

**FOR RELEASE: June 1, 2018**

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**May 2018 Manufacturing ISM<sup>®</sup> Report On Business<sup>®</sup>**

PMI<sup>®</sup> at 58.7%

New Orders, Production, and Employment Growing

Supplier Deliveries Slowing at Faster Rate; Backlog Growing

Raw Materials Inventories Growing; Customers' Inventories Too Low

Prices Increasing at Faster Rate; Exports and Imports Growing

**(Tempe, Arizona)** — Economic activity in the manufacturing sector expanded in May, and the overall economy grew for the 109th consecutive month, say the nation's supply executives in the latest Manufacturing ISM<sup>®</sup> Report On Business<sup>®</sup>.

The report was issued today by Timothy R. Fiore, CPSM, C.P.M., Chair of the Institute for Supply Management<sup>®</sup> (ISM<sup>®</sup>) Manufacturing Business Survey Committee: "The May PMI<sup>®</sup> registered 58.7 percent, an increase of 1.4 percentage points from the April reading of 57.3 percent. The New Orders Index registered 63.7 percent, an increase of 2.5 percentage points from the April reading of 61.2 percent. The Production Index registered 61.5 percent, a 4.3 percentage point increase compared to the April reading of 57.2 percent. The Employment Index registered 56.3 percent, an increase of 2.1 percentage points from the April reading of 54.2 percent. The Supplier Deliveries Index registered 62 percent, a 0.9 percentage point increase from the April reading of 61.1 percent. The Inventories Index registered 50.2 percent, a decrease of 2.7 percentage points from the April reading of 52.9 percent. The Prices Index registered 79.5 percent in May, a 0.2 percentage point increase from the April reading of 79.3 percent, indicating higher raw materials prices for the 27th consecutive month.

“Comments from the panel reflect continued expanding business strength. Demand remains strong, with the New Orders Index at 60 or above for the 13th straight month, and the Customers’ Inventories Index remaining at very low levels. The Backlog of Orders Index continued expanding, with its highest reading since April 2004, when it registered 66.5 percent. Consumption, described as production and employment, continues to expand in spite of labor and skill shortages. Inputs, expressed as supplier deliveries, inventories and imports, had expansion declines, due primarily to inventory reductions likely caused by supplier performance issues. Lead-time extensions, steel and aluminum disruptions, supplier labor issues, and transportation difficulties continue. Export orders expanded at slower rates. The Prices Index is at its highest level since April 2011, when it registered 82.6 percent. Demand remains robust, but the nation’s employment resources and supply chains continue to struggle. Respondents say price pressure at their companies is causing price-increase discussions as we prepare to enter H2.”

Of the 18 manufacturing industries, 16 reported growth in May, in the following order: Textile Mills; Nonmetallic Mineral Products; Electrical Equipment, Appliances & Components; Printing & Related Support Activities; Fabricated Metal Products; Furniture & Related Products; Machinery; Chemical Products; Food, Beverage & Tobacco Products; Computer & Electronic Products; Petroleum & Coal Products; Plastics & Rubber Products; Miscellaneous Manufacturing; Transportation Equipment; Paper Products; and Primary Metals. No industry reported a decrease in PMI<sup>®</sup> in May compared to April.

What respondents are saying...

- “We are currently overselling our forecast and don’t see an end to the upswing in business. We are very concerned, however, about the tariffs proposed in Section 301 and are focusing on alternatives to Chinese sourcing.” (Transportation Equipment)
- “Very difficult to hire skilled and unskilled labor.” (Food, Beverage & Tobacco Products)
- “We are concerned about the strong dollar affecting our export orders as well as the steel tariffs, which are causing domestic steel prices to rise.” (Fabricated Metal Products)
- “Strong demand from (agricultural) business; solid demand in all other business segments.” (Chemical Products)
- “Sales remain strong. Lead times and direct material costs are soaring.” (Machinery)
- “Suppliers are seeing price increases and trying to pass them on.” (Miscellaneous Manufacturing)
- “Continued talk around steel tariffs has resulted in price increases for domestic line pipe, while HRC seems to be moving sideways. Temporary exemptions for allies and an agreement with South Korea have not calmed the market.” (Petroleum & Coal Products)
- “Growth seems to be coming in the construction industry, but at a slower pace than expected with delays due to weather in the U.S. Business in (Latin America) is way up, and Canada is off to a decent start.” (Nonmetallic Mineral Products)

- “Industry demand is causing price increases. Fuel prices are also on the rise, and there have been (price) increases associated with that.” (Primary Metals)
- “Severe allocation, long lead times and upward price pressure, particularly in the electronic components market, continue to hamper our ability to meet customer demand and our shipping schedule.” (Computer & Electronic Products)

Manufacturing at a Glance  
**May 2018**

Index	Series Index May	Series Index Apr	Percentage Point Change	Direction	Rate of Change	Trend* (Months)
<b>PMI<sup>®</sup></b>	58.7	57.3	+1.4	Growing	Faster	21
<b>New Orders</b>	63.7	61.2	+2.5	Growing	Faster	29
<b>Production</b>	61.5	57.2	+4.3	Growing	Faster	21
<b>Employment</b>	56.3	54.2	+2.1	Growing	Faster	20
<b>Supplier Deliveries</b>	62.0	61.1	+0.9	Slowing	Faster	20
<b>Inventories</b>	50.2	52.9	-2.7	Growing	Slower	5
<b>Customers’ Inventories</b>	39.6	44.3	-4.7	Too Low	Faster	20
<b>Prices</b>	79.5	79.3	+0.2	Increasing	Faster	27
<b>Backlog of Orders</b>	63.5	62.0	+1.5	Growing	Faster	16
<b>New Export Orders</b>	55.6	57.7	-2.1	Growing	Slower	27
<b>Imports</b>	54.1	57.8	-3.7	Growing	Slower	16
<b>OVERALL ECONOMY</b>				Growing	Faster	109
<b>Manufacturing Sector</b>				Growing	Faster	21

**Manufacturing ISM<sup>®</sup> Report On Business<sup>®</sup>** data is seasonally adjusted for the New Orders, Production, Employment and Supplier Deliveries Indexes.

\*Number of months moving in current direction.

Commodities reported up/down in price and in short supply

### **Commodities Up in Price**

Aluminum (19); Aluminum Based Products; Brass; Capacitors; Caustic Soda (11); Cobalt; Copper (7); Corrugate (20); Corrugated Boxes; Corrugated Cartons; Electrical Components (2); Freight (4); Paper; Resistors; Steel — Galvanized; Steel — Hot Rolled (18); Steel — Hot Rolled Plate; Steel — Stainless (2); Steel — Stainless Steel Bar; Steel — Stainless Steel Sheet; Steel Based Products; and Wood (2).

### **Commodities Down in Price**

None.

### **Commodities in Short Supply**

Aluminum; Capacitors (11); Electrical Components (2); Electronic Components; Freight; Memory; Resistors (7); Steel Based Products; and Steel – Hot Rolled (2).

The number of consecutive months the commodity is listed is indicated after each item.

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May 2018 Manufacturing Index Summaries

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### **PMI<sup>®</sup>**

Manufacturing expanded in May as the PMI<sup>®</sup> registered 58.7 percent, an increase of 1.4 percentage points from the April reading of 57.3 percent. “This indicates strong growth in manufacturing for the 21st consecutive month, led by continued expansion in new orders, production and employment. However, inventories are struggling to maintain expansion levels, and suppliers continue to deliver at essentially the same rate as the previous month, relative to production,” says Fiore. A reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally contracting.

A PMI<sup>®</sup> above 43.2 percent, over a period of time, generally indicates an expansion of the overall economy. Therefore, the May PMI<sup>®</sup> indicates growth for the 109th consecutive month in the overall economy and the 21st straight month of growth in the manufacturing sector. “The past relationship between the PMI<sup>®</sup> and the overall economy indicates that the PMI<sup>®</sup> for May (58.7 percent) corresponds to a 4.8-percent increase in real gross domestic product (GDP) on an annualized basis.”

## The Last 12 Months

Month	PMI <sup>®</sup>
May 2018	58.7
Apr 2018	57.3
Mar 2018	59.3
Feb 2018	60.8
Jan 2018	59.1
Dec 2017	59.3
Month	PMI <sup>®</sup>
Nov 2017	58.2
Oct 2017	58.5
Sep 2017	60.2
Aug 2017	59.3
Jul 2017	56.5
Jun 2017	56.7

Average for 12 months - 58.7

High - 60.8

Low - 56.5

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## New Orders

ISM<sup>®</sup>'s New Orders Index registered 63.7 percent in May, which is an increase of 2.5 percentage points when compared to the 61.2 percent reported for April, indicating growth in new orders for the 29th consecutive month. "The faster rate of new orders expansion reversed a two-month expansion slowing and supported the index being above 60 percent for the 13th straight month. Customer inventories remain too low, and backlog expansion continues at very high levels," says Fiore. A New Orders Index above 52.4 percent, over time, is generally consistent with an increase in the Census Bureau's series on manufacturing orders (in constant 2000 dollars).

Fifteen of 18 industries reported growth in new orders in May, listed in the following order: Nonmetallic Mineral Products; Computer & Electronic Products; Fabricated Metal Products; Electrical Equipment, Appliances & Components; Furniture & Related Products; Miscellaneous Manufacturing; Textile Mills; Printing & Related Support Activities; Chemical Products; Machinery; Transportation Equipment; Food, Beverage & Tobacco Products; Petroleum & Coal Products; Plastics & Rubber Products; and Primary Metals. The only industry reporting a decrease in new orders in May compared to April is Apparel, Leather & Allied Products.

<b>New Orders</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>May 2018</b>	37.5	56.3	6.2	+31.3	63.7
<b>Apr 2018</b>	42.4	49.5	8.1	+34.3	61.2
<b>Mar 2018</b>	43.3	48.0	8.6	+34.7	61.9
<b>Feb 2018</b>	40.6	50.9	8.5	+32.1	64.2

## **Production**

ISM<sup>®</sup>'s Production Index registered 61.5 percent in May, which is an increase of 4.3 percentage points when compared to the 57.2 percent reported for April, indicating growth in production for the 21st consecutive month. "Production expansion continues; reversing four months of expansion slowing and contributing positively to PMI<sup>®</sup> expansion in May. Labor constraints and supply chain disruptions, however continue to limit full production potential," says Fiore. An index above 51.5 percent, over time, is generally consistent with an increase in the Federal Reserve Board's Industrial Production figures.

The 15 industries reporting growth in production during the month of May — listed in order — are: Textile Mills; Furniture & Related Products; Electrical Equipment, Appliances & Components; Nonmetallic Mineral Products; Plastics & Rubber Products; Fabricated Metal Products; Printing & Related Support Activities; Machinery; Chemical Products; Food, Beverage & Tobacco Products; Computer & Electronic Products; Miscellaneous Manufacturing; Petroleum & Coal Products; Transportation Equipment; and Paper Products. The only industry reporting a decrease in production in May compared to April is Apparel, Leather & Allied Products.

<b>Production</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>May 2018</b>	35.8	55.2	8.9	+26.9	61.5
<b>Apr 2018</b>	33.6	58.5	8.0	+25.6	57.2
<b>Mar 2018</b>	36.1	55.7	8.2	+27.9	61.0

<b>Production</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>Feb 2018</b>	35.5	54.9	9.6	+25.9	62.0

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### **Employment**

ISM®'s Employment Index registered 56.3 percent in May, an increase of 2.1 percentage points when compared to the April reading of 54.2 percent. This indicates growth in employment in May for the 20th consecutive month. "Employment reversed two months of slowing expansion and supported production growth. Respondents continue to see the labor market as a constraint to their production and their suppliers' production," says Fiore. An Employment Index above 50.8 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) data on manufacturing employment.

Of the 18 manufacturing industries, the 13 reporting employment growth in May — listed in order — are: Textile Mills; Petroleum & Coal Products; Electrical Equipment, Appliances & Components; Food, Beverage & Tobacco Products; Chemical Products; Furniture & Related Products; Miscellaneous Manufacturing; Fabricated Metal Products; Plastics & Rubber Products; Transportation Equipment; Computer & Electronic Products; Machinery; and Paper Products. The three industries reporting a decrease in employment in May compared to April are: Apparel, Leather & Allied Products; Printing & Related Support Activities; and Nonmetallic Mineral Products.

<b>Employment</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>May 2018</b>	27.6	61.2	11.3	+16.3	56.3
<b>Apr 2018</b>	23.1	66.8	10.2	+12.9	54.2
<b>Mar 2018</b>	22.9	66.3	10.8	+12.2	57.3
<b>Feb 2018</b>	28.4	61.8	9.8	+18.7	59.7

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### **Supplier Deliveries**

The delivery performance of suppliers to manufacturing organizations was slower in May, as the Supplier Deliveries Index registered 62 percent. This is 0.9 percentage point higher than the 61.1 percent reported for April. "This is the 20th straight month of slowing supplier deliveries that continue to constrain production growth. Lead-time extensions for production materials, supplier labor shortages, transportation delays, and ongoing uncertainty in the steel and aluminum markets continue to restrict production output. The index recorded its highest level since the 2017 hurricane period (63.4 in September 2017). Before that, the highest reading was in March 2010, when the index reached 64," says

Fiore. A reading below 50 percent indicates faster deliveries, while a reading above 50 percent indicates slower deliveries.

The 17 industries reporting slower supplier deliveries in May — listed in order — are: Printing & Related Support Activities; Apparel, Leather & Allied Products; Fabricated Metal Products; Machinery; Petroleum & Coal Products; Plastics & Rubber Products; Textile Mills; Electrical Equipment, Appliances & Components; Paper Products; Nonmetallic Mineral Products; Food, Beverage & Tobacco Products; Computer & Electronic Products; Furniture & Related Products; Primary Metals; Transportation Equipment; Chemical Products; and Miscellaneous Manufacturing. No industries reported faster supplier deliveries in May compared to April.

<b>Supplier Deliveries</b>	<b>% Slower</b>	<b>% Same</b>	<b>% Faster</b>	<b>Net</b>	<b>Index</b>
<b>May 2018</b>	29.9	65.7	4.4	+25.5	62.0
<b>Apr 2018</b>	25.6	71.3	3.2	+22.4	61.1
<b>Mar 2018</b>	28.4	65.9	5.7	+22.7	60.6
<b>Feb 2018</b>	26.2	70.4	3.4	+22.8	61.1

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#### **Inventories\***

The Inventories Index registered 50.2 percent in May, which is a decrease of 2.7 percentage points when compared to the 52.9 percent reported for April, indicating raw materials inventories grew in May. “Suppliers were not able to maintain desired inventory expansion levels consistent with production demands for the third straight month. Wide-scale supplier lead-time extensions and freight uncertainties continue to impact inventory accounts,” says Fiore. An Inventories Index greater than 43 percent, over time, is generally consistent with expansion in the Bureau of Economic Analysis (BEA) figures on overall manufacturing inventories (in chained 2000 dollars).

The eight industries reporting higher inventories in May — listed in order — are: Apparel, Leather & Allied Products; Printing & Related Support Activities; Textile Mills; Nonmetallic Mineral Products; Electrical Equipment, Appliances & Components; Fabricated Metal Products; Chemical Products; and Machinery. The six industries reporting lower inventories in May — listed in order — are: Plastics & Rubber Products; Petroleum & Coal Products; Paper Products; Miscellaneous Manufacturing; Transportation Equipment; and Computer & Electronic Products.

<b>Inventories</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>May 2018</b>	17.7	65.1	17.3	+0.4	50.2
<b>Apr 2018</b>	20.4	65.0	14.6	+5.8	52.9



<b>Inventories</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>Mar 2018</b>	22.1	66.7	11.1	+11.0	55.5
<b>Feb 2018</b>	23.8	66.0	10.3	+13.5	56.7

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### **Customers' Inventories\***

ISM<sup>®</sup>'s Customers' Inventories Index registered 39.6 percent in May, which is 4.7 percentage points lower than the 44.3 percent reported for April, indicating that customers' inventory levels were still considered too low in May. "Customers' inventory levels are too low for the 20th consecutive month supporting an overall positive environment for production output growth in the near term," says Fiore.

The only manufacturing industry reporting customers' inventories as too high during the month of May is Miscellaneous Manufacturing. The 10 industries reporting customers' inventories as too low during May — listed in order — are: Plastics & Rubber Products; Electrical Equipment, Appliances & Components; Machinery; Chemical Products; Paper Products; Food, Beverage & Tobacco Products; Computer & Electronic Products; Transportation Equipment; Fabricated Metal Products; and Primary Metals.

<b>Customers' Inventories</b>	<b>% Reporting</b>	<b>% Too High</b>	<b>% About Right</b>	<b>% Too Low</b>	<b>Net</b>	<b>Index</b>
<b>May 2018</b>	80	7.3	64.5	28.2	-20.9	39.6
<b>Apr 2018</b>	87	9.7	69.2	21.1	-11.4	44.3
<b>Mar 2018</b>	80	7.8	68.5	23.7	-16.0	42.0
<b>Feb 2018</b>	50	5.1	77.3	17.7	-12.6	43.7

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### **Prices\***

The ISM<sup>®</sup> Prices Index registered 79.5 percent in May, an increase of 0.2 percentage point from the April level of 79.3 percent, indicating an increase in raw materials prices for the 27th consecutive month. In May, 62.2 percent of respondents reported paying higher prices, 3.1 percent reported paying lower prices, and 34.7 percent of supply executives reported paying the same prices as in April. The Prices Index again expanded to its highest level since May 2011, when it registered 82.6 percent. "The increases in prices across all industry sectors continues. The Business Survey Committee noted price increases in metals (all steels, steel components, aluminum and copper), corrugate, freight, electronic components, wood and some chemicals. Shortages continue in electronics components, with steels, steel-based products, electrical components, aluminum and freight added to the list this month," says

Fiore. A Prices Index above 52.4 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) Producer Price Index for Intermediate Materials.

Seventeen industries reported paying increased prices for raw materials in May, in the following order: Apparel, Leather & Allied Products; Printing & Related Support Activities; Electrical Equipment, Appliances & Components; Miscellaneous Manufacturing; Petroleum & Coal Products; Fabricated Metal Products; Food, Beverage & Tobacco Products; Nonmetallic Mineral Products; Primary Metals; Machinery; Computer & Electronic Products; Paper Products; Textile Mills; Transportation Equipment; Furniture & Related Products; Chemical Products; and Plastics & Rubber Products. No industry reported a decrease in prices in May compared to April.

<b>Prices</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>May 2018</b>	62.2	34.7	3.1	+59.1	79.5
<b>Apr 2018</b>	61.2	36.2	2.6	+58.6	79.3
<b>Mar 2018</b>	57.1	42.1	0.8	+56.2	78.1
<b>Feb 2018</b>	51.0	46.4	2.7	+48.3	74.2

#### **Backlog of Orders\***

ISM<sup>®</sup>'s Backlog of Orders Index registered 63.5 percent in May, which is 1.5 percentage points higher than the 62 percent reported in April, indicating growth in order backlogs for the 16th consecutive month. "Backlog expansion continued during the period, with the index reaching its highest level since April 2004, when it registered 66.5 percent. Strong backlog, extremely low levels of customer inventory and continued strong new order expansion indicate that production requirements should remain robust into Q3," says Fiore.

The 13 industries reporting growth in order backlogs in May — listed in order — are: Printing & Related Support Activities; Paper Products; Nonmetallic Mineral Products; Plastics & Rubber Products; Computer & Electronic Products; Fabricated Metal Products; Chemical Products; Transportation Equipment; Electrical Equipment, Appliances & Components; Machinery; Furniture & Related Products; Food, Beverage & Tobacco Products; and Miscellaneous Manufacturing. The only industry reporting a decrease in order backlogs during May is Apparel, Leather & Allied Products.

<b>Backlog of Orders*</b>	<b>% Reporting</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>May 2018</b>	89	34.8	57.5	7.7	+27.1	63.5
<b>Apr 2018</b>	88	32.3	59.3	8.3	+24.0	62.0

<b>Backlog of Orders*</b>	<b>% Reporting</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>Mar 2018</b>	87	32.1	55.4	12.5	+19.7	59.8
<b>Feb 2018</b>	88	31.8	56.0	12.2	+19.6	59.8

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### **New Export Orders\***

ISM<sup>®</sup>'s New Export Orders Index registered 55.6 percent in May, a decrease of 2.1 percentage points when compared to the 57.7 percent reported for April, indicating growth in new export orders for the 27th consecutive month. "Five of six big industry sectors continued to expand export activity during the period, in spite of comments noting the strength of the U.S. Dollar," says Fiore.

The eight industries reporting growth in new export orders in May — listed in order — are: Nonmetallic Mineral Products; Furniture & Related Products; Chemical Products; Computer & Electronic Products; Transportation Equipment; Machinery; Plastics & Rubber Products; and Fabricated Metal Products. Two industries — Apparel, Leather & Allied Products; and Primary Metals — reported a decrease in new export orders in May as compared to April. Eight industries reported no change in raw materials inventories in April compared to March.

<b>New Export Orders*</b>	<b>% Reporting</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>May 2018</b>	79	17.3	76.5	6.2	+11.2	55.6
<b>Apr 2018</b>	79	18.6	78.2	3.2	+15.4	57.7
<b>Mar 2018</b>	80	22.6	72.0	5.3	+17.3	58.7
<b>Feb 2018</b>	79	27.9	69.8	2.3	+25.6	62.8

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### **Imports\***

ISM<sup>®</sup>'s Imports Index registered 54.1 percent in May, a decrease of 3.7 percentage points when compared to the 57.8 percent reported for April, indicating that imports grew in May for the 16th consecutive month. "Imports continued to expand to support production demand, but at slower expansion rates," says Fiore.

The six industries reporting growth in imports during the month of May — listed in order — are: Furniture & Related Products; Electrical Equipment, Appliances & Components; Chemical Products; Computer & Electronic Products; Transportation Equipment; and Machinery. The three industries that reported a decrease in imports during May compared to April are: Petroleum & Coal Products; Paper

Products; and Plastics & Rubber Products. Eight industries reported no change in imports in May compared to April.

<b>Imports</b>	<b>% Reporting</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
<b>May 2018</b>	85	17.1	74.0	8.9	+8.2	54.1
<b>Apr 2018</b>	86	21.6	72.4	6.0	+15.6	57.8
<b>Mar 2018</b>	84	26.1	67.1	6.7	+19.4	59.7
<b>Feb 2018</b>	82	24.5	71.9	3.5	+21.0	60.5

\*The Inventories, Customers' Inventories, Prices, Backlog of Orders, New Export Orders and Imports Indexes do not meet the accepted criteria for seasonal adjustments.

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### **Buying Policy**

Average commitment lead time for Capital Expenditures decreased in May by two days, to 143 days. Average lead time for Production Materials increased by three days, to 70 days. Average lead time for Maintenance, Repair and Operating (MRO) Supplies decreased by two days, to 33 days. "Capital expenditure lead time contracted slightly, with production material lead time increasing during May, which is applying negative pressure to the Inventory Index," says Fiore.

### **Percent Reporting**

<b>Capital Expenditures</b>	<b>Hand-to-Mouth</b>	<b>30 Days</b>	<b>60 Days</b>	<b>90 Days</b>	<b>6 Months</b>	<b>1 Year +</b>	<b>Average Days</b>
<b>May 2018</b>	19	6	10	19	27	19	143
<b>Apr 2018</b>	21	5	10	21	21	22	145
<b>Mar 2018</b>	22	5	12	15	29	17	139
<b>Feb 2018</b>	21	6	11	17	23	22	145
<b>Production Materials</b>	<b>Hand-to-Mouth</b>	<b>30 Days</b>	<b>60 Days</b>	<b>90 Days</b>	<b>6 Months</b>	<b>1 Year +</b>	<b>Average Days</b>
<b>May 2018</b>	13	30	26	20	7	4	70
<b>Apr 2018</b>	10	35	28	17	7	3	67
<b>Mar 2018</b>	13	37	23	18	6	3	63

<b>Production Materials</b>	<b>Hand-to-Mouth</b>	<b>30 Days</b>	<b>60 Days</b>	<b>90 Days</b>	<b>6 Months</b>	<b>1 Year +</b>	<b>Average Days</b>
<b>Feb 2018</b>	12	37	27	14	7	3	64

<b>MRO Supplies</b>	<b>Hand-to-Mouth</b>	<b>30 Days</b>	<b>60 Days</b>	<b>90 Days</b>	<b>6 Months</b>	<b>1 Year +</b>	<b>Average Days</b>
<b>May 2018</b>	32	44	16	7	1	0	33
<b>Apr 2018</b>	35	41	15	7	2	0	35
<b>Mar 2018</b>	39	37	17	4	3	0	34
<b>Feb 2018</b>	33	42	17	6	2	0	33

### **About This Report**

DO NOT CONFUSE THIS NATIONAL REPORT with the various regional purchasing reports released across the country. The national report's information reflects the entire U.S., while the regional reports contain primarily regional data from their local vicinities. Also, the information in the regional reports is not used in calculating the results of the national report. The information compiled in this report is for the month of May 2018..

The data presented herein is obtained from a survey of manufacturing supply executives based on information they have collected within their respective organizations. ISM<sup>®</sup> makes no representation, other than that stated within this release, regarding the individual company data collection procedures. The data should be compared to all other economic data sources when used in decision-making.

### **Data and Method of Presentation**

The **Manufacturing ISM<sup>®</sup> Report On Business<sup>®</sup>** is based on data compiled from purchasing and supply executives nationwide. The composition of the Manufacturing Business Survey Committee is stratified according to the North American Industry Classification System (NAICS) and each of the following NAICS-based industry's contribution to gross domestic product (GDP): Food, Beverage & Tobacco Products; Textile Mills; Apparel, Leather & Allied Products; Wood Products; Paper Products; Printing & Related Support Activities; Petroleum & Coal Products; Chemical Products; Plastics & Rubber Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliances & Components; Transportation Equipment; Furniture & Related Products; and Miscellaneous Manufacturing (products such as medical equipment and supplies, jewelry, sporting goods, toys and office supplies). The data are weighted based on each industry's contribution to GDP. Beginning in January 2018, computation of the indexes is accomplished utilizing unrounded numbers.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, Backlog of Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Customers' Inventories, Employment and Prices), this

report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries) and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index. Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive).

The resulting single index number for those meeting the criteria for seasonal adjustments (PMI<sup>®</sup>, New Orders, Production, Employment and Supplier Deliveries) is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements, and differences attributable to non-moveable holidays. All seasonal adjustment factors are subject annually to relatively minor changes when conditions warrant them. The PMI<sup>®</sup> is a composite index based on the diffusion indexes of five of the indexes with equal weights: New Orders (seasonally adjusted), Production (seasonally adjusted), Employment (seasonally adjusted), Supplier Deliveries (seasonally adjusted), and Inventories.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. A PMI<sup>®</sup> reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally declining. A PMI<sup>®</sup> above 43.2 percent, over a period of time, indicates that the overall economy, or gross domestic product (GDP), is generally expanding; below 43.2 percent, it is generally declining. The distance from 50 percent or 43.2 percent is indicative of the strength of the expansion or decline. With some of the indicators within this report, ISM<sup>®</sup> has indicated the departure point between expansion and decline of comparable government series, as determined by regression analysis. The **Manufacturing ISM<sup>®</sup> Report On Business<sup>®</sup>** survey is sent out to Manufacturing Business Survey Committee respondents the first part of each month. Respondents are asked to ONLY report on information for the current month. ISM<sup>®</sup> receives survey responses throughout most of any given month, with the majority of respondents generally waiting until late in the month to submit responses in order to give the most accurate picture of current business activity. ISM<sup>®</sup> then compiles the report for release on the first business day of the following month.

The industries reporting growth, as indicated in the **Manufacturing ISM<sup>®</sup> Report On Business<sup>®</sup>** monthly report, are listed in the order of most growth to least growth. For the industries reporting contraction or decreases, those are listed in the order of the highest level of contraction/decrease to the least level of contraction/decrease.

Responses to Buying Policy reflect the percent reporting the current month's lead time, the approximate weighted number of days ahead for which commitments are made for Capital Expenditures; Production Materials; and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (five days), 30 days, 60 days, 90 days, six months (180 days), a year or more (360 days), and the weighted average number of days. These responses are raw data, never revised, and not seasonally adjusted since there is no significant seasonal pattern.

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## About Institute for Supply Management<sup>®</sup>

Institute for Supply Management<sup>®</sup> (ISM<sup>®</sup>) serves supply management professionals in more than 90 countries. Its 50,000 members around the world manage about US\$1 trillion in corporate and government supply chain procurement annually. Founded in 1915 as the first supply management

institute in the world, ISM is committed to advancing the practice of supply management to drive value and competitive advantage for its members, contributing to a prosperous and sustainable world. ISM leads the profession through the ISM Report On Business<sup>®</sup>, its highly regarded certification programs and the ISM Mastery Model<sup>®</sup>. This report has been issued by the association since 1931, except for a four-year interruption during World War II.

The full text version of the **Manufacturing ISM<sup>®</sup> Report On Business<sup>®</sup>** is posted on ISM<sup>®</sup>'s website at [www.ismrob.org](http://www.ismrob.org) on the first business day\* of every month after 10:00 a.m. ET.

The next **Manufacturing ISM<sup>®</sup> Report On Business<sup>®</sup>** featuring **June 2018** data will be released at 10:00 a.m. ET on **Monday, July 2, 2018**.

\*Unless the NYSE is closed.