**Volkswagen Case – Avoiding Value Destruction**

**I. Genesis of a scandal**

In 2007 electronics manufacturer Bosch and VW were negotiating the supply of Bosch’s

emission testing software to VW. A letter from Bosch warned VW in 2007 that the software’s

testing mode should not be used for vehicles it intended to sell, noting that the “test mode”

changes were meant for VW’s internal testing only. Nevertheless VW introduced testing

software in its then-next-generation TDI diesel vehicles in 2009.

The US Environmental Protection Agency (EPA) had been requiring carmakers to follow a

test script that in 2009 had not changed in more than a decade. The script had remained the

same over the years in order to compare vehicles or validate data. They put the vehicles on a

dynamometer - a treadmill for cars - that accelerates and slows down at a programmed

interval known as a "drive cycle." A device measures pollutants from the tailpipe. Aware of

the script, VW installed between 2009-2015 diesel models with software that sensed when the

vehicles were on the treadmill and switched the emissions system to trap the right amount of

nitrogen oxide. The software’s sophisticated algorithm sensed things such as the position of

the steering wheel, speed, the duration of the engine's operation and barometric pressure.

It is still debated, to which extent the use of the defeat device was known throughout the VW

Group (and its top management) from 2007 on. In September 2016, an e-mail written by an

Audi employee in 2007 became public. The employee stated in this mail that without cheating

it would not be possible to comply with US emission standards. In a different internal

document of Audi that became public, in-house council warned that the use of "warm-up

programmes" (meaning the defeat device) would be illegal. In 2011 a Volkswagen technician

warned about the use of testing devices that would adapt to regulatory testing and produce

results that did not reflect emissions of the same car in normal traffic. His concerns were not

heard or followed up upon.

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Since 2013 the International Council on Clean Transportation (a US NGO) had been issuing

research reports that document gaps in the automobile industry between laboratory and real

world data regarding emissions (not only NOx but also CO2). It was only when ICCT

researchers connected with West Virginia University in 2014, using technology pioneered by

EPA, was VW's defeat device exposed (by subjecting the cars to actual road tests).

Threatened with having its new models banned from the U.S. market, VW entered into

negotiations with the EPA. Since May 2014 the EPA had been "in discussions" with

Volkswagen. Senior Fellow and US Co-Lead of the ICCT John German remarked,

“*One aspect that's really interesting is that we turned data and* a *report over to CARB*

(CARB is the California Air Resources Board, a state regulatory agency of California)

*and the EPA back in May 2014 and they discussed the problems with Volkswagen.*

*Then in December 2014, Volkswagen issued a field fix, and they reflashed the*

*computers in the cars to install the field fix. A few months later they assessed, and*

*found the defeat device was still in the field fix. That is incomprehensible to me, so the*

*interpretation is that this was only a relatively small part of the company.*”

On 18 September 2015, the EPA issued a notice of violation of the Clean Air Act to German

automaker Volkswagen Group putting forward that Volkswagen had intentionally

programmed turbocharged direct injection (TDI) diesel engines to activate certain emissions

controls only during laboratory emissions testing.

The defeat device had been built into cars with Diesel motors, namely the VW EA189 and

EA288. Worldwide about 11 million vehicles (brands: VW, Audi, Seat and Skoda) are

concerned and could be subject to recall requirements (some already are, see below).

**II. VW’s reaction**

After the disclosure of what will be called the “emissions scandal”, the company reacted with

governance measures and communications:

On 23 September 2015, VW’s chairman of the management board, Martin Winterkorn,

resigned and was replaced by Matthias Müller.

On 30 September 2015 the supervisory board of Volkswagen hired the US law firm Jones

Day to conduct an *internal investigation* (corporate internal investigations are used in order to

establish, document and secure facts when this appears to have become necessary or

desirable, for example when there is evidence or substantiated allegations of illegal or

unethical conduct, such as fraud or corruption, within a company. The objective of such an

investigation for a company is to quickly establish a factual record which the company may

use to draw conclusions as to what went wrong and then consider its options, address any

instances of misconduct, identify what lessons may be learned, and make adjustments to its

policies and procedures. These actions will then allow it to manage compliance and mitigate

any risks of civil or criminal liability or damage to its reputation. We will discuss *internal*

*investigations* during the compliance class later on.

In March 2016, the CEO of VW USA, Michael Horn, resigned.

VW initial communications were:

- “*The US Environmental Protection Agency and the California Air Resources Board*

*revealed their findings that while testing diesel cars of the Volkswagen Group they have*

*detected manipulations that violate American environmental standards. The Board of*

*Management at Volkswagen AG takes these findings very seriously*”;

- “*We can only apologize and ask our customers, the public, the authorities and our investors*

*to give us a chance to make amends*”;

- “*We are working at full speed on a technical solution that we will present to partners, to our*

*customers and to the public as swiftly as possible. Our aim is to inform our customers as*

*quick as possible, so that their vehicles comply fully with regulations. I assure you that*

*Volkswagen will do everything humanly possible to win back the trust of our customers, the*

*dealerships and the public*”.

In large advertisements in more than 30 American newspapers, readers could also find

'confessions' such as “*Recently we made a big mistake: We broke your trust*”; “*We are*

*working to make things right*”. The Chairman of the Supervisory Board, in December 2015,

stressed that this scandal was due to “*individual errors and breaches by some employees in*

*some parts of the company*” and that they “*have no evidence of any active involvement of the*

*members of the Executive Board or the Supervisory Board*”.

**Economic and financial consequences**

The VW Group includes the brands Skoda, Seat, Volkswagen, Audi, Porsche, etc. In

Germany, it represents 14% of the manufacturing sector. In the beginning of 2015 and before

the scandal broke out, VW Group had become the largest car manufacturer putting Toyota at

second. In 2014, the Volkswagen Group had generated 200 billion € in turnover to achieve a

profit above of 12 billion €. VW sold slightly more than 10 million vehicles worldwide in

2014 (close to 4 million in Europe, 1 million in North America and more than 4 million in the

Asia-Pacific region). In the first three quarters of 2015, the VW Group continued to grow in

Europe and the US. The scandal could call into question its global leadership in the

automotive industry:

- In its annual report for 2015 (published in April 2016), VW disclosed provisions for

estimated liability obligations amounting to 16.2 billion €. The provisions are the main reason

for VW's record loss of 4.1 billion € (resulting in a reported net loss of 1.5 billion €).

- By July 2016, VW's sales in the US and in Germany suffered severely dropping by 8 and

16% respectively. However, globally, despite the scandal, VW's sales did not decrease

significantly, which can be explained, on the one hand, by continuing growth of VW in China

and Eastern Europe, but also by offering customers discounts and other advantages.

- Finally, VW's preference share price (VW's ordinary shares are not publicly traded) had

reached a 253 € high in April 2015, then steadily decreased and even plunged to a record low

of 92 € in October 2015. Meanwhile preference shares are traded at the price level of the year

2012 level at around 142 €.

**Some political consequences in Germany**

The emissions scandal became an issue in German politics on state and federal level. The

state Lower-Saxony is most concerned, already because it is a major holder of VW's ordinary

shares and has a qualified minority, meaning that it could veto significant shareholder

decisions. The state also has two representatives on VW's supervisory board. Further VW is

the state's largest employer. Stephan Weil, minister-president of Lower-Saxony and

supervisory board member at VW regretted in October 2015 that the people at VW weren't able to raise awareness of wrongful developments in a timely manner, and that the company

would have a "lot of catching up to do" with regard to leadership, responsibility and

teamwork.

In September 2015 the German Federal Minister of Transport convened an investigatory

commission to deal with the matter. At the same time he also instructed the Federal Motor

Transport Authority to conduct investigations into VW's diesel vehicles through independent

experts.

The states Bavaria, Hessen, and Baden-Wurttemberg initiated legal action against VW

alleging that their public pension funds suffered losses due to the loss of value of their

portfolio that includes a high number of VW preference shares (see for further legal reactions

below).

**Legal aftermath**

The legal consequences of the emission scandal are still unraveling. Some procedures are

ongoing, for example the criminal investigations against former chairman of the management

board Martin Winterkorn or the German model case proceedings filed by shareholders on the

basis of the German Capital Investor Proceedings Act. However, many important proceedings

have been concluded. In particular, VW reached settlements with the US Department of

Justice on behalf of the EPA and the US Federal Trade Commission, involving multi-billion $

fines and mandatory requirements to invest in zero emission vehicle infrastructure and

development as well as in a mitigation trust fund that is intended to mitigate the total, lifetime

excess NOx emissions from the 2.0 liter vehicles.

**Annex 1** provides an overview of the legal proceedings in the US, France and Germany. Yet,

VW also faces lawsuits in other countries such as Canada, Australia, the United Kingdom,

France and South Korea. For example, the latter’s antitrust regulator seeks criminal charges

against Volkswagen’s executives and will fine the German carmaker’s unit in the country 32

million dollars. Also, Italy's antitrust regulator has fined Volkswagen 5 million euros.