained positive. Most price indexes increased modestly, with the exception of future selling prices which eased slightly.

The month-over-month composite index was 17 in September, up from 16 in August and 10 in July (Tables 1 & 2, Chart). The composite index is an average of the production, new orders, employment, supplier delivery time, and raw materials inventory indexes. Factory activity increased solidly at both durable and non-durable goods plants, particularly for chemicals, plastics, and machinery products. Month-over-month indexes were somewhat mixed. The production index remained unchanged, while the shipments, employment, and new orders for exports indexes increased mildly. In contrast, the new orders index fell from 25 to 10, and the order backlog index also decreased. The finished goods inventory index fell from 2 to -6, while the raw materials inventory index was mostly unchanged.

Year-over-year factory indexes increased versus the previous month. The composite index jumped from 23 to 35, and the production, shipments, new orders, and order backlog indexes also rose considerably. The employment index increased from 22 to 30, and the capital expenditures index also edged higher. The raw materials inventory index slipped from 18 to 16, and the finished goods inventory index eased from 6 to 2.

Expectations for future factory activity were mostly stable at high levels. The future composite index inched higher from 23 to 26, and the future order backlog and new orders for exports indexes also increased slightly. The future production, shipments, and employment indexes were unchanged, while the future new orders index dropped from 39 to 27. The future capital expenditures index eased from 18 to 13 after rising last month. The future raw materials inventory index jumped from -2 to 19, and the future finished goods inventory index also moved into positive territory.

Most price indexes increased in September. The month-over-month finished goods price index edged up from 8 to 13, and the raw materials price index also inched higher. The year-over-year finished goods price index rose from 29 to 38, and the year-over-year raw materials price index also increased modestly. The future raw materials price index was unchanged, while the future finished goods price index eased from 34 to 29.

SELECTED COMMENTS

- "It has been a very strong month with a nice backlog of orders going into October."
- "We are looking very good going into the last quarter of the year. We continue to grow sales at a nice steady pace with our existing customers."
- "Recent peer group meeting had level of pessimism I have not seen in years. Change in consumer habits from traditional retail to online ordering has many examining their business models."
- "The hectic pace of orders has slowed in past 4-6 weeks. We anticipate that the peak of this business cycle has passed now and things will cool down a bit to a more balanced level of business between orders and sales."
- "Business activity is picking up. Competition for competent employees is fierce. This is exacerbated by the fact we are located in a rural area."
- "Overall we feel good, but concern is lurking that the economy is reaching a very mature part of the cycle, squeezing margins from both sides."

COMMENTS ON RECENT HURRICANES

- "So far there has been less impact than I originally anticipated but South Texas is very important to us and I have to feel it will have some impact in that area and affect industries outside of the area that will impact us as well."
- "We should receive some orders to replace equipment we have in the area."
- "Service and repair industry should push new opportunities our direction."
- "Haven't really seen anything yet, we could anticipate material shortages or price hikes in materials as a result."
- "Suppliers located in the area impacted by the hurricanes had either very short closures or no closures and it has not impacted receipts of supplies or materials at the plant."
- "We think we could be impacted threefold-- shipments in and out of those ports are delayed, impacting components and finished goods; suppliers located in those areas are delayed; our work is being delayed as contractors shift to emergency work to get all affected areas back up and running."

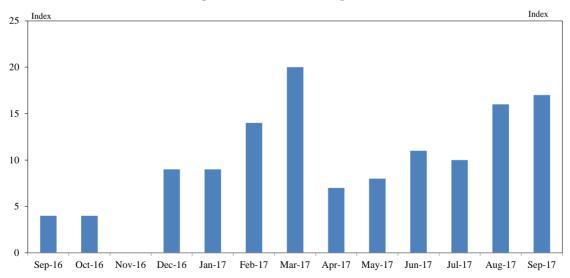
Table 1 Summary of Tenth District Manufacturing Conditions, September 2017

| | | September vs. Year Ago (percent)* | | | | Expected in Six Months (percent)* | | | | | | | | |
|--------------------------------------|----------|-----------------------------------|----------|--------|---------|-----------------------------------|--------|----------|--------|----------|--------|----------|--------|---------|
| | | No | | Diff | SA | | No | | Diff | | No | • | Diff | SA |
| Plant Level Indicators | Increase | Change | Decrease | Index^ | Index*^ | Increase | Change | Decrease | Index^ | Increase | Change | Decrease | Index^ | Index*^ |
| Composite Index | | | | 18 | 17 | | | | 35 | | | | 25 | 26 |
| Production | 43 | 41 | 16 | 27 | 22 | 71 | 14 | 15 | 56 | 55 | 30 | 15 | 40 | 38 |
| Volume of shipments | 44 | 42 | 14 | 29 | 25 | 67 | 15 | 18 | 49 | 54 | 33 | 13 | 40 | 38 |
| Volume of new orders | 30 | 51 | 19 | 12 | 10 | 62 | 22 | 15 | 47 | 47 | 34 | 19 | 28 | 27 |
| Backlog of orders | 26 | 57 | 17 | 10 | 7 | 51 | 34 | 15 | 37 | 40 | 43 | 17 | 23 | 21 |
| Number of employees | 31 | 59 | 11 | 20 | 18 | 50 | 30 | 20 | 30 | 37 | 51 | 12 | 25 | 26 |
| Average employee workweek | 20 | 68 | 12 | 8 | 7 | 44 | 43 | 13 | 31 | 21 | 65 | 13 | 8 | 7 |
| Prices received for finished product | 15 | 82 | 2 | 13 | 13 | 45 | 48 | 7 | 38 | 35 | 59 | 6 | 29 | 29 |
| Prices paid for raw materials | 28 | 67 | 5 | 24 | 24 | 65 | 27 | 8 | 56 | 49 | 44 | 7 | 42 | 39 |
| Capital expenditures | | | | | | 42 | 42 | 16 | 26 | 32 | 52 | 16 | 15 | 13 |
| New orders for exports | 14 | 78 | 7 | 7 | 6 | 23 | 63 | 13 | 10 | 19 | 70 | 11 | 8 | 8 |
| Supplier delivery time | 24 | 74 | 2 | 21 | 22 | 32 | 64 | 5 | 27 | 24 | 68 | 7 | 17 | 18 |
| Inventories: Materials | 28 | 52 | 20 | 8 | 11 | 40 | 37 | 23 | 16 | 33 | 49 | 18 | 15 | 19 |
| Inventories: Finished goods | 16 | 65 | 20 | -4 | -6 | 27 | 48 | 25 | 2 | 28 | 53 | 19 | 10 | 9 |

^{*}Percentage may not add to 100 due to rounding

Note: The September survey included 87 responses from plants in Colorado, Kansas, Nebraska, Oklahoma, Wyoming, northern New Mexico, and western Missouri.

Composite Index vs. a Month Ago



[^]Diffusion Index. The diffusion index is calculated as the percentage of total respondents reporting increases minus the percentage reporting declines.

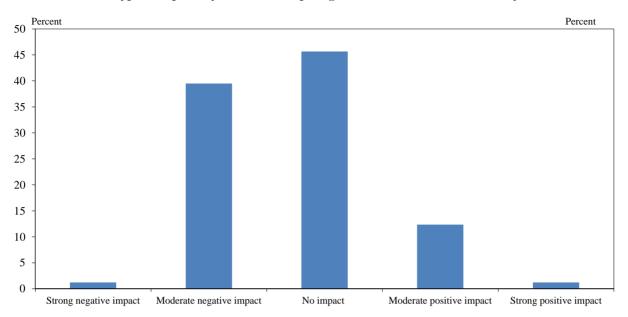
^{*/}Seasonally Adjusted Diffusion Index. The month vs. month and expected-in-six-months diffusion indexes are seasonally adjusted using Census X-12.

Table2 Historical Manufacturing Survey Indexes

| | Sep'16 | Oct'16 | Nov'16 | Dec'16 | Jan'17 | Feb'17 | Mar'17 | Apr'17 | May'17 | Jun'17 | Jul'17 | Aug'17 | Sept'17 |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|---------|
| Versus a Month Ago | | | | | | | | | | | | | |
| (seasonally adjusted) | | | | | | | | | | | | | |
| Composite Index | 4 | 4 | 0 | 9 | 9 | 14 | 20 | 7 | 8 | 11 | 10 | 16 | 17 |
| Production | 11 | 12 | 5 | 18 | 20 | 11 | 37 | 12 | -1 | 23 | 4 | 22 | 22 |
| Volume of shipments | 12 | 18 | 4 | 8 | 20 | 16 | 35 | 11 | 3 | 23 | -2 | 23 | 25 |
| Volume of new orders | 9 | 9 | 5 | 5 | 20 | 26 | 32 | 8 | 9 | 4 | 10 | 25 | 10 |
| Backlog of orders | -2 | 3 | -1 | 4 | 14 | 19 | 21 | 7 | 12 | -6 | -1 | 13 | 7 |
| Number of employees | -4 | 3 | -1 | 8 | 6 | 17 | 13 | 9 | 11 | 15 | 15 | 14 | 18 |
| Average employee workweek | 4 | 5 | -9 | 3 | 9 | 15 | 13 | -4 | 1 | 7 | 1 | 9 | 7 |
| Prices received for finished product | -7 | -6 | -4 | 10 | 0 | 1 | 9 | 5 | 8 | -2 | 5 | 8 | 13 |
| Prices paid for raw materials | 2 | 2 | 12 | 28 | 24 | 26 | 28 | 34 | 17 | 16 | 18 | 21 | 24 |
| Capital expenditures | n/a | n/a |
| New orders for exports | -4 | 0 | -3 | -4 | -5 | 9 | 2 | 4 | 4 | 3 | -2 | 4 | 6 |
| Supplier delivery time | -1 | 3 | 0 | 7 | 4 | 6 | 2 | 5 | 14 | 8 | 10 | 10 | 22 |
| Inventories: Materials | 6 | -9 | -7 | 4 | -3 | 11 | 16 | 4 | 4 | 2 | 10 | 10 | 11 |
| Inventories: Finished goods | -2 | -7 | -14 | | -4 | 5 | 17 | 8 | 0 | -2 | 7 | 2 | -6 |
| in the cites of implied goods | _ | , | | Ü | • | · | - 7 | Ü | Ü | _ | , | - | Ü |
| Versus a Year Ago | | | | | | | | | | | | | |
| (not seasonally adjusted) | | | | | | | | | | | | | |
| Composite Index | -10 | -11 | -10 | 0 | 7 | 6 | 14 | 13 | 18 | 28 | 23 | 23 | 35 |
| Production | -10 | -16 | -21 | 0 | 11 | 3 | 17 | 18 | 20 | 43 | 28 | 27 | 56 |
| Volume of shipments | -10 | -20 | -20 | 1 | 7 | 7 | 14 | 16 | 16 | 39 | 33 | 29 | 49 |
| Volume of new orders | -13 | -3 | -7 | 4 | 20 | 14 | 30 | 15 | 27 | 35 | 37 | 27 | 47 |
| Backlog of orders | -18 | -8 | -12 | -5 | 5 | 10 | 16 | 18 | 26 | 19 | 21 | 18 | 37 |
| Number of employees | -15 | -14 | -11 | -5 | 3 | -2 | 17 | 14 | 18 | 24 | 22 | 22 | 30 |
| Average employee workweek | -4 | -11 | -9 | 5 | -4 | -3 | 6 | 0 | 13 | 11 | 15 | 20 | 31 |
| Prices received for finished product | -3 | 1 | 10 | 17 | 13 | 13 | 26 | 29 | 16 | 15 | 20 | 29 | 38 |
| Prices paid for raw materials | -2 | 14 | 20 | 24 | 31 | 28 | 37 | 48 | 44 | 47 | 44 | 48 | 56 |
| Capital expenditures | -4 | -7 | -1 | 2 | -2 | 14 | 12 | 5 | 16 | 12 | 15 | 21 | 26 |
| New orders for exports | -8 | -10 | -11 | -5 | -1 | -1 | 4 | 10 | 5 | 7 | 0 | 9 | 10 |
| Supplier delivery time | -5 | -1 | 4 | 7 | 5 | 10 | 6 | 13 | 15 | 15 | 19 | 23 | 27 |
| Inventories: Materials | -4 | -19 | -15 | -9 | -3 | 3 | 1 | 3 | 8 | 22 | 10 | 18 | 16 |
| Inventories: Finished goods | -7 | -16 | -6 | -10 | -3 | -4 | 4 | -2 | 16 | 10 | 7 | 6 | 2 |
| inventories. I mislied goods | , | 10 | Ü | 10 | 3 | 7 | | _ | 10 | 10 | , | Ü | 2 |
| Expected in Six Months | | | | | | | | | | | | | |
| (seasonally adjusted) | | | | | | | | | | | | | |
| Composite Index | 11 | 16 | 11 | 17 | 27 | 29 | 32 | 17 | 30 | 25 | 19 | 23 | 26 |
| Production | 18 | 30 | 23 | 29 | 50 | 42 | 51 | 28 | 50 | 42 | 29 | 38 | 38 |
| Volume of shipments | 19 | 30 | 21 | 28 | 47 | 39 | 53 | 27 | 44 | 37 | 34 | 38 | 38 |
| Volume of new orders | 23 | 16 | 24 | 34 | 41 | 36 | 43 | 15 | 46 | 39 | 25 | 39 | 27 |
| Backlog of orders | 9 | 5 | 9 | 25 | 35 | 13 | 29 | 12 | 29 | 12 | 10 | 19 | 21 |
| Number of employees | 13 | 18 | 5 | 11 | 31 | 30 | 43 | 26 | 24 | 32 | 26 | 26 | 26 |
| Average employee workweek | 6 | 3 | 5 | 14 | 22 | 19 | 11 | 6 | 18 | 10 | 17 | 1 | 7 |
| Prices received for finished product | 7 | 7 | 9 | 21 | 21 | 21 | 27 | 24 | 23 | 21 | 13 | 34 | 29 |
| Prices paid for raw materials | 21 | 18 | 20 | 37 | 38 | 53 | 59 | 45 | 37 | 49 | 36 | 39 | 39 |
| Capital expenditures | 11 | 7 | 13 | 9 | 19 | 27 | 34 | 11 | 23 | 16 | 16 | 18 | 13 |
| New orders for exports | 5 | 1 | 5 | 3 | 4 | 13 | 9 | 10 | 17 | 11 | 0 | 4 | 8 |
| Supplier delivery time | 5 | 5 | 4 | 5 | 5 | 16 | 12 | 13 | 21 | 11 | 14 | 14 | 18 |
| Inventories: Materials | -3 | 12 | 1 | 4 | 7 | 20 | 8 | 4 | 10 | 0 | 4 | -2 | 19 |
| Inventories: Finished goods | -6 | 4 | -3 | 1 | 7 | 23 | 4 | 12 | 14 | 7 | 17 | -2 -6 | 9 |
| myemones, i misneu goods | -0 | + | -3 | 1 | / | 23 | + | 12 | 1+ | , | 1/ | -0 | 2 |

Chart 2. Special Question

What type of impact is your firm anticipating as a result of Hurricanes Harvey and/or Irma?



Commments on the recent hurricanes:

"We think we could be impacted threefold-- shipments in and out of those ports are delayed, impacting components and finished goods; suppliers located in those areas are delayed; our work is being delayed as contractors shift to emergency work to get all affected areas back up and running."

"So far there has been less impact than I originally anticipated but South Texas is very important to us and I have to feel it will have some impact in that area and affect industries outside of the area that will impact us as well."

"We should receive some orders to replace equipment we have in the area."

"Service and repair industry should push new opportunities our direction."

"Haven't really seen anything yet, we could anticipate material shortages or price hikes in materials as a result."

"Suppliers located in the area impacted by the hurricanes had either very short closures or no closures and it has not impacted receipts of supplies or materials at the plant."