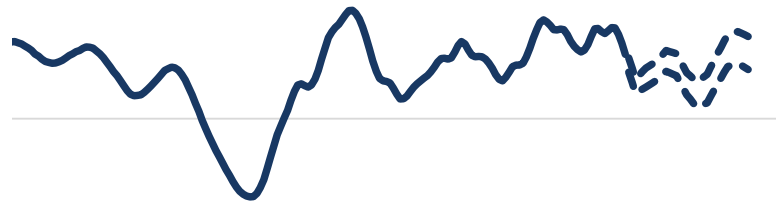




Forecast

March 2019

Company A



ITR Economics™ • Manchester, NH
603.796.2500 • itreconomics.com



Company A

Billions of \$



	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21
<i>Lower Forecast Range</i>	3.5	1.6	2.0	2.4	3.0	2.7	1.5	0.7	1.0	2.2	3.3	3.5	3.1
Annual Growth Rate (%)	3.8	2.1	2.6	3.0	3.7	3.4	2.2	1.5	1.9	3.2	4.3	4.5	4.2
<i>Upper Forecast Range</i>	4.1	2.5	3.2	3.6	4.3	4.1	2.9	2.3	2.8	4.1	5.3	5.5	5.2
Actual	4.1												
<i>Lower Forecast Range</i>	187.4	187.8	190.0	192.4	193.5	193.7	194.0	194.9	196.7	199.3	201.8	203.3	204.6
Annual Sales (Billions of \$)	187.9	188.6	191.1	193.5	194.8	195.0	195.3	196.4	198.5	201.1	203.7	205.3	206.7
<i>Upper Forecast Range</i>	188.4	189.4	192.2	194.7	196.0	196.3	196.7	198.0	200.2	203.0	205.7	207.2	208.8
Actual	188.4												
Quarterly Sales (Billions of \$)	190.3	193.6	194.5	195.8	195.2	194.5	195.8	200.2	203.3	205.3	206.1	206.5	209.0
Actual	190.6												

Outlook:

- The Sales 12MMT will rise through at least the end of 2021.
- Despite this, expect the pace of rise to generally slow into the latter half of 2020.
- Sales will subsequently rise at an accelerating pace into the second half of 2021.

Results:

- The Sales 12MMT ended 2018 4.1% above the 2017 level, coming in within forecast range for 4Q18.
- Our analysis of leading indicators suggests that the forecast is an accurate outlook for the coming three years. Therefore, the forecast is unchanged and has been extended through 4Q21.

Supporting Evidence:

- Ongoing decline in the US Motor Vehicle Metal Stamping Production Index 12/12 supports near-term decline in the Sales 12/12.
- Expected rise in the Sales 12/12 in 2H19 is in line with recent rise in the US Motor Vehicle Parts Production Index 12/12.

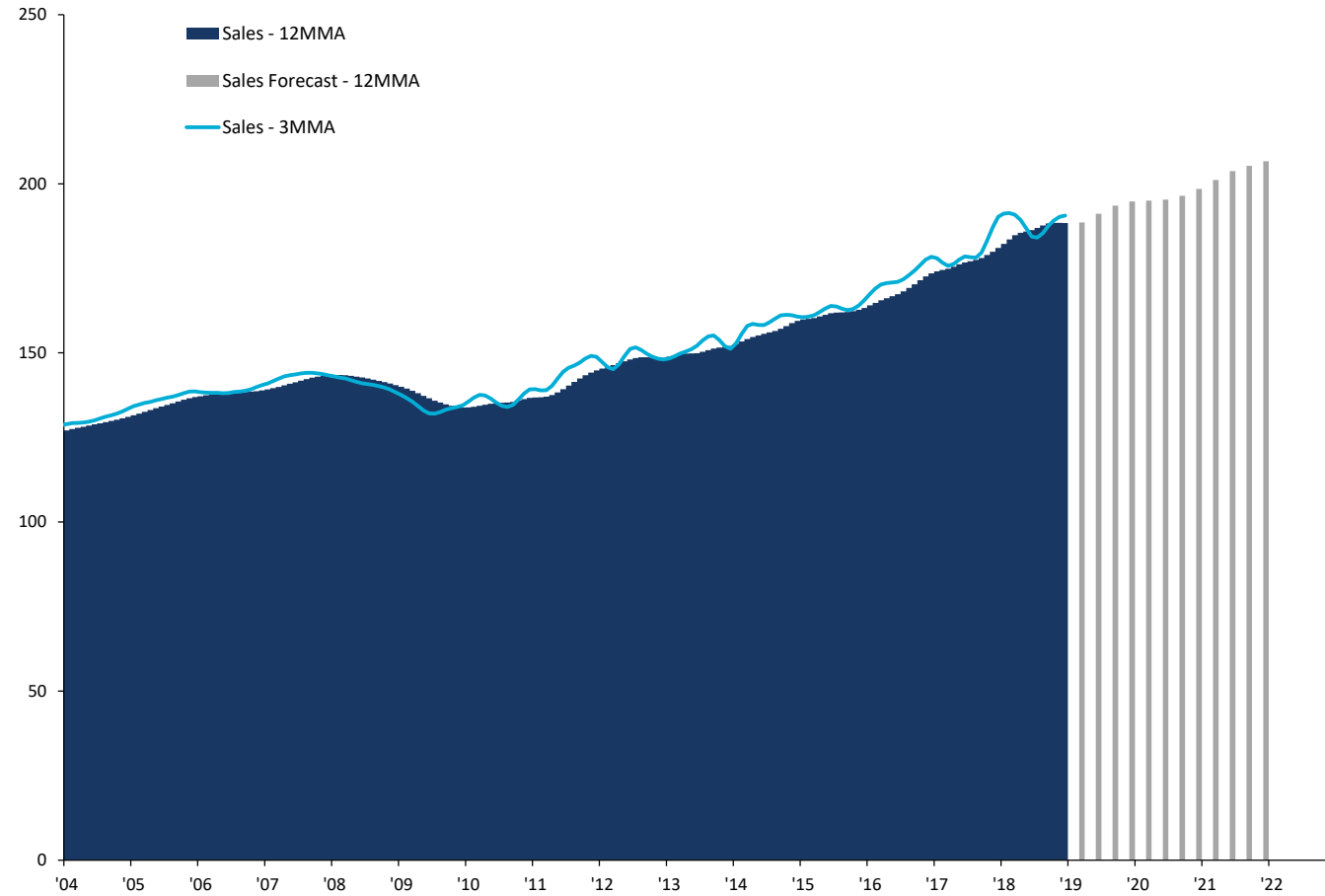
Risks:

- The Retail Sales Automotive Parts, Accessories, and Tire Stores 12/12 is rising and could be an upside risk to our outlook for the Sales 12/12 for this quarter.
- Rising interest rates may negatively impact Sales if decline in the US economy is more severe than we anticipate, which could impact consumers' willingness to spend.

Company A

Data Trends, Billions of \$

3MMA



12MMA

**QUARTERLY SALES
(3MMA)**

\$190.6

**ANNUAL SALES
(12MMA)**

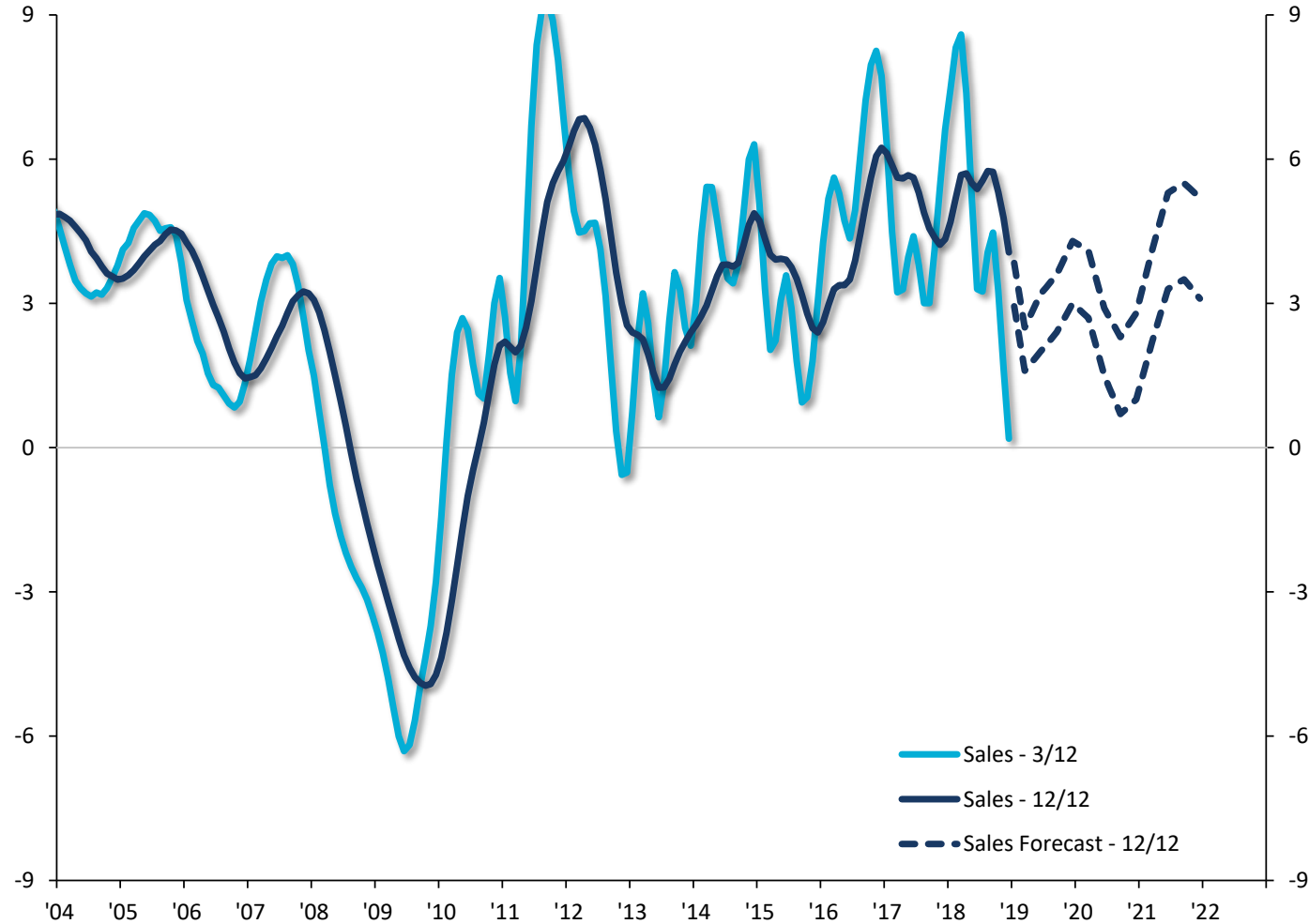
\$188.4

OUTLOOK

The Sales 12MMT will rise through at least 2021. Expect the Sales 12MMT to generally rise at a slowing pace into 3Q20 before subsequently rising at an accelerating pace into at least 3Q21.

	Mar-19	Jun-19	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21
<i>Lower Forecast Range</i>	187.8	190.0	192.4	193.5	193.7	194.0	194.9	196.7	199.3	201.8	203.3	204.6
Annual Sales (Billions of \$)	188.6	191.1	193.5	194.8	195.0	195.3	196.4	198.5	201.1	203.7	205.3	206.7
<i>Upper Forecast Range</i>	189.4	192.2	194.7	196.0	196.3	196.7	198.0	200.2	203.0	205.7	207.2	208.8

Company A Rates-of-Change



**QUARTERLY GROWTH
(3/12)**

0.2%

**ANNUAL GROWTH
(12/12)**

4.1%

NEXT 12/12 LOW

3Q20

NEXT 12/12 HIGH

3Q21

	Mar-19	Jun-19	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21
<i>Lower Forecast Range</i>	1.6	2.0	2.4	3.0	2.7	1.5	0.7	1.0	2.2	3.3	3.5	3.1
Annual Growth Rate (%)	2.1	2.6	3.0	3.7	3.4	2.2	1.5	1.9	3.2	4.3	4.5	4.2
<i>Upper Forecast Range</i>	2.5	3.2	3.6	4.3	4.1	2.9	2.3	2.8	4.1	5.3	5.5	5.2

Data Trends:

Monthly Moving Total (MMT) vs Monthly Moving Average (MMA):

Averages are used when the data cannot be compounded, such as an index, percent, price level, or interest rate. Totals are used for things where it makes sense to add the data together. For example, units sold or total dollars spent.

3MMT/A and 12MMT/A:

A 3-month or 12-month moving total/average is the total/average of the monthly data for the most recent 3 and 12 months, respectively. The 3MMT/A illustrates the seasonal changes inherent to the data series. The 12MMT/A removes seasonal variation to derive the underlying cyclical trend. It is also referred to as the annual total or annual average.

[Click here for a brief video explanation of the methodology we use in this report.](#)

Rates-of-Change:

A rate-of-change figure is the ratio comparing a data series during a specified time period to the same period one year ago. **Rates-of-Change** are expressed in terms of the **annual percent change in an MMT or MMA, 3MMT/A, and actual monthly data.**

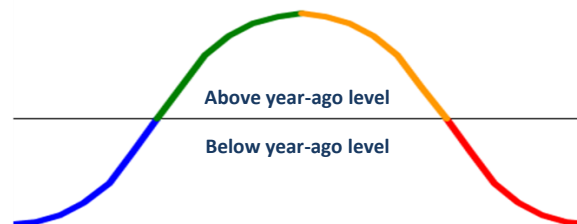
Rates-of-change reveal whether activity levels are rising or falling compared to last year. A rate-of-change trend illustrates and measures cyclical change and trends in the data. ITR Economics' three commonly used rates-of-change are the **1/12**, **3/12**, and **12/12**, which represent the year-over-year percent change of a single month, 3MMT/A, and 12MMT/A (respectively).

A rate-of-change above 0 indicates the data is higher than one year prior, while a rate-of-change below 0 indicates the data is below one year earlier.

Accelerating Growth (B): 12/12 is rising above 0, data trend is accelerating in its ascent and is above the year-ago level. This is the second positive phase of the business cycle.

Recovery (A): 12/12 is rising below 0 and the data trend is either heading toward a low or is in the early stages of recovery. This is the first positive phase of the business cycle.

Business Cycle



Slowing Growth (C): 12/12 is declining but remains above 0, data trend ascent is slowing or has stopped its rise, but it is still above last year. This is the first negative phase of the business cycle.

Recession (D): 12/12 is below 0, data trend is below the year-ago level and the rate of decline is intensifying. This is the second and final negative phase of the business cycle.