## Central Bank of Nigeria

## Purchasing Managers' Index (PMI) Survey Report

Statistics Department June 2020


#### Abstract

Data and Method: The Manufacturing and Non-Manufacturing PMI Report on businesses is based on survey responses, indicating the changes in the level of business activities in the current month compared with the preceding month. For each of the indicators measured, this report shows the diffusion index of the responses. The diffusion index is computed as the percentage of responses with positive change plus half of the percentage of those reporting no change, except for supplier delivery time, which is computed as the percentage of responses with negative change plus half of the percentage of those reporting no change. The composite PMI for the manufacturing sector is computed as the weighted average of five diffusion indices, namely: production level, level of new orders, suppliers' delivery time, employment level and raw materials inventory/work in progress, with assigned weights of $25 \%, 30 \%, 15 \%, 10 \%$ and $20 \%$, respectively. The composite PMI for the non-manufacturing sector is computed from four diffusion indices, namely: business activity, level of new orders, employment level and raw materials inventory, with equal weights of $25 \%$ each.

A composite PMI above 50 points indicates that the manufacturing/non-manufacturing economy is generally expanding, 50 points indicates no change and below 50 points indicates that it is generally contracting. The subsectors reporting growth are listed in the order of highest to lowest growth, while those reporting contractions are listed in the order of the highest to the lowest contraction.


### 1.0 Introduction

The June 2020 PMI survey was conducted by the Statistics Department of the Central Bank of Nigeria during the period June 8-12, 2020. The respondents were purchasing and supply executives of manufacturing and non-manufacturing companies in the 36 states in Nigeria and the Federal Capital Territory (FCT). The Bank makes no representation regarding the individual companies, other than the information they have provided. The data contained herein further provides input for policy decisions.

### 2.0 Manufacturing June 2020 PMI

In June 2020, supplier delivery time grew, while production level, new orders, employment level and raw materials inventories declined.


The Manufacturing PMI in the month of June 2020 stood at 41.1, indicating contraction in the manufacturing sector for the second time. (Fig. 2 and Table 1). Of the 14 surveyed subsectors, 5 subsectors reported growth (above $50 \%$ threshold) in the review month in the following order: electrical equipment; cement; petroleum \& coal products; transportation equipment and paper products. However, the remaining 9 subsectors reported declines in the following order printing \& related support activities; textile, apparel, leather \& footwear; primary metal; plastics \& rubber products; nonmetallic mineral products; fabricated metal products; food, beverage \& tobacco products; chemical \& pharmaceutical products and furniture \& related products.

### 2.1 Production Level

At 36.6 points, the production level index for the manufacturing sector declined in June 2020 for the second consecutive month. Three subsectors recorded increased production level, 2 remained unchanged, while 9 subsectors recorded declines in production level in June 2020 (Fig. 3 and Table 2).


### 2.2 New Orders

At 36.4 points, the new orders index further declined from the level recorded in May 2020, indicating declines in new orders in June 2020. Five subsectors reported growth, while 9 recorded declines in the review month (Fig. 4 and Table 3).


### 2.3 Supplier Delivery Time

The manufacturing supplier delivery time index stood at 60.9 points in June 2020, indicating growth in supplier delivery time index for the second time. The index recorded growth from the contraction level recorded in March 2020. Nine of the 14 subsectors recorded improved suppliers' delivery time, 3 subsectors reported no change while 2 recorded slower delivery time in June 2020 (Fig. 5 and Table 4).

### 2.4 Employment Level

The employment level index in June 2020 stood at 38.8 points, indicating decline in employment level index for the third month. Of the 14 subsectors, 2 subsectors recorded increases in employment, one subsector remained unchanged, while the remaining 11 subsectors recorded lower employment level in the review month (Fig. 6 and Table 5).



### 2.5 Raw material Inventories

The manufacturing sector inventories index showed contraction for the third time in June 2020. At 41.0 points, the raw materials inventories index is contracting at a slower rate when compared to its level in May 2020. Three of the 14 subsectors recorded reported growth in inventories, 1 remained unchanged, while the remaining 10 subsectors recorded lower raw material inventories in the review month (Fig. 7 and Table 6).

### 3.0 Non-Manufacturing PMI Report

The composite PMI for the non-manufacturing sector stood at 35.7 points in June 2020, indicating contraction for the third consecutive month, but showing gradual recovery in non-manufacturing activities when compared to the index in May 2020. All of the 17 subsectors surveyed recorded declines in the following order: electricity, gas, steam \& air conditioning supply; arts, entertainment \& recreation; agriculture; water supply, sewage \& waste management; finance \& insurance; transportation \& warehousing; real estate rental \& leasing; accommodation \& food services; health care \& social assistance; professional, scientific, \& technical services; utilities; wholesale/retail trade; management of companies; repair, maintenance/washing of motor vehicles...; information \& communication; educational services; construction and public administration (Fig. 9 and Table 7).



### 3.1 Business Activity

At 34.3 points, the business activity index declined for the second time, indicating contraction in nonmanufacturing business activity in June 2020. All the 17 surveyed subsectors recorded declines in business activity in the review month (Fig. 10 Table 8).



### 3.2 New Orders

At 32.5 points, new orders index declined for the third time in June 2020 . All the 17 surveyed subsectors, recorded declines in new orders during the review period (Fig. 11 Table 9).

### 3.3 Employment Level

The employment level Index for the non-manufacturing sector stood at 37.4 points, indicating decrease in employment level in the review month. All the 17 surveyed subsectors recorded contraction in employment level in the review month (Fig. 12 Table 10).

### 3.4 Non-manufacturing Inventory

At 38.5 points, non-manufacturing inventory index declined for the third consecutive month. This indicates decrease in inventories in the review period. From the surveyed subsectors, one of the 17 subsectors reported no change, while 16 subsectors recorded declines in inventories in the review period (Fig. 13, Table 11).



Fig. 13: Trend of non-manufacturing inventory index

## APPENDICES

Table 1: Details of Overall Manufacturing PMI

| Index | $\begin{gathered} \text { May } \\ 2020 \\ \text { Index* } \end{gathered}$ | $\begin{gathered} \text { Jun } \\ 2020 \\ \text { Index* } \end{gathered}$ | Difference | Direction | Rate of Change | Trend** <br> (Months) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Composite PMI \1 | 42.4 | 41.1 | -1.3 | Declining | Faster | 2 |
| Production level | 44.5 | 36.6 | -7.9 | Declining | Faster | 2 |
| New orders | 42.8 | 36.4 | -6.4 | Declining | Faster | 2 |
| Supplier delivery time | 65.2 | 60.9 | -4.3 | Growing | Slower | 2 |
| Employment level | 24.5 | 38.8 | 14.3 | Declining | Slower | 3 |
| Raw materials/WIP Inventory | 37.4 | 41.0 | 3.6 | Declining | Slower | 3 |
| New Export Orders | 36.3 | 25.9 | -10.4 | Declining | Faster | 63 |
| Output Prices | 53.2 | 53.2 | 0.0 | Growing | Flat | 53 |
| Input Prices | 61.4 | 67.2 | 5.8 | Growing | Faster | 71 |
| Quantity of Purchases | 26.3 | 35.8 | 9.5 | Declining | Slower | 2 |
| Outstanding Business/Backlog of Work | 34.9 | 36.4 | 1.5 | Declining | Slower | 30 |
| Stock of Finished Goods | 39.6 | 43.3 | 3.7 | Declining | Slower | 2 |
| Manufacturing Sub-Sectors |  |  |  |  |  |  |
| Cement | 29.0 | 56.9 | 27.9 | Growing | From Contraction | 1 |
| Chemical \& pharmaceutical products | 44.0 | 42.4 | -1.6 | Declining | Faster | 3 |
| Electrical equipment | 50.8 | 61.5 | 10.7 | Growing | Faster | 2 |
| Fabricated metal products | 43.0 | 41.3 | -1.7 | Declining | Faster | 2 |
| Food, beverage \& tobacco products | 43.5 | 41.4 | -2.1 | Declining | Faster | 2 |
| Furniture \& related products | 38.2 | 43.1 | 4.9 | Declining | Slower | 2 |
| Nonmetallic mineral products | 47.3 | 37.1 | -10.2 | Declining | Faster | 3 |
| Paper products | 40.9 | 50.8 | 9.9 | Growing | From Contraction | 1 |
| Petroleum \& coal products | 35.0 | 56.7 | 21.7 | Growing | From Contraction | 1 |
| Plastics \& rubber products | 45.0 | 33.5 | -11.5 | Declining | Faster | 2 |
| Primary metal | 49.2 | 33.0 | -16.2 | Declining | Faster | 11 |
| Printing \& related support activities | 36.3 | 27.0 | -9.3 | Declining | Faster | 4 |
| Textile, apparel, leather \& footwear | 39.1 | 32.1 | -7.0 | Declining | Faster | 3 |
| Transportation equipment | 45.0 | 55.8 | 10.8 | Growing | From Contraction | 1 |

\1 The composite PMI is a weighted average of the following diffusion indices: production level, new orders, supplier deliveries, employment level and inventories. The weights assigned to these variables are $25 \%, 30 \%, 15 \%, 10 \%$ and $20 \%$ respectively.
*The series index is a diffusion index defined as a weighted percentage of high, same and low with $1.0,0.5$ and 0.0 as weights respectively.

[^0]Table 2: Non-Manufacturing at a Glance

| Index | May <br> 2020 <br> Index | Jun <br> 2020 <br> Index | Difference | Direction | Rate of Change | Trend (Months) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Composite PMM \1 | 25.3 | 35.7 | 10.4 | Declining | Slower | 3 |
| Business Activity | 19.5 | 34.3 | 14.8 | Declining | Slower | 2 |
| Level of new orders/customers/incoming business | 19.6 | 32.5 | 12.9 | Declining | Slower | 3 |
| Employment Level | 32.0 | 37.4 | 5.4 | Declining | Slower | 3 |
| Inventories | 30.1 | 38.5 | 8.4 | Declining | Slower | 3 |
| Average price of Inputs (volume weighted) | 42.6 | 46.7 | 4.1 | Declining | Slower | 2 |
| Level of outstanding business/ Backlog of work | 31.1 | 38.5 | 7.4 | Declining | Slower | 71 |
| New Exports orders | 22.6 | 27.0 | 4.4 | Declining | Slower | 71 |
| Imports | 22.7 | 29.6 | 6.9 | Declining | Slower | 71 |
| Inventory (sentiments) | 29.8 | 34.5 | 4.7 | Declining | Slower | 71 |
| Non-manufacturing sub-sectors |  |  |  |  |  |  |
| Accommodation \& food services | 26.2 | 36.0 | 9.8 | Declining | Slower | 3 |
| Agriculture | 21.4 | 40.7 | 19.3 | Declining | Slower | 3 |
| Arts, Entertainment \& Recreation | 35.9 | 41.6 | 5.7 | Declining | Slower | 2 |
| Construction | 14.8 | 29.4 | 14.6 | Declining | Slower | 3 |
| Educational services | 20.0 | 30.8 | 10.8 | Declining | Slower | 3 |
| Electricity, gas, steam \& air conditioning supply | 17.8 | 42.7 | 24.9 | Declining | Slower | 3 |
| Finance \& insurance | 23.1 | 37.6 | 14.5 | Declining | Slower | 3 |
| Health care \& social assistance | 29.9 | 35.7 | 5.8 | Declining | Slower | 2 |
| Information \& communication | 24.3 | 32.8 | 8.5 | Declining | Slower | 2 |
| Management of companies | 30.0 | 33.9 | 3.9 | Declining | Slower | 2 |
| Professional, scientific, \& technical services | 27.8 | 35.0 | 7.2 | Declining | Slower | 4 |
| Real estate rental \& leasing | 26.4 | 36.2 | 9.8 | Declining | Slower | 2 |
| Repair, Maintenance/Washing Of Motor Vehicles... | 17.0 | 33.3 | 16.3 | Declining | Slower | 2 |
| Transportation \& warehousing | 33.3 | 37.5 | 4.2 | Declining | Slower | 3 |
| Utilities | 45.8 | 35.0 | -10.8 | Declining | Faster | 2 |
| Water supply, sewage \& waste management | 25.0 | 38.6 | 13.6 | Declining | Slower | 2 |
| Wholesale/Retail trade | 28.6 | 34.5 | 5.9 | Declining | Slower | 2 |

1 The composite PMI is a simple average of the following diffusion (series) indices: business activity, new orders, employment level and inventories

Table 3: Manufacturing PMI Data Series

| $\begin{aligned} & \text { 듣 } \\ & \text { 을 } \end{aligned}$ |  | $\begin{aligned} & \text { 믈 } \\ & \text { 흘 } \\ & \text { 든 } \\ & \text { 흠 } \\ & \text { 은 } \end{aligned}$ | $\begin{aligned} & \text { 는 } \\ & \text { 믄 } \\ & 3 \\ & \frac{3}{2} \end{aligned}$ |  |  |  |  | $\begin{aligned} & \text { U } \\ & \text { 른 } \\ & \text { 言 } \\ & \text { 3 } \end{aligned}$ | $\begin{aligned} & \text { 뜬 } \\ & \text {. } \\ & \text { 言 } \\ & \text { ㅡㅡㄹ } \end{aligned}$ |  | 능 3 3 0 00 00 능 0.0 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jul '14 | 51.3 | 55.2 | 53.0 | 46.4 | 46.9 | 52.9 | 43.6 | 50.6 | 54.2 | 53.3 | 46.4 | 47.2 |
| Aug '14 | 49.7 | 49.7 | 51.2 | 49.9 | 45.9 | 52.2 | 40.8 | 48.6 | 52.7 | 50.8 | 45.4 | 48.6 |
| Sep '14 | 54.0 | 57.4 | 57.6 | 46.4 | 49.3 | 55.7 | 45.4 | 49.3 | 52.9 | 55.1 | 46.9 | 49.8 |
| Oct '14 | 51.9 | 55.1 | 55.3 | 46.2 | 46.8 | 52.4 | 45.9 | 49.7 | 56.7 | 57.1 | 50.5 | 51.7 |
| Nov '14 | 52.2 | 55.1 | 56.9 | 45.1 | 47.2 | 51.7 | 46.0 | 53.3 | 60.9 | 56.0 | 50.0 | 47.6 |
| Dec '14 | 49.8 | 51.2 | 51.1 | 49.7 | 46.8 | 48.4 | 44.6 | 53.6 | 56.3 | 51.4 | 47.5 | 51.1 |
| Jan '15 | 50.2 | 50.4 | 49.3 | 51.3 | 51.1 | 49.3 | 47.7 | 48.7 | 55.6 | 52.5 | 48.8 | 45.5 |
| Feb '15 | 53.0 | 57.4 | 54.7 | 43.8 | 50.0 | 56.4 | 50.1 | 54.0 | 60.9 | 58.0 | 50.7 | 53.7 |
| Mar '15 | 48.9 | 52.1 | 48.9 | 47.8 | 46.4 | 47.1 | 38.1 | 50.1 | 56.4 | 48.7 | 44.5 | 46.5 |
| Apr '15 | 52.0 | 56.9 | 54.1 | 42.7 | 48.9 | 53.9 | 43.0 | 50.2 | 54.4 | 53.0 | 48.3 | 48.7 |
| May '15 | 49.4 | 53.6 | 49.7 | 44.6 | 48.0 | 48.0 | 36.9 | 51.6 | 59.0 | 50.5 | 44.9 | 45.6 |
| Jun '15 | 49.5 | 51.5 | 50.8 | 42.0 | 48.5 | 53.3 | 40.0 | 49.2 | 56.7 | 53.0 | 45.3 | 49.3 |
| Jul '15 | 47.8 | 49.7 | 46.2 | 43.5 | 48.4 | 52.6 | 40.1 | 47.9 | 55.0 | 51.7 | 45.2 | 45.3 |
| Aug '15 | 48.4 | 51.0 | 50.1 | 43.1 | 44.8 | 52.4 | 37.6 | 49.0 | 53.1 | 50.2 | 43.7 | 46.1 |
| Sep '15 | 50.7 | 54.9 | 52.1 | 46.8 | 47.1 | 49.0 | 40.3 | 47.5 | 52.8 | 51.0 | 42.5 | 43.2 |
| Oct '15 | 49.2 | 52.0 | 49.3 | 42.7 | 48.4 | 53.1 | 39.8 | 49.1 | 53.8 | 48.3 | 45.6 | 46.8 |
| Nov '15 | 51.2 | 55.4 | 52.9 | 47.3 | 45.5 | 52.2 | 38.7 | 46.2 | 52.8 | 51.0 | 46.0 | 46.9 |
| Dec '15 | 51.2 | 55.4 | 52.7 | 45.2 | 47.5 | 52.7 | 38.0 | 48.6 | 56.5 | 54.5 | 45.1 | 46.4 |
| Jan 16 | 47.2 | 49.3 | 46.2 | 48.4 | 46.0 | 45.8 | 38.3 | 52.6 | 56.7 | 49.9 | 44.2 | 46.3 |
| Feb '16 | 45.5 | 45.0 | 43.0 | 52.8 | 45.0 | 44.7 | 39.2 | 53.0 | 57.0 | 42.8 | 38.5 | 44.4 |
| Mar '16 | 45.9 | 46.6 | 43.0 | 50.6 | 45.5 | 47.1 | 37.8 | 56.4 | 60.9 | 41.6 | 41.2 | 43.8 |
| Apr '16 | 43.7 | 42.7 | 41.8 | 52.2 | 42.0 | 43.0 | 36.3 | 63.9 | 67.8 | 43.6 | 42.6 | 41.6 |
| May '16 | 45.8 | 47.9 | 42.7 | 50.2 | 45.7 | 43.9 | 38.7 | 59.6 | 68.4 | 42.7 | 37.0 | 40.1 |
| Jun '16 | 41.9 | 40.2 | 37.0 | 55.6 | 42.2 | 39.4 | 35.3 | 61.4 | 70.0 | 39.0 | 40.2 | 36.0 |
| Jul '16 | 44.1 | 43.0 | 42.4 | 51.7 | 43.8 | 41.4 | 38.5 | 60.8 | 64.2 | 41.6 | 41.9 | 39.0 |
| Aug '16 | 42.1 | 40.5 | 37.5 | 57.4 | 40.4 | 40.0 | 31.2 | 64.1 | 69.8 | 39.9 | 38.3 | 38.3 |
| Sep '16 | 42.5 | 40.9 | 38.7 | 55.6 | 41.2 | 40.9 | 26.3 | 66.5 | 74.0 | 42.8 | 37.1 | 42.4 |
| Oct '16 | 44.1 | 42.3 | 40.3 | 57.7 | 42.2 | 42.9 | 37.3 | 65.2 | 71.8 | 43.5 | 39.2 | 39.9 |
| Nov '16 | 46.0 | 46.9 | 45.1 | 53.2 | 40.6 | 46.1 | 39.6 | 65.7 | 71.2 | 48.1 | 45.2 | 42.0 |
| Dec '16 | 52.0 | 57.6 | 51.8 | 47.9 | 48.6 | 51.6 | 37.2 | 70.4 | 73.2 | 52.7 | 45.3 | 48.5 |
| Jan '17 | 48.2 | 51.3 | 47.9 | 48.5 | 45.3 | 46.3 | 33.1 | 67.9 | 71.4 | 48.4 | 43.6 | 46.9 |
| Feb '17 | 44.6 | 45.2 | 44.0 | 48.7 | 41.7 | 44.8 | 38.4 | 69.9 | 70.9 | 47.7 | 43.2 | 43.9 |
| Mar '17 | 47.7 | 50.8 | 45.6 | 51.3 | 43.6 | 49.1 | 38.5 | 65.0 | 68.3 | 50.1 | 43.6 | 45.1 |
| Apr '17 | 51.1 | 58.5 | 50.1 | 47.5 | 46.6 | 50.6 | 37.7 | 65.1 | 69.2 | 45.1 | 40.0 | 46.4 |
| May '17 | 52.5 | 58.7 | 50.5 | 49.9 | 50.7 | 50.8 | 37.6 | 61.3 | 68.4 | 46.1 | 42.3 | 51.8 |
| June '17 | 52.9 | 58.2 | 51.0 | 50.3 | 51.1 | 52.3 | 32.6 | 62.7 | 66.6 | 46.2 | 43.9 | 49.1 |
| July '17 | 54.1 | 59.3 | 52.7 | 51.3 | 51.8 | 53.6 | 37.5 | 60.4 | 64.1 | 48.0 | 42.1 | 48.5 |
| Aug '17 | 53.6 | 57.4 | 52.3 | 52.0 | 51.5 | 54.9 | 36.7 | 58.8 | 64.9 | 49.0 | 47.9 | 51.6 |
| Sep '17 | 55.3 | 58.8 | 53.5 | 55.4 | 52.8 | 56.4 | 30.4 | 58.2 | 65.7 | 49.4 | 51.9 | 50.4 |
| Oct '17 | 55.0 | 58.4 | 52.8 | 55.5 | 53.1 | 56.5 | 35.5 | 55.4 | 62.7 | 49.6 | 50.8 | 50.0 |
| Nov '17 | 55.9 | 59.3 | 54.3 | 56.0 | 53.7 | 57.1 | 37.6 | 54.0 | 64.3 | 48.1 | 50.0 | 48.8 |
| Dec '17 | 59.3 | 63.2 | 60.0 | 57.4 | 53.9 | 61.1 | 40.2 | 54.3 | 63.4 | 53.6 | 45.7 | 47.4 |
| Jan '18 | 57.3 | 59.6 | 58.3 | 56.8 | 53.3 | 57.7 | 35.1 | 55.0 | 63.3 | 49.1 | 42.9 | 45.4 |
| Feb '18 | 56.3 | 57.8 | 55.6 | 57.0 | 53.9 | 58.1 | 42.0 | 55.9 | 65.4 | 54.3 | 37.6 | 53.3 |
| Mar '18 | 56.7 | 59.1 | 56.1 | 56.6 | 53.3 | 59.4 | 36.4 | 52.1 | 61.1 | 54.1 | 42.1 | 48.7 |
| Apr '18 | 56.9 | 58.6 | 55.8 | 57.4 | 55.0 | 59.5 | 37.6 | 51.3 | 62.4 | 52.9 | 41.4 | 51.1 |
| May '18 | 56.5 | 58.8 | 54.9 | 57.5 | 55.2 | 58.1 | 40.1 | 53.9 | 61.8 | 50.8 | 38.5 | 55.8 |
| June '18 | 57.0 | 59.2 | 56.2 | 56.5 | 55.4 | 57.7 | 37.6 | 53.8 | 61.9 | 47.6 | 38.0 | 51.1 |
| July '18 | 56.8 | 59.0 | 55.8 | 56.8 | 55.0 | 57.4 | 39.4 | 52.3 | 60.7 | 51.1 | 40.7 | 51.3 |
| Aug '18 | 57.1 | 59.3 | 56.9 | 55.9 | 55.5 | 57.1 | 39.7 | 50.1 | 59.3 | 50.1 | 43.1 | 50.7 |
| Sep '18 | 56.2 | 58.4 | 55.3 | 56.1 | 54.9 | 55.9 | 37.1 | 52.4 | 57.5 | 49.4 | 42.2 | 50.5 |
| Oct '18 | 56.8 | 58.9 | 56.8 | 56.4 | 54.8 | 56.2 | 39.9 | 51.2 | 56.7 | 50.9 | 39.6 | 51.5 |
| Nov '18 | 57.9 | 59.9 | 58.1 | 56.9 | 55.4 | 58.7 | 41.2 | 51.9 | 57.8 | 52.2 | 40.0 | 53.8 |
| Dec '18 | 61.1 | 63.6 | 62.3 | 58.4 | 57.0 | 63.2 | 42.1 | 51.6 | 61.3 | 56.1 | 41.7 | 50.6 |
| Jan '19 | 58.5 | 59.3 | 58.9 | 58.3 | 56.4 | 59.9 | 41.4 | 52.5 | 62.2 | 52.5 | 42.1 | 52.3 |
| Feb '19 | 57.1 | 57.5 | 56.9 | 58.2 | 56.3 | 56.2 | 39.7 | 53.7 | 60.9 | 52.1 | 44.1 | 55.4 |
| Mar '19 | 57.4 | 58.3 | 56.7 | 58.4 | 56.9 | 57.1 | 47.9 | 62.3 | 57.6 | 51.8 | 47.6 | 60.7 |
| Apr '19 | 57.7 | 58.8 | 57.2 | 58.1 | 57.0 | 57.5 | 37.4 | 52.4 | 60.2 | 57.3 | 44.5 | 54.4 |
| May '19 | 57.8 | 59.1 | 56.9 | 58.4 | 57.3 | 56.8 | 37.7 | 52.3 | 62.2 | 51.5 | 40.8 | 51.5 |
| June '19 | 57.4 | 59.3 | 55.9 | 58.7 | 57.5 | 55.0 | 38.0 | 52.4 | 62.7 | 52.1 | 43.8 | 51.1 |
| July '19 | 57.6 | 58.9 | 57.2 | 57.5 | 57.3 | 56.2 | 41.1 | 52.2 | 59.5 | 52.5 | 41.8 | 51.5 |
| Aug '19 | 57.9 | 58.7 | 57.1 | 58.3 | 57.1 | 58.7 | 39.9 | 50.3 | 57.0 | 51.2 | 42.4 | 52.1 |
| Sep '19 | 57.7 | 58.5 | 57.2 | 58.4 | 56.6 | 58.1 | 39 | 51.9 | 58.8 | 50.7 | 43.9 | 53.5 |
| Oct '19 | 58.2 | 59.3 | 57.9 | 58.6 | 56.8 | 58.6 | 40 | 52.5 | 58.4 | 53.7 | 42.5 | 53.1 |
| Nov '19 | 59.3 | 60.1 | 59.4 | 58.7 | 57.7 | 60.6 | 41.0 | 53.1 | 59.3 | 55.8 | 41.4 | 53.1 |
| Dec '19 | 60.8 | 61.8 | 61.5 | 60.5 | 58 | 62.4 | 39.1 | 51.9 | 59.2 | 57 | 45.5 | 52.8 |
| Jan '20 | 59.2 | 59.6 | 59.7 | 59.1 | 57.3 | 60.7 | 37.0 | 55.3 | 63.5 | 54.8 | 42.6 | 51.0 |
| Feb '20 | 58.3 | 58.9 | 59.1 | 58.4 | 56.4 | 58.5 | 41.9 | 53.7 | 61.4 | 55.5 | 43.3 | 51.8 |
| Mar '20 | 51.1 | 54.4 | 52.3 | 49.4 | 47.1 | 49.4 | 42.3 | 53 | 62.6 | 55.6 | 41.2 | 50.3 |
| May '20 | 42.4 | 44.5 | 42.8 | 65.2 | 24.5 | 37.4 | 36.3 | 53.2 | 61.4 | 26.3 | 34.9 | 39.6 |
| Jun '20 | 41.1 | 36.6 | 36.4 | 60.9 | 38.8 | 41.0 | 25.9 | 53.2 | 67.2 | 35.8 | 36.4 | 43.3 |

Table 4: Non-Manufacturing PMI Data Series

| $\begin{aligned} & \text { 듣 } \\ & \text { 을 } \end{aligned}$ |  |  |  |  | $\begin{aligned} & \text { 릉 } \\ & \text { 를 } \\ & \text { 르 } \end{aligned}$ |  |  |  | $\begin{aligned} & \text { 능 } \\ & \text { 를 } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jul '14 | 55.0 | 58.9 | 55.9 | 50.2 | 55.2 | 54.0 | 46.2 | 44.0 | 47.3 | 47.8 |
| Aug '14 | 58.9 | 60.6 | 59.8 | 58.3 | 57.0 | 56.1 | 47.0 | 46.1 | 46.4 | 48.1 |
| Sep '14 | 54.7 | 57.1 | 57.5 | 49.9 | 54.3 | 52.8 | 46.2 | 40.7 | 45.2 | 47.6 |
| Oct '14 | 57.3 | 59.6 | 59.4 | 53.9 | 56.4 | 53.3 | 46.4 | 40.8 | 44.9 | 43.8 |
| Nov '14 | 59.6 | 62.5 | 63.6 | 57.9 | 54.6 | 57.3 | 49.6 | 45.2 | 47.5 | 48.1 |
| Dec '14 | 53.8 | 56.2 | 56.0 | 51.4 | 51.5 | 54.5 | 45.6 | 43.6 | 46.5 | 43.8 |
| Jan '15 | 50.6 | 48.8 | 50.4 | 51.2 | 51.9 | 48.8 | 43.2 | 41.1 | 44.3 | 47.0 |
| Feb '15 | 54.0 | 54.2 | 54.7 | 52.5 | 54.5 | 54.1 | 46.0 | 43.0 | 44.6 | 46.1 |
| Mar '15 | 48.6 | 49.7 | 51.1 | 45.6 | 48.0 | 49.8 | 46.5 | 39.9 | 44.2 | 40.2 |
| Apr '15 | 53.7 | 58.2 | 56.8 | 49.1 | 50.8 | 51.5 | 46.6 | 41.1 | 44.5 | 43.0 |
| May '15 | 51.7 | 52.9 | 53.1 | 49.7 | 51.1 | 51.3 | 44.1 | 37.2 | 39.1 | 44.3 |
| Jun '15 | 50.1 | 51.5 | 50.3 | 46.4 | 52.0 | 48.5 | 44.4 | 36.9 | 40.4 | 42.7 |
| Jul '15 | 50.0 | 50.4 | 51.4 | 48.6 | 49.5 | 50.3 | 43.8 | 39.1 | 39.2 | 44.0 |
| Aug '15 | 50.7 | 52.3 | 52.4 | 48.0 | 50.1 | 50.7 | 43.0 | 39.8 | 38.3 | 44.0 |
| Sep '15 | 50.1 | 52.1 | 52.3 | 47.0 | 49.1 | 48.7 | 44.5 | 42.9 | 41.4 | 45.9 |
| Oct '15 | 51.9 | 54.2 | 54.1 | 49.3 | 50.1 | 49.9 | 43.9 | 40.3 | 42.4 | 45.2 |
| Nov '15 | 49.6 | 52.9 | 51.6 | 45.6 | 48.5 | 51.8 | 42.8 | 37.7 | 39.0 | 41.8 |
| Dec '15 | 53.4 | 55.9 | 56.4 | 50.0 | 51.5 | 54.7 | 47.0 | 41.9 | 42.7 | 47.2 |
| Jan 16 | 46.9 | 46.2 | 46.4 | 47.0 | 47.9 | 57.3 | 44.3 | 36.2 | 39.0 | 41.6 |
| Feb '16 | 44.3 | 43.7 | 42.0 | 44.5 | 47.1 | 53.6 | 39.6 | 37.5 | 36.6 | 43.6 |
| Mar '16 | 45.4 | 46.3 | 44.7 | 43.9 | 46.5 | 58.5 | 43.8 | 34.3 | 35.0 | 41.1 |
| Apr '16 | 44.3 | 44.2 | 42.2 | 43.3 | 47.6 | 62.2 | 43.1 | 31.8 | 33.1 | 39.8 |
| May '16 | 44.3 | 44.3 | 41.3 | 44.6 | 46.9 | 62.9 | 38.1 | 33.2 | 35.0 | 40.3 |
| Jun '16 | 42.3 | 40.2 | 39.6 | 42.5 | 47.1 | 60.7 | 39.6 | 33.2 | 34.7 | 38.5 |
| Jul '16 | 43.2 | 42.8 | 42.3 | 41.9 | 45.8 | 60.4 | 38.6 | 30.0 | 32.7 | 38.0 |
| Aug '16 | 43.7 | 43.6 | 42.0 | 41.4 | 47.7 | 60.8 | 39.4 | 32.9 | 34.2 | 39.4 |
| Sep '16 | 41.0 | 39.9 | 40.0 | 40.3 | 43.9 | 63.1 | 39.6 | 28.6 | 30.2 | 37.9 |
| Oct '16 | 43.4 | 43.0 | 42.7 | 41.5 | 46.4 | 65.3 | 40.9 | 32.8 | 33.8 | 38.7 |
| Nov '16 | 42.8 | 43.0 | 42.3 | 40.2 | 45.5 | 66.8 | 42.4 | 30.8 | 34.0 | 41.1 |
| Dec '16 | 47.1 | 48.2 | 46.9 | 43.8 | 49.5 | 64.0 | 41.5 | 33.8 | 35.5 | 41.6 |
| Jan '17 | 49.4 | 50.6 | 49.4 | 45.6 | 52.0 | 65.6 | 43.6 | 32.5 | 36.1 | 45.5 |
| Feb '17 | 44.5 | 45.4 | 44.9 | 42.6 | 44.9 | 65.4 | 42.9 | 33.4 | 34.5 | 38.7 |
| Mar '17 | 47.1 | 49.8 | 46.4 | 44.0 | 48.0 | 62.1 | 42.7 | 33.1 | 34.5 | 40.6 |
| Apr '17 | 49.5 | 53.3 | 50.5 | 45.5 | 48.6 | 63.1 | 41.6 | 29.2 | 33.2 | 41.1 |
| May '17 | 52.7 | 56.2 | 53.2 | 50.2 | 51.4 | 62.7 | 45.3 | 31.6 | 34.1 | 43.6 |
| June '17 | 54.2 | 57.0 | 54.6 | 53.4 | 51.8 | 58.6 | 40.5 | 30.3 | 33.5 | 42.7 |
| July '17 | 54.4 | 56.8 | 55.1 | 54.0 | 51.9 | 58.1 | 42.9 | 32.0 | 36.8 | 41.5 |
| Aug '17 | 54.1 | 56.1 | 53.5 | 54.4 | 52.3 | 54.5 | 42.8 | 34.5 | 34.8 | 42.0 |
| Sep '17 | 54.9 | 56.8 | 55.4 | 54.7 | 52.9 | 56.9 | 42.2 | 31.2 | 35.9 | 44.2 |
| Oct '17 | 55.3 | 57.5 | 55.7 | 54.4 | 53.4 | 56.4 | 41.4 | 29.6 | 35.4 | 38.9 |
| Nov '17 | 57.6 | 59.4 | 58.4 | 54.6 | 58.0 | 55.7 | 43.6 | 28.8 | 33.3 | 40.6 |
| Dec '17 | 62.1 | 67.4 | 62.2 | 55.7 | 62.9 | 56.1 | 44.6 | 34.6 | 39.1 | 40.3 |
| Jan '18 | 58.5 | 61.3 | 58.2 | 55.1 | 59.5 | 56.9 | 41.3 | 31.0 | 35.1 | 42.8 |
| Feb '18 | 56.1 | 55.6 | 53.7 | 55.3 | 59.8 | 52.8 | 41.2 | 34.7 | 39.1 | 40.3 |
| Mar '18 | 57.2 | 58.7 | 55.8 | 55.1 | 59.2 | 50.3 | 42.9 | 39.0 | 38.5 | 44.1 |
| Apr '18 | 57.5 | 58.8 | 56.4 | 55.3 | 59.5 | 50.3 | 41.5 | 34.2 | 34.9 | 45.0 |
| May '18 | 57.3 | 58.7 | 55.9 | 55.6 | 59.2 | 50.8 | 40.6 | 36.4 | 38.4 | 46.2 |
| June '18 | 57.5 | 59.1 | 56.4 | 55.9 | 58.5 | 52.2 | 44.0 | 33.2 | 40.1 | 42.4 |
| July '18 | 57.7 | 59.6 | 56.1 | 56.2 | 59.1 | 52.1 | 43.1 | 42.1 | 40.5 | 45.0 |
| Aug '18 | 58.0 | 59.3 | 56.9 | 56.7 | 58.9 | 50.8 | 43.3 | 40.1 | 40.3 | 44.8 |
| Sep '18 | 56.5 | 58.1 | 55.8 | 55.4 | 56.8 | 50.2 | 41.5 | 40.3 | 41.3 | 45.7 |
| Oct '18 | 57.0 | 58.3 | 56.4 | 55.7 | 57.6 | 50.7 | 42.8 | 39.7 | 42.2 | 45.5 |
| Nov '18 | 58.4 | 60.4 | 57.5 | 56.2 | 59.6 | 52.6 | 42.0 | 38.7 | 39.4 | 45.9 |
| Dec '18 | 62.3 | 65.2 | 63.1 | 57.9 | 62.8 | 52.4 | 42.7 | 42.0 | 41.3 | 45.8 |
| Jan '19 | 60.1 | 61.7 | 60.2 | 57.7 | 60.6 | 52.2 | 40.1 | 38.1 | 40.4 | 45.5 |
| Feb '19 | 58.4 | 59.7 | 58.6 | 57.3 | 58.2 | 50.3 | 38.8 | 36.2 | 42.2 | 44.6 |
| Mar '19 | 58.5 | 57.8 | 58.9 | 57.8 | 59.5 | 50.5 | 40.3 | 39.4 | 38.7 | 44.2 |
| Apr '19 | 58.7 | 58.4 | 59.0 | 58.7 | 58.5 | 52.1 | 43.5 | 38.8 | 40.8 | 45.0 |
| May '19 | 58.9 | 59.2 | 58.6 | 58.5 | 59.3 | 51.3 | 42.3 | 39.8 | 43.2 | 44.5 |
| June '19 | 58.6 | 58.2 | 59.2 | 58.3 | 58.8 | 52.1 | 40.3 | 43.0 | 45.3 | 46.1 |
| July '19 | 58.7 | 57.6 | 60.1 | 58.0 | 58.9 | 51.7 | 41.4 | 42.0 | 43.9 | 46.6 |
| Aug '19 | 58.8 | 58.2 | 59.6 | 57.8 | 59.8 | 51.2 | 45.1 | 44.1 | 45.2 | 48.1 |
| Sep '19 | 58.0 | 57.2 | 58.4 | 58.0 | 58.5 | 51.9 | 45.5 | 42.4 | 45.7 | 48.7 |
| Oct '19 | 58.2 | 57.9 | 58.5 | 57.1 | 59.2 | 52.2 | 42.9 | 40.4 | 41.7 | 45.1 |
| Nov '19 | 60.1 | 60.0 | 60.7 | 58.4 | 61.5 | 54.6 | 43.6 | 41.6 | 41.9 | 45.8 |
| Dec '19 | 62.1 | 62.6 | 61.9 | 60.8 | 63.1 | 56.0 | 42.5 | 43.2 | 41.8 | 43.5 |
| Jan '20 | 59.6 | 59.8 | 59.4 | 58.9 | 60.4 | 51.2 | 43.2 | 41.3 | 42.3 | 45.3 |
| Feb '20 | 58.6 | 59.3 | 58.8 | 57.8 | 58.6 | 52.1 | 44.1 | 44.6 | 42.9 | 46.0 |
| Mar '20 | 49.2 | 52.2 | 47.8 | 47.3 | 49.6 | 51.2 | 41.6 | 36.1 | 39.1 | 44.4 |
| May '20 | 25.3 | 19.5 | 19.6 | 32.0 | 30.1 | 42.6 | 31.1 | 22.6 | 22.7 | 29.8 |
| Jun '20 | 35.7 | 34.3 | 32.5 | 37.4 | 38.5 | 46.7 | 38.5 | 27.0 | 29.6 | 34.5 |


[^0]:    ** Number of month moving in current direction

