The aerospace market faces continued order softness that is tempering the gains made over the past few years.

2016 resulted in far fewer orders than 2015 with Airbus selling 300 less aircraft than in 2015 and Boeing 100 fewer aircraft. This order softness is expected to continue in 2017 while increased production rates will deliver on the large OEM order books.

Ongoing capacity investments, in particular for the narrow body aircraft, which will come online in the second half of 2017, will put an additional pressure on the supplier quality and capacity. Both Airbus and Boeing could have the potential to deliver an overall additional 60+ aircraft in 2017, coming from 2016 deliveries of 688 and 748 respectively. This will likely drive additional investments in efficiency, production automation, cost visibility, and supplier development.

Lagging aircraft retirements and additional shop visits for older platforms will provide more opportunity for cost-competitive third-party MROs. These may also delay OEMs’ ability to differentiate with the proprietary service offerings targeted at newer platforms.
North America and Asia are the main drivers for the forecast commercial aerospace growth, with major OEMs claiming that cyclical ups and downs are smoothing out. In contrast to recent years, year-on-year growth has also slowed, providing an anticipated 0.8% and 3.2% growth YoY in 2016. EALA’s offsetting 3.7% YoY decline leads to a modest 0.9% overall YoY decline vs. 2015.

Looking ahead, 2017 is shaping up to deliver 2.1% annualized growth. However, industry executives we polled remain concerned about geopolitical risks. Over the next 12 months, these concerns are focused on worsening economic conditions and increased political instability.

While there has been some belt-tightening and furloughs at a few companies, production capacity and employment have been relatively stable compared with 2015 levels. However, the narrow body capacity increases and wide body line retooling will be in place this year to accommodate newer models.

Major areas of cost—materials and labor—have remained stable in 2016, and are expected to creep up beginning this year.

Overall, Accenture’s econometric modeling, together with the results from our poll of aerospace executives, support the case for a continued rise in 2017 air traffic growth.

We are likely to see a continued slowdown in the number of aircraft retirements as rising, but still low fuel prices positively impact the economic basis for maintaining older aircraft in service.
GLOBAL OUTLOOK

Demand pauses for 2017 capacity expansion

New aircraft deliveries in 2016 met overall expectations with a potential 5% increase in 2017 commercial aircraft production capacity.

There is a persistent healthy aftermarket, driven mainly by airline traffic and older fleets that continues to fly. These same factors are shoring up the overall commercial aerospace market, with both North America and Asia-Pacific driving global demand.

**Global Commercial Aerospace Index**
(USD, 2014 = 100)

Globally, 16.2% QoQ / -1.1% YoY growth rates are expected for 4Q16, with strong deliveries in the last quarter of 2016 making up for a somewhat lackluster 3Q16 to end 2016 slightly down from 2015.
First-half demand in 2017 is expected to be flat, but we predict that this will be an offset by stronger deliveries in the remainder of 2017, with EOY demand gains of 2.1% versus 2016.
PRODUCTION OUTLOOK
Intelligently keeping up with rate increases.

Although there is some belt-tightening at companies compared with 2015 levels, demand in 2017 and beyond is expected to drive additional production capacity. The uptick in 2017 aircraft deliveries is a welcome change to the overall flat 2016 deliveries. This is largely being driven by narrow-body production rate increases and the supplier network support that these require. These trends are confirmed by the results of our aerospace executive poll.

Production Capacity Outlook

<table>
<thead>
<tr>
<th>Next 6 months</th>
<th>Next 12 months</th>
<th>Next 18 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rising</td>
<td>Rising</td>
<td>Rising</td>
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</tbody>
</table>

PRODUCTION INPUTS
Costs starting to creep up.

2017 material and labor costs are anticipated to creep up versus 2016 levels, and flatten out in the 2019 timeframe. Our aerospace executive poll supports these trends and expect an increase in both labor and materials costs in the 18-24 months’ timeframe.

Production Input Cost Outlook

<table>
<thead>
<tr>
<th>Next 6 months</th>
<th>Next 12 months</th>
<th>Next 18 months</th>
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</thead>
<tbody>
<tr>
<td>Rising</td>
<td>Rising</td>
<td>Flat</td>
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</table>
BUSINESS CYCLE STANCE
Incremental improvement in 2017.

Our predictions for relatively soft new order demand over the next 12 months with production increases to draw down the order backlog, yielding a modest overall 2.1% YoY improvement in 2017, are supported by econometric modeling and our aerospace executive poll.

This outlook is, however, tempered by executive concerns around worsening economic conditions, political instability and terrorism.

AIRCRAFT OPERATIONS
The fleets keep flying, driving MRO demand.

2016 resulted in a rise in air traffic and resulting MRO spend. We expect in 2017 to continue this trend, supported by econometric modeling and by our aerospace executive poll.

Aircraft Operations Activity Outlook
What keeps aerospace executives up at night?

Geopolitical risks continue to weigh on industry executives’ minds.

In the next 12 months, worsening economic conditions, political instability and terrorism loom large as the key areas of concern.

Looking at ‘Next 12-24 months’ time-horizon, deteriorating economic conditions are a growing cause for concern. Interest and exchange rates and regional armed conflict are seen as relatively lower-risk areas.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Next 6 months</th>
<th>Next 12 months</th>
<th>Next 2 years</th>
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<tr>
<td>Terrorism</td>
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<td>Political instability</td>
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<td>Worsening economic conditions</td>
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<td>Regional armed conflicts</td>
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<td>Exchange rate changes</td>
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<td>Medium</td>
</tr>
<tr>
<td>Interest rate changes</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
</tbody>
</table>
NORTH AMERICA OUTLOOK

Rebounding from flat to YoY growth

2017 North America aerospace demand is expected to be up 3.5%.

2016 fourth quarter gains will offset the somewhat softer demand in the first three quarters of 2016, with a gain of 0.8% versus 2015. 5.0% QoQ / 3.8% YoY growth rates are projected for 4Q16, with 2016 gaining over 2015 levels.

As was the case for 2016, we are forecasting a challenging first quarter in 2017, with the rest of the year spent offsetting 1Q17, resulting in an overall better year.
North America Commercial Aerospace Index (USD, 2014 = 100)

North America Commercial Aerospace Index Performance (quarterly YoY percent change)
ASIA PACIFIC OUTLOOK

Continued growth

2017 Asia Pacific aerospace demand is expected to continue to grow.

Although end-of-year gains will be offset by lower demand in the first half of 2016, the year is forecast to finish 3.2% up versus 2015 actuals. However, a 5.2% YoY decline is projected for 4Q16.

Looking further ahead, 2017 looks set to be stronger YoY at 7.5% and well ahead of the other region growth rates.
Asia Pacific Commercial Aerospace Index (Yuan, 2014 = 100)

Asia Pacific Commercial Aerospace Index Performance (quarterly YoY percent change)

*Note that due to half-year reporting periods for most Asia aerospace companies, quarterly results are amplified when compared to other regions.
EUROPE, AFRICA, MIDDLE EAST AND LATIN AMERICA OUTLOOK

2017 growth remains challenging

2017 Europe, Africa, Middle East and Latin America aerospace demand is forecast to decline compared with 2016 actuals, but the decline is losing its momentum.

4Q16 is projected to show a -5.9% YoY decline, with strong deliveries helping to shore up a tepid first half, but bringing the overall 2016 YoY decline to an expected -3.7%.

Looking further ahead, 2017 is forecast to flatten out to a -0.5% YoY decline versus 2016. As was the case for 2016, we are forecasting a challenging 1Q17. The rest of the year will be spent offsetting the challenging first quarter.
Europe, Africa, Middle East and Latin America Commercial Aerospace Index (Euro, 2014 = 100)

Europe, Africa, Middle East and Latin America Commercial Aerospace Index Performance (quarterly YoY percent change)
IMPLICATIONS
Stay the course

While new orders are not what they once were, we see deliveries continuing to ramp up for narrow bodies and retool for new wide body models. We further expect 2017 increased aircraft production to further stress the supply chain.

The current softness in new orders may present more of a buyers’ market for those operators that do come to the table. Deep order books will afford some negotiating position for OEMs, but bragging rights on winning the orders battle is always a powerful pull.

Ongoing new model production ramp up and retooling will continue to put pressure on costs and drive additional investments in efficiency, production automation, cost visibility, and supplier development.

Lagging retirements and additional shop visits for older platforms will provide additional opportunity for cost-competitive third-party MROs and may delay the ability of OEMs to differentiate with proprietary service offerings targeted at newer platforms.

Aftermarket demand will continue as it remains economic to keep older aircraft in operation. Support for those fleets will likely continue at steady levels.
Combining sophisticated econometric modeling methodologies to drive quantitative quarterly forecasts on the health of the commercial aviation market, together with insights from the leading industry executives worldwide, the “Accenture Commercial Aerospace Insight Report” provides a unique perspective on short- and medium-term trends and drivers in this market. Instead of focusing solely on OEM sales, the report covers a wide range of activities, from suppliers to MRO.

**Notes:**
Regional forecasts are in the highest-impact regional currency with the global index aggregated in US dollars, using current exchange rates (at the time of writing). The index baseline year is 2014, both regional and global indices are based from this year.

To complement the econometric modeling, executives at major commercial aerospace companies were polled to get their insights on future supply and demand outlook. The outlook indicators in this report are based on the combination of the econometric modeling and the executive poll.
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