Boeing 737 Max Scandal

By David Tsung, Rolando Meza, Isaac Tromiczak, Chris Neary, Ruidi Lei
Strengths

Strong Presence in Domestic Market

**America's Biggest Defense Contractors**
U.S. Department of Defense expenditure with contractors in 2015

- Lockheed Martin: $29.4bn
- Boeing: $14.6bn
- Raytheon: $12.3bn
- General Dynamics: $11.8bn
- Northrop Grumman: $9.5bn
- United Technologies Corporation: $6.7bn
- L-3 Communications: $5.0bn
- BAE Systems: $4.3bn
- Humana: $3.6bn
- Huntington Ingalls Industries: $3.0bn

Source: U.S. Department of Defense
Geographic Diversification

Boeing Global Footprint

Countries with the Largest Boeing Presence

Commercial + Defense – 174,400 employees in 70 Countries

Defense – 59,000 employees
Weaknesses

Large Dependance on Subcontractors and Suppliers

Declined Liquidity
Opportunities

Rising International Tensions
Future of Aerospace Industry

U.S. aerospace parts manufacturing market size, by product, 2016 - 2027 (USD Billion)

Source: www.grandviewresearch.com
Threats

- Intense Competition
- Volatile Exchange Rate Risks
Original 737 vs 737 Max Engine Comparison
How the new MAX flight-control system operates to prevent a stall

**MCAS (Maneuvering Characteristics Augmentation System)**

The MCAS system automatically swivels the horizontal tail to move the nose down.

**Angle of attack sensor**

Aligns itself with

**The angle of attack**

The angle between the wing

**Horizontal tail**

Sources: Boeing, FAA, Indonesia National Transportation Safety Committee, Leeham.net, and The Air Current.

Reporting by DOMINIC GATES, Graphic by MARK NOWLIN / THE SEATTLE TIMES
Public Opinions

The Boeing Company

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MARKET SHARE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>17.5</td>
</tr>
<tr>
<td>2016</td>
<td>17.1</td>
</tr>
<tr>
<td>2017</td>
<td>18.9</td>
</tr>
<tr>
<td>2018</td>
<td>7</td>
</tr>
<tr>
<td>2019</td>
<td>9.1</td>
</tr>
</tbody>
</table>
"Boeing is deeply saddened to learn of the passing of the passengers and crew on Ethiopian Airlines Flight 302, a 737 MAX 8 airplane. We extend our heartfelt sympathies to the families and loved ones of the passengers and crew on board and stand ready to support the Ethiopian Airlines team. A Boeing technical team will be travelling to the crash site to provide technical assistance under the direction of the Ethiopia Accident Investigation Bureau and U.S. National Transportation Safety Board."

11:25 AM · Mar 10, 2019 · Twitter Web Client
Fired Employees & Victims
Boycotts

- Ralph Nader called all consumers to boycott
- Twitter trends

The Boeing 737 Max Crisis:
It didn't happen to them.
It happened because of them.

Boycott Boeing
@Boycott_Boeing

If you'd like to find out more ways to help the campaign, feel free to DM me.

change.org/p/boycott-boei...
Joined May 2019

1,715 Following  595 Followers
Congressional Hearing
Company Response
Boeing has a tradition of aerospace leadership and innovation, and is committed to investing in the communities where our people work and live worldwide.
Grounded 737 MAX’s
Main Safety Points

SOFTWARE UPDATES
- Robust MCAS software update three additional layers of protection
- 1100+ test and production flights with new software totaling 2,100+ hours
- Additional updates to the flight control computer software for further redundancy and safety

GLOBAL OUTREACH
- Continued listening and feedback from customers and regulators
- 20 global conferences for operators & financiers with 1,100+ participants from 250+ organizations
- 565 participants in simulator sessions from 141 customers, regulators and other stakeholders

TRAINING UPDATES
- Developing comprehensive proposed training with global regulators
- Ongoing feedback from operator's pilots around the globe

AIRPLANE PRODUCTION
- Actions to drive quality and stability across production system
- Close engagement with more than 900 737 suppliers and efforts for supply chain stability
- Measured decisions on production rate to plan for future

FLEET SUPPORT
- 24/7 Operations Center
- Deliver highest quality on-the-ground support for fleet readiness
- Entry-into-service approach to support 737 MAX return to service augmented with advanced analytics

COMPANY ACTIONS
- Strengthening the culture of safety at Boeing and industry-wide
- Separated chairman and CEO roles for increased focus on safety
- Reinforced core values of safety, quality and integrity in annual recommitment
- All-employee quality stand-down and training
Legal consequences

2019.3
The Federal Aviation Administration grounded 737 Max worldwide

2019.10
Southwest Airlines Pilots Association sued 100 million

2019.12
Boeing hired top attorney

2020.1
Settlement of compensation
<table>
<thead>
<tr>
<th>Company’s name</th>
<th>Compensation amount</th>
<th>Agreement?</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEROMEXICO</td>
<td>Did not disclose</td>
<td>No</td>
</tr>
<tr>
<td>AMERICAN AIRLINES</td>
<td>Did not disclose</td>
<td>Yes</td>
</tr>
<tr>
<td>SOUTHWEST AIRLINES</td>
<td>830 million</td>
<td>Yes</td>
</tr>
<tr>
<td>TURKISH AIRLINES</td>
<td>225 million</td>
<td>No</td>
</tr>
<tr>
<td>Victims</td>
<td>144,500/each</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>
Loss of Market Share

Major Players

Major Players and Their Market Share 2004-2019

- GE Aviation
- The Boeing Company
- Lockheed Martin Corporation
- United Technologies Corporation

Aircraft, Engine & Parts Manufacturing in the US
Source: IBISWorld
## Financial Report after crisis

### Table 1. Summary Financial Results

<table>
<thead>
<tr>
<th>(Dollars in Millions, except per share data)</th>
<th>Fourth Quarter</th>
<th>Full Year</th>
<th>Change</th>
<th>Fourth Quarter</th>
<th>Full Year</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td>$17,911</td>
<td>$28,341</td>
<td>(37)%</td>
<td>$76,559</td>
<td>$101,127</td>
<td>(24)%</td>
</tr>
<tr>
<td><strong>GAAP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Loss)/Earnings From Operations</td>
<td>($2,204)</td>
<td>$4,175</td>
<td>NM</td>
<td>($1,975)</td>
<td>$11,987</td>
<td>NM</td>
</tr>
<tr>
<td>Operating Margin</td>
<td>(12.3)%</td>
<td>14.7%</td>
<td>NM</td>
<td>(2.6)%</td>
<td>11.9%</td>
<td>NM</td>
</tr>
<tr>
<td>Net (Loss)/Earnings</td>
<td>($1,010)</td>
<td>$3,424</td>
<td>NM</td>
<td>($636)</td>
<td>$10,460</td>
<td>NM</td>
</tr>
<tr>
<td>(Loss)/Earnings Per Share</td>
<td>($1.79)</td>
<td>$5.93</td>
<td>NM</td>
<td>($1.12)</td>
<td>$17.85</td>
<td>NM</td>
</tr>
<tr>
<td>Operating Cash Flow</td>
<td>($2,220)</td>
<td>$2,947</td>
<td>NM</td>
<td>($2,446)</td>
<td>$15,322</td>
<td>NM</td>
</tr>
<tr>
<td><strong>Non-GAAP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Operating (Loss)/Earnings</td>
<td>($2,526)</td>
<td>$3,867</td>
<td>NM</td>
<td>($3,390)</td>
<td>$10,660</td>
<td>NM</td>
</tr>
<tr>
<td>Core Operating Margin</td>
<td>(14.1)%</td>
<td>13.6%</td>
<td>NM</td>
<td>(4.4)%</td>
<td>10.5%</td>
<td>NM</td>
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<tr>
<td>Core (Loss)/Earnings Per Share</td>
<td>($2.33)</td>
<td>$5.48</td>
<td>NM</td>
<td>($3.47)</td>
<td>$16.01</td>
<td>NM</td>
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</tbody>
</table>
Conclusion