

ON DECK WITH LEAGUE PARK

BOEING 737 MAX CRISIS

Two deadly aircraft crashes resulted in the grounding of the Boeing 737 MAX fleet, which has rippled throughout the supply chain and impacted M&A activity

SITUATION OVERVIEW

Two deadly plane crashes within a five-month period, which resulted in the deaths of 346 people, have driven the grounding of the 737 MAX airliner in March 2019, sending shockwaves throughout the aviation and defense market and rippling across Boeing's supply chain. Modifications to the aircraft's new automated flight control system, which were made to accommodate a shift in engine placement, coupled with limited operator training on the new system, are believed to be primarily responsible for both incidents. In April 2019, Boeing announced that it was temporarily cutting 737 MAX production from 52 aircraft per month to 42 aircraft, attributing the decision to the grounding of the fleet, and a return to pre-grounding production levels is not expected to occur until 2022. Subsequently, in November 2019, the FAA revoked Boeing's authority to issue airworthiness certificates for 737 MAX aircraft, and in January 2020, Boeing halted production of the 737 MAX aircraft until the FAA clears the aircraft to fly. The grounding of the 737 MAX, which is still in effect, is the longest ever for a U.S. airliner, and Boeing estimates that the costs associated with the grounding will exceed \$18 billion as of March 2020. Despite these challenges, Boeing's stock performance has remained generally in line with Airbus, which has been similarly impacted by the COVID-19 global pandemic.

BOEING 737 MAX CRISIS TIMELINE

For the Period from September 28, 2018 – March 16, 2020

% change in share price



ON DECK – 737 MAX CRISIS, CONTINUED

ON DECK WITH LEAGUE PARK, CONTINUED

IMPACT ON SUPPLY CHAIN AND M&A

The grounding of Boeing's 737 MAX fleet had pronounced and widespread effects on the supply chain, impacting not only Boeing's core business but also its significant network of 600 core suppliers and the countless subcontractors that serve those suppliers. While Boeing did not pursue layoffs, the company did reassign approximately 3,000 Seattle-based employees dedicated to the 737 MAX program. Additionally, in 2019, Boeing experienced its worst fiscal year in three decades based on aircraft orders and deliveries. Meanwhile, as the effects of the 737 MAX production freeze rippled through Boeing's supply chain, a number of the company's primary suppliers pursued cost-reduction strategies focused on labor and sourcing initiatives. An estimated ~80% of Boeing's recurring build costs associated with the 737 MAX involve payments to independent suppliers for parts, and while some larger suppliers, such as United Technologies Corporation (parent company of engine OEM Pratt & Whitney Company) and Honeywell International, are diversified across various other Boeing and Airbus production programs and therefore relatively less exposed to the 737 MAX, other smaller manufacturers are less insulated and stand to experience a meaningful reduction in revenue. Spirit AeroSystems, a leading aerostructures OEM, announced the layoff of 2,800 employees at the company's Wichita, Kansas location, with additional labor cuts anticipated at the company's Tulsa and McAlester, Oklahoma locations. Numerous other suppliers have experienced similar disruption to their production schedules and have pursued right-sizing activities. Various key public aerospace OEMs in the supply chain have traded downward over the last few months, as League Park's Aerostructures OEM Index and Engines OEM Index, in particular, are trading at ~48% and ~67%, respectively, of September 2018 levels, and all of League Park's OEM Indices are trading below ~66% of their February 21, 2020 price levels (one trading day prior to the COVID-19-driven Dow Jones Industrial Average plummet). All in all, U.S. Treasury Secretary Steven Mnuchin estimates that the 737 MAX crisis could restrict U.S. GDP by 0.5%, and an indefinite production timeline is providing uncertainty with respect to long-term expectations.

As the aerospace and defense supply chain has slowed in the wake of the 737 MAX crisis, M&A activity has also been affected. While monthly domestic aerospace and defense M&A activity (i.e., disclosed transaction volume) has generally remained in line with historical averages, transactions in process have been impacted, as timelines have slowed due to additional due diligence requirements and M&A valuations have been tempered. Meanwhile, differentiated production approaches (e.g., lean manufacturing, automation, etc.), quality control programs (e.g., Six Sigma, statistical process control, etc.), and production program diversity serve as key investment characteristics that have helped companies to realize more resilient valuations.

BOEING 737 MAX CRISIS BY THE NUMBERS...



624

Annualized production volume of 737 MAX aircraft now suspended



~\$18B

Estimated costs to Boeing associated with the grounding of the 737 MAX fleet



~0.5%

Expected negative impact on U.S. GDP per U.S. Treasury Secretary Steven Mnuchin

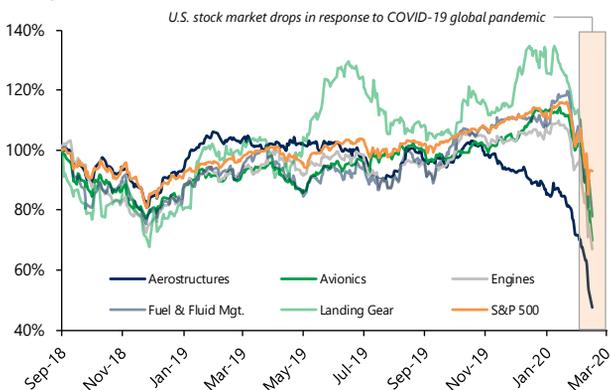


600+

Number of Boeing's core suppliers impacted by the 737 MAX production freeze

STOCK PRICES: TIER I AEROSPACE OEMS VS. S&P 500

For the Period from September 28, 2018 – March 16, 2020
% change in share price



TEV / EBITDA VALUATIONS: TIER I AEROSPACE OEMS VS. S&P 500

For the Period from September 28, 2018 – March 16, 2020

