Investor and Analyst Call FY 2018

Dr. Konstantin Sauer | CFO
ZF Friedrichshafen AG
Mobility Trends

Radical changes in the automotive industry

- Changes in mobility behavior
- Diffusion of advanced technology
- New competition and cooperation
- Shifting markets and revenue pools
- Digitalization in products & processes

Electrification
Connectivity
Shared mobility
Autonomous driving
ZF Strategy: Next Generation Mobility

**Our Mission**

- A clean and safe mobility
- Automated, comfortable and affordable
- For everyone, everywhere

**Segments**

- Passenger Cars
- Commercial Vehicles/Public Transportation
- Industrial Applications

**Technology Areas**

- Automated Driving
- Vehicle Motion Control
- Integrated Safety
- Electric Mobility

**Markets**

- Established Markets (EU, USA, Japan)
- New Markets (India, China, ...)

**Core Targets ZF**

- Innovation and Cost Leadership
- Balanced Market Penetration
- Financial Independence
- Globally Attractive Employer
- Diversified for Profit

USP SYSTEM INTEGRATION
ZF Shapes the Future in 4 Technology Domains

- Vehicle Motion Control
- Automated Driving
- Integrated Safety
- Electric Mobility

Digitalization / Internet of Things
Electric Mobility for Passenger Cars: ZF Solutions

BEV

EV PLUS
Long-Term Contract for Electrified Transmission

Biggest single ZF contract ever
# Electrified Commercial Vehicles

<table>
<thead>
<tr>
<th>TraXon Hybrid</th>
<th>Cetrax</th>
<th>AxTrax AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrid solutions</td>
<td>Fully electric drivelines</td>
<td>Electric portal axle (Fuell cell, Hybrid, catenary power or BEV)</td>
</tr>
</tbody>
</table>

- **TraXon Hybrid**: Hybrid solutions
- **Cetrax**: Fully electric drivelines
- **AxTrax AVE**: Electric portal axle (Fuell cell, Hybrid, catenary power or BEV)
ZFs as a System Supplier for Commercial Vehicles

Sensor Set

ZF ProAI

Vehicle Motion Control

ZF Systems

Camera
LiDAR
Investor and Analyst Call FY 2018

ZF – Systems Supplier for Commercial Vehicles

CONNECTIVITY SOLUTIONS
DIGITAL SERVICES
SAFETY ELECTRONICS
ADAS / AD SYSTEMS
DAMPING SYSTEMS
SUSPENSION CONTROL
STEERING SYSTEMS
STEERING CONTROL
POWERTRAIN MODULES
CHASSIS MODULES & COMPONENTS
AXLE SYSTEMS
WHEEL END SOLUTIONS

ZF

WABCO

BRAKING CONTROL
(Air Brake Valves, EBS & ESC, ABS)
OCCUPANT SAFETY SYSTEMS
ELECTRONIC COMPONENTS
ELECTRONIC CONTROL AND MONITORING SYSTEMS
TRANSMISSION SYSTEMS
TRANSMISSION AUTOMATION
ELECTRIC DRIVES

© ZF Friedrichshafen AG
Transaction Follows a Clear Strategic Rationale
ZF Friedrichshafen AG and WABCO

The combined company forms the world’s leading integrated systems provider for commercial vehicle technology

**Game-changing** next generation technology in the field of Autonomous Driving (AD/ADAS) in both commercial and passenger vehicles

**Strengthening** its position in emerging markets where WABCO operates market leading positions with cost advantages

Access to the highly attractive truck fleet management market where WABCO excels with telematics solutions

Superior access to truck trailer customers and advanced mechatronic competencies
Urban Mobility of the Future: ZF Solutions

A clean, safe, comfortable and affordable individual mobility, for people and goods.
Mobility-as-a-Service/Transport-as-a-Service: ZF Solutions

- E-Drive
- Active Kinematics Control (AKC)
- Integrated Braking Control (IBC)
- Suspension
- Electronic Power Steering (EPS)
- Radar
- Camera
- LiDAR
- ZF ProAI RoboThink Supercomputer
- Full Systems Supplier in all Technology Domains
2getthere Reinforces Automated Driving

System Competence

- Engineering
- Software
- Project Management
- Configuration & Implementation
- AD-Systems
- Payment Systems
New Urban Mobility Concepts
Financial Key Figures 2018
2018 Financial Overview

- €2.1 billion Adjusted EBIT
- €2.5 billion Research & Development
- €1.6 billion Investments in property, plant and equipment
- €36.9 billion Sales
- €1.4 billion Reduction of Gross Debt
- 148,969 Employees
Organic Sales Growth at approximately 6%

- **2017**: 36,444
  - Organic: +2,039 (+5.6%)
  - FX: -966 (-2.7%)
- **2018**: 36,929
  - M&A: -588 (-1.6%)
  - Total: +1.3%
Sales by Regions

Sales in € million and in % of sales

**North America**
- 10,264
  - +11%

**South America**
- 1,034
  - +18%

**Europe**
- 17,390
  - +2%

**Asia-Pacific**
- 8,008
  - +6%

**Africa**
- 233
  - +20%

*Organic growth in 2018*
Sales by Divisions

Sales in € million

- **Car Powertrain Technology**
  - 2017: 8,725
  - 2018: 7,775

- **Car Chassis Technology**
  - 2017: 6,484
  - 2018: 7,876

- **Commercial Vehicle Technology**
  - 2017: 3,172
  - 2018: 3,720

- **Industrial Technology**
  - 2017: 2,530
  - 2018: 2,782

- **E-Mobility**
  - 2017: 924
  - 2018: 2,195

- **Active & Passive Safety Technology**
  - 2017: 13,970
  - 2018: 12,121

- **ZF Aftermarket**
  - 2017: 3,007
  - 2018: 2,975

- Business with automatic transmissions specially for hybrids was the strongest growth driver.
- Disproportionate growth in Asia-Pacific, negatively affected by exchange rate effects and sales development in North America.
- Growth through market development in China as well as the positive turnaround in Russia and Brazil.
- Increased sales in the business unit “Off-Highway Systems” could nearly offset the sales decrease in the wind power sector.
- High demand for hybrid modules and control systems.
- Sales decrease due to disposal of business units.
- Organic sales increase of approx. 3%.
R&D Budget and Investments in PP&E

**R&D Expenses**
in € million and in % of sales

- **2017**
  - €2,230
  - 6.1%
- **2018 (before IFRS 15)**
  - €2,470
  - 6.7%
- **2018**
  - €2,158
  - 5.8%

**Investments in PP&E**
in € million and in % of sales

- **2017**
  - €1,350
  - 3.7%
- **2018 (before IFRS 15)**
  - €1,618
  - 4.4%
- **2018**
  - €1,586
  - 4.3%
Adjusted EBIT Margin

in € million and margin in %

<table>
<thead>
<tr>
<th>Year</th>
<th>Adjusted EBIT</th>
<th>Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>2,339</td>
<td>6.4%</td>
</tr>
<tr>
<td>2018</td>
<td>2,065</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

Developments

- Increased R&D expenses by €240 million mainly in the area of E-Mobility, AD/ADAS and Safety impacted the EBIT margin by 0.6%ppt.
- Furthermore EBIT negatively affected by
  - Material price increase
  - FX effects
Adjusted EBIT Margin

EBIT and Adjusted EBIT 2017
in € million and margin in %

- EBIT: €1,771
  - Margin: 4.9%
- Purchase price allocation: €568
- Adjusted EBIT: €2,339
  - Margin: 6.4%

EBIT and Adjusted EBIT 2018
in € million and margin in %

- EBIT: €1,528
  - Margin: 4.1%
- Purchase price allocation: €624
- Book gain from disposal: €-87
- Adjusted EBIT: €2,065
  - Margin: 5.6%
Net Profit After Tax

in € million

2017: 1,167
2018: 965

3.2% 2.6%

Developments

- Decrease of financial expenses driven by further deleveraging
- Interest on financial liabilities reduced by almost €150 millions
- Tax rate 2018 at 21% (previous year 17%)
Adjusted Free Cash Flow at around €900 millions

in € million

Free Cash Flow at €1,547 million in 2018

Adjustments M&A activities 2018 comprise:
- Disposal of the Body Control System
- Participations by Zukunft Ventures GmbH

Adjusted Free Cash Flow at €891 million
Gross Debt Reduction by €1.4 billion

in € million

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross Debt</th>
<th>Cash</th>
<th>Net Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>6,391</td>
<td>1,315</td>
<td>5,076</td>
</tr>
<tr>
<td>2018</td>
<td>5,019</td>
<td>922</td>
<td>4,097</td>
</tr>
</tbody>
</table>

Developments

- Gross debt reduced by €1.4 billion since December 31, 2017
- Net debt reduced by around €1 billion
- Investment Grade Rating Confirmed:
  - S&P: BBB– (negative outlook)
  - Moody’s: Baa3 (negative outlook)

Note: Gross debt = Financial liabilities / derivative financial instruments
Equity Ratio Increased to 28 %

Liabilities and Equity
in € million and in % of balance sheet total

<table>
<thead>
<tr>
<th>Year</th>
<th>Equity</th>
<th>Pension Provisions</th>
<th>Other Liabilities/Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>27,833</td>
<td>14%</td>
<td>62%</td>
</tr>
<tr>
<td>2018</td>
<td>27,032</td>
<td>15%</td>
<td>57%</td>
</tr>
</tbody>
</table>

Developments

- Equity increase by €656 million mainly due to positive net profit after tax
- Balance sheet total decrease by €801 million due to further debt pay-down the disposal of Body Control Systems
- Equity ratio increased by 4 percentage points to 28 %
Maturity Profile Further Smoothened in 2018

Maturity of Main Group Financings as of December 31, 2018
Nominal amounts in € million

Note: Excluding bilaterals worldwide which are rolled in the ordinary course of business
Outlook 2019
Market for PassCar and CV < 6to is Slowing Down

Production: 2018 and Forecast 2019 (% to Previous Year)

<table>
<thead>
<tr>
<th></th>
<th>Global</th>
<th>Europe</th>
<th>South America</th>
<th>North America</th>
<th>China</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2018</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0,8%</td>
<td>-1,3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2019</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-1,3%</td>
<td>-1,4%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2019 Forecast

Sales: 37–38 billion €

EBIT margin:* 5.0–5.5%

Free cash flow*: ~€ 1 billion

* adjusted