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Analysis of the Volkswagen Scandal Possible Solutions for Recovery

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The Volkswagen scandal is a notorious example of how corporations can shape the ethical and political issues of the environment. The Volkswagen Group that is headquartered in Wolfsburg, Germany owns Bentley, Bugatti, Lamborghini, Audi, Porsche, SEAT, and Škoda. Volkswagen's presence as a global company made this a significant event not because of the legal and financial repercussions that occurred from different countries, but because of the lasting damage on society and the environment that cannot be fully perceived. Volkswagen previously had a goal of becoming the world's largest automaker by 2018, but the scandal caused the company to lose one third of the company's market cap.¹ In an attempt to compensate for the emissions violations, Volkswagen ordered a voluntary recall, issued a public apology, and the CEO along with other directors of the firm resigned. The company is also facing lawsuits and criminal charges and the future of the company looks grim. In order to analyze how such a global company could commit fraud for so long on such a big scale, it is beneficial to view this case as a problem of regulatory capture involving information asymmetry, issues with oversight, and private governance. This analysis attempts to examine the problems of social concern presented by the behavior of Volkswagen in the international economy and provide some recommendations to increase the system of accountability within the global auto industry.

Action Forcing Event

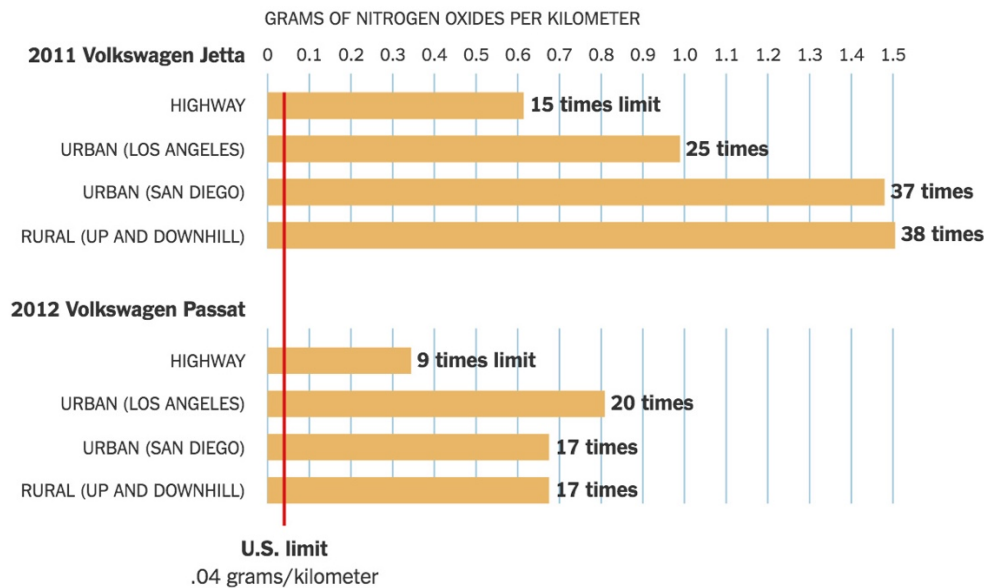
The action forcing event to this whole story began with a group of scientists at West Virginia University who were testing diesel cars on the road. The International Council on Clean Transportation, a nonprofit, tried to provide independent research to environmental regulation

¹ Clifford Atiyeh, *Everything You Need to Know About the VW Diesel Emissions Scandal*, (Car and Driver, 2016). Accessed March 16, 2016 <http://blog.caranddriver.com/everything-you-need-to-know-about-the-vw-diesel-emissions-scandal/>

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government agencies. It hired West Virginia University to perform standard emissions tests on diesel cars. Volkswagen had been promoting their diesel cars to be one of the most environmentally friendly and fuel efficient vehicles on the market, which generated some of the highest sales. However, research assistant professor Arvind Thiruvengadam noticed dramatically different results from Volkswagen's claim of low emissions. The team kept repeating the study in order to confirm their findings. Thiruvengadam stated, "And then, I mean, we did so much testing that we couldn't repeatedly be doing the same mistake again and again."²

Average emissions of nitrogen oxides in on-road testing



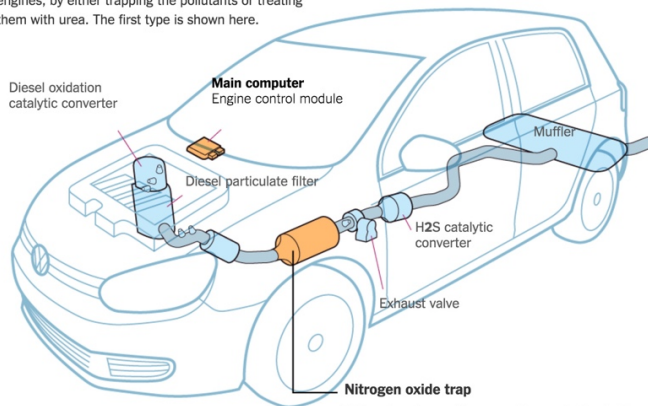
Source: Arvind Thiruvengadam, Center for Alternative Fuels, Engines and Emissions at West Virginia University

² Sonari Ginton, *How a Little Lab in West Virginia Caught Volkswagen's Big Cheat* (NPR, 2015). Accessed March 16, 2016 www.npr.org/2015/09/24/443053672/how-a-little-lab-in-west-virginia-caught-volkswagens-big-cheat

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Exhaust system of a Volkswagen Golf

Volkswagen has used two basic types of technology to reduce emissions of nitrogen oxides from diesel engines, by either trapping the pollutants or treating them with urea. The first type is shown here.



Nitrogen oxide trap
This system traps nitrogen oxides, reducing toxic emissions. But the engine must regularly use more fuel to allow the trap to work. The car's **computer** could save fuel by allowing more pollutants to pass through the exhaust system. Saving fuel is one potential reason that Volkswagen's software could have been altered to make cars pollute more, according to researchers at the International Council on Clean Transportation.

Illustration by Guilbert Gates | Source: Volkswagen, The International Council on Clean Transportation

The International Council on Clean Transportation (ICCT) suspected that Volkswagen had installed a defeat device. This is a programmer writing code that tells the computer it is on the official test cycle and allows for changes in how the emissions control system.³ In essence, diesel engines have a trade-off between power, fuel efficiency, and clean emissions and the vehicle can only choose two out of three. However, the device can only do so much. Somebody within the company must have deliberately performed the validations incorrectly. The ICCT summed up the data on 15 vehicles from three different sources, then turned its findings to the Environmental Protection Agency (EPA) and the California Air Resources board. On September 18, 2015, the EPA publicly announced that Volkswagen had violated the Clean Air Act by illegally installing software into diesel cars to cheat emissions tests that emitted toxic gases up to a staggering 40 times above permitted levels.⁴

³ Glinton, *Volkswagen's Big Cheat*

⁴ Clive Coleman, *VW Could Face Long Legal Nightmare* (BBC, 2015). Accessed March 16, 2016 <http://www.bbc.com/news/business-34352243>

Repercussions

Volkswagen soon became the target of regulatory investigations in multiple countries. Prosecutors from the United States, South Korea, France, Italy, Canada, Germany, and the UK tried to find out how many people knew of the deceit that occurred within the corporation.⁵ One German newspaper even labeled this scandal as the “most expensive act of stupidity in the history of the car industry.”⁶ As news of the scandal began to leak, Volkswagen’s stock price immediately began to fall. Volkswagen admitted that 11 million cars worldwide had been fitted with the defeat device. Then on November 2, 2015, the EPA also found the same defeat devices on additional Volkswagen, Audi, and even Porsche models.⁷

However, the biggest tragedy of this entire scandal is the release of enormous amounts of nitrogen oxide into the atmosphere. NO_x gases cause smog, acid rain, and the formation of the ground level ozone which are associated with adverse health effects such as inflammation of the airways and respiratory problems including asthma, bronchitis, emphysema, etc.⁸ High levels of NO_x also cause damage to vegetation including reduced growth.⁹ The EU also published an inventory report in 2011 that stated the majority of NO_x emissions comes from the road transport sector at 40%.¹⁰ It is important to realize that the environmental damage of this scandal will have a far more lasting and immeasurable impact on the ecosystem.

⁵ Coleman, *Nightmare*

⁶ Coleman, *Nightmare*

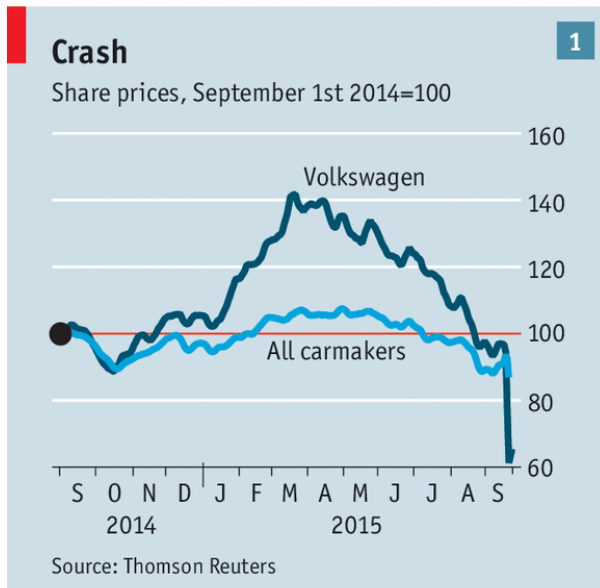
⁷ Coleman, *Nightmare*

⁸ Jack Ewing, *Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception* (The New York Times, 2015). Accessed March 16, 2016

www.nytimes.com/2015/09/23/business/international/volkswagen-diesel-car-scandal.html

⁹ *Nitrogen Oxide Pollution*

¹⁰ *Nitrogen Oxide Pollution*



Economist.com

As a step towards remedying the situation, Volkswagen vowed to set aside 6.5 billion euros (about \$7.3 billion) to use towards fixing the cars to comply with pollution standards.¹¹ This may seem like a big sum but in reality, it is equivalent to only half a year of Volkswagen's profits. The company is currently facing a 3.3 billion euro lawsuit and could face possible criminal prosecutions.¹² In the US, the company is facing a fine of up to \$30,000 per car which is a total amount of approximately \$18 billion.¹³ Within a day of the news release, Volkswagen's share prices fell by a third and dropped over 20% to a four-year low.¹⁴ It is also important to note that the European market accounts for 40% of the company's profits while the United States only account for 6% of unit sales.¹⁵ This means that issues in the European market are much more pressing on Volkswagen's agenda. However, standards for diesels in Europe are not as strictly tested and enforced as the United States.

¹¹ Ewing, *Diesel Deception*

¹² Ewing, *Diesel Deception*

¹³ *Exposure of the Volkswagen Scandal: The Full Story Explained* (Amazon Digital Services LLC, 2016), 22.

¹⁴ Ewing, *Diesel Deception*

¹⁵ Ewing, *Diesel Deception*

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Aside from public apologies, Volkswagen announced a voluntary recall of all the vehicles with TDI engines. The CEO Martin Winterkorn immediately resigned and Volkswagen's top US executive also stepped down.¹⁶ Heinz-Jakob Neusser (the head of brand development), Ulrich Hackenberg (Audi research and development head), and Wolfgang Hatz (Porsche research and development head) were also suspended.¹⁷ The Volkswagen head office in Wolfsburg and other offices were raided for investigation purposes.¹⁸ It is impossible to fathom that only a handful of people were involved in the master plan of the manipulation software. Perhaps the company made the wrong decisions and followed a wrong strategy, but this scandal was way too big to be an accident. Firms have an obligation to be open and honest to owners and managers should be held accountable to stakeholders. However, this was more than just a problem of simple deceit. This case involved more complex theories that deal with the theory of regulatory capture.

The Problem of Public Interest

Volkswagen should be held accountable to their actions, but the bigger issue is how the manipulation software went undetected for so many years. If it were not for the existence of NGOs such as the ICCT, this scandal may have never been uncovered and Volkswagen would have proceeded to emit harmful gases above permitted levels. Environmental groups had previously warned national car approval authorities and the European Commission that diesel cars emitted much less NOx in official laboratory tests than on the roads. Many also knew that this was due to tricks used by manufacturers, but regulators did not take urgent measures.

¹⁶ *Volkswagen Faces £2.5bn Lawsuit From Investors* (The Week, 2016). Accessed March 16, 2016 <http://www.theweek.co.uk/65351/volkswagens-us-boss-steps-down-with-immediate-effect>

¹⁷ Julia Bradshaw and Jon Yeomans, *VW Scandal: Porsche Boss Named New Volkswagen Chief Executive- As it Happened* (The Telegraph, 2015)

¹⁸ *Exposure*, 18.

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According to the International Center for Financial Regulation (ICFR), regulatory capture is a form of corruption that occurs when an agency that's supposed to act in the public interest, instead chooses to advance the commercial or political concerns of special interest groups or the industry or sector it is charged with regulating.¹⁹ One month after the release of the scandal to the public, the officials of the EU member states gathered in Brussels and came to discuss the repercussions, but failed to push alternative testing methods such as testing auto emissions on the road which would have defeated the manipulation software.²⁰ The representative from Spain urged for proposals to overhaul the testing system to be watered down in order to prevent the destruction of highly qualified jobs and prevent a negative influence on the Spanish economy.²¹ Of course the British, French, Italian, and German representatives also took a similar stance and in the end the EU commissioner feared the talks would collapse so he urged everybody to back the watered-down deal.²² The European car industry is too close to the government and the government has been reluctant to take any steps that risk the stability of a sector that employs 12.1 million people or 7% of the EU's manufacturing employment.²³ Many fear that if Volkswagen walks away with a slap on the wrist, this will act as an incentive for future firms to do the same.

The European car industry is an example of regulatory capture because it is often particular to "revolving doors" that exist between the regulatory agencies and the firms they regulate. Regulators often find their best career opportunities within the firms that they regulate

¹⁹ Stefano Pagliari, *Making Good Financial Regulation: Towards a Policy Response to Regulatory Capture* (Governor House Publishing, 2012).

²⁰ Jim Brunsten and Christian Oliver, *Volkswagen Emissions Scandal: Noxious Omissions* (Financial Times, 2016). Accessed March 16, 2016 www.ft.com/intl/cms/s/0/f8aafc92-bae4-11e5-bf7e-8a339b6f2164.html

²¹ Brunsten and Oliver, *Noxious Omissions*

²² Brunsten and Oliver, *Noxious Omissions*

²³ Brunsten and Oliver, *Noxious Omissions*

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and the reverse trend is also true. The traditional concept of regulatory capture focused on material incentives between regulators and different stakeholders, but today, it can also be used to investigate how policies may favor a narrow set of special interests. The problem is that an agent in the regulatory body will do one thing but the interest of the agent is different. The agent will always have slack and this means he is able to go off and do something that's fundamentally different from the principal. The principal can also only enforce things they observe which is why there is always slack. If the principal sits and observes the agents, then they lose the point of hiring agents. The European Commission decided to choose economic incentives over remedying environmental policy.

In order to overcome agency problems, it may be helpful to focus on contract design that specify the roles of the agent and create penalty or rewards for their behavior. For example, if the European Commission or EPA can consider making even more detailed outlines. Another option is screening and selection mechanisms to reduce information asymmetry. This is also a good option because it can be done ex ante and is less costly. If Volkswagen had hired trust workers in the first place, then this scandal may have not occurred. Of course, it is difficult to tell who would be trustworthy or not before they are placed in a position of power. This is why it is helpful to increase monitoring and reporting requirements. Since these can only be performed ex post, they are often costly and inefficient. Another downside is that they can also be manipulated by agents. Monitoring takes the form of police patrols which may be carried out through random audits of the company. Fire alarms by third parties may be a feasible option, but this method will also be detrimental to the company's image. Finally, institutional checks such as checks and balances can be implemented. As professional norms and standards become more clear, it will be more costly for agents to deviate from expected professional behavior.

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The main policy failure was failure to incorporate new information and to combat this, new mechanisms to create transparency in the organization must be implemented. The problem with private governance is that the decisions affect the quality of life and opportunities of the larger public so it requires more than just self-governance or self-regulation. Volkswagen as a firm should have tried harder to adhere to environmental regulations because of true accounting cost. It is cheaper for firms to follow regulations now rather than later but future costs cannot be shown on a balance sheet. Managers are only paid for what can be shown on a balance sheet and they don't get paid for what the company brings in 100 years from now. New structures need to be implemented so that consumers have the confidence that other firms will not repeat it.

The Volkswagen case is also an example of how business dominates policymaking. Politics shape corporate governance by setting rules that companies are bound by and financial incentives often play a large role in shaping political preferences.²⁴ Shareholder ideology says that managers have the obligation to maximize the rate of return and they are often the ones who have to face conflicts of interest whether it is from sources of income or conflicts of interest from separate shareholders or public/social goals.²⁵ Owners, managers, and workers are responsible for getting the laws and regulations they want to the public arena to obtain their preferred corporate governance outcome.²⁶ If corporate governance reporting standards are high, then it will be more difficult for companies to commit fraud in the future.²⁷

Possible Solutions

The Volkswagen Group is now faced with a problem of establishing credibility to its

²⁴ Peter Gourevitch and James Shinn, *Political Power and Corporate Control: The New Global Politics of Corporate Governance* (Princeton University Press, 2005)

²⁵ Peter Gourevitch, *What Do Corporations Owe Citizens*, (Springer Science, 2007)

²⁶ Gourevitch and Shinn, *Political Power and Corporate Control*, 1-14

²⁷ Gourevitch and Shinn, *Political Power and Corporate Control*, 57-94

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consumers and stakeholders. There are no set guidelines on what to do when a company's reputation is damaged. However, three possible solutions include having Volkswagen restart under a new name, join an independent verification agency, and/or set up a bond. Volkswagen should implement as many measures as possible to restore credibility to its company. The worst case scenario would be a lack of action that may spark a consumer boycott. This would lead to a decrease in sales and the eventual collapse of this company.

Re-branding

In the last 60 years, Volkswagen has become a global brand and it is the biggest car company in the world. While some believe that the scandal will be forgotten soon, other Volkswagen directors have discussed the possibility of restarting the company under a new name. If the company restarts under a new name, this may improve brand image to have a company that is smaller and more efficient than the current Volkswagen Group. Re-branding will make it easier for the company to speed up efficiency programs and potentially save the company. Rebranding can be expensive and risky, but it may reduce the negative publicity that was caused by the scandal. It is important that the rebranding not only focuses on exterior changes, but also changes in other aspects of the company.

The Volkswagen group is headed by the group chief executive Matthias Mueller. The management board includes 9 bosses led by Herbert Diess, the Volkswagen car chief.²⁸ The management board oversees the supervisory board which is composed of 20 members, including key investors, led by Berthold Huber, interim chairman.²⁹ Most shockingly, Martin Wintercorn is likely to receive two years pay and a pension of more than £22 million.³⁰ This is the same man

²⁸ Bradshaw and Yeomans, *VW Scandal*

²⁹ Bradshaw and Yeomans, *VW Scandal*

³⁰ Bradshaw and Yeomans, *VW Scandal*

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who first tried to cover up the scandal by claiming the company did not lie but faced a “technical problem.”³¹ Bernd Osterloh, the Chairman of the General and Groups Works Council of Volkswagen AG, has suggested a new CEO who has a deep knowledge of technology needs to be appointed. He stated, “We need changes in our corporate culture. For the future we need a climate in which problems are not concealed, but rather are openly communicated to management.”³² A new CEO will bring a new lease of life into the organization and lead to a change in business strategy, competitive position, and business environment. A change in the governance process such as shareholder process, open election of directors, and wide inclusion of membership may also prove to be beneficial to the new company.

If Volkswagen chooses to rebrand, it should try to develop a company that is more green and has better corporate social responsibility practices. Studies show that “greenwashing,” when a company tries to portray itself as more environmentally minded than it actually is, has become increasingly prevalent in recent years.³³ The reputation of a company has become an increasingly bigger factor when it comes to consumer decisions. The new company should try to work with organizations such as the Federal Trade Commission to focus on sustainability work and collaborate with suppliers, universities, and other scientific institutions to embed its corporate social responsibility practices in every sector of the new company. For example, in order to compensate for the previous emissions, employees could change the way they travel or business trips could be replaced with internet conferences.

The new company should focus on reducing energy consumption, reducing carbon

³¹ Atiyeh, *Everything You Need to Know*

³² Bradshaw and Yeomans, *VW Scandal*

³³ David Gelles, *Social Responsibility That Rubs Right Off* (The New York Times, 2015).

Accessed March 16, 2016 www.nytimes.com/2015/10/18/business/energy-environment/social-responsibility-that-rubs-right-off.html?_r=0

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emissions, saving water, and reducing waste. The new company should also design ex post evaluations to test the efficiency of new programs. The new company may also engage with local communities or NGOs to show the public that they care about society and sustainability. After all, NGOs are powerful vigilantes best suited to hunt down new information. They are often the ones who go out to scream and yell to get the public's attention about sustainability issues. An updated website illustrating all of their practices and an annual report would greatly improve the company's image. Clear financial statements are necessary to show the public where the money comes from and goes within the company. It would be helpful to use social marketing as part of an overall strategy to increase transparency within the company.

Joining an Independent Verification Agency

While Volkswagen has its own internal team that examines vehicle emissions, the company should also partner up with other independent verification agencies to rebuild consumer trust. Some agencies that the company could consider partnering up with include the World Business Council for Sustainable Development (WCSBD), Fair Labor Association (FLA), Federal Trade Commission (FTC), and the Landfill Methane Outreach Program (LMOP). The WCSBD is “a CEO-led organization of forward-thinking companies that galvanizes the global business community to create a sustainable future for business, society and the environment.”³⁴

The WCSBD already works with a global network of over 65 independent national and regional business councils and partner organizations and their executive committee meets three times a year to tackle the latest sustainable development issues. The FLA has their own Workplace Code of Conduct and a sustainable compliance methodology that gauges normal working conditions and uncovers root causes of problems so issues are fixed in a lasting way.

³⁴ *Overview: Business Solutions for a Sustainable World (WBCSD)*. Accessed March 16, 2016 <http://www.wbcسد.org/home.aspx>

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The FTC is an independent agency of the US government that focuses on consumer protection and addressing deception practices. The LMOP is a voluntary assistance program that aims to reduce methane emissions from landfills by using landfill gas as a renewable energy resource to fuel power plants, manufacturing facilities, vehicles, homes, etc.³⁵

If Volkswagen decides to partner with independent groups, then not only will it rebuild consumer trust, but gain recognitions and rewards from NGOS that rank and test companies based on corporate social responsibility practices. For example, the Dow Jones Sustainability Indices is the longest-running global sustainability benchmark worldwide and has become a key reference point in sustainability investing because they conduct analysis on corporate economic, environmental, and social performance.³⁶ The index is updated annually and this is better than the Institut der Wirtschaftsprüfer, a non-profit company based in Germany that focuses on carrying out quality assurance procedures, but only publishes reports for the German public. If Volkswagen joins more prestigious international organizations, this will give them stronger credibility.

Posting a Bond

One final method to regain consumer trust is for Volkswagen to post a bond that assures the public nothing like this will happen again. A bond is an indicator of credibility. Perhaps Volkswagen can state that if any fraud happens again within the company, they will pay a bond out to the European Commissions automotive industry. This will motivate the European Commissions regulators to be stricter and thorough with their audits. The money can also be used towards the research and development of green vehicles, decarbonization of conventional

³⁵ *Landfill Methane Outreach Program* (EPA). Accessed March 16, 2016
<https://www3.epa.gov/lmop/>

³⁶ *The First Decade: 1999-2009*" (Dow Jones Indexes, 2009) Accessed March 16, 2016

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engines, safety, and informational technology infrastructure. The bond needs to be set at a really high amount so that consumers will know that Volkswagen truly regrets cheating emissions standards. Volkswagen is a big company with a lot of assets and well-known brands. In order to finance this bond, Volkswagen should sell one of their brands.

Out of the current companies that Volkswagen owns, it may be wisest to sell their big truck manufacturing company MAN SE. MAN SE generates approximately €14.68 billion revenue and its subsidiaries include MAN Truck & Bus, MAN Diesel & Turbo, MAN Latin America, Neoplan, Renk, Sinotruk (Hong Kong), and ÖAF.³⁷ Money acquired from this sale can be used towards posting the bond. The money could also be used to pay out claimers and governments. Of course, Volkswagen will most likely try to solve this problem without selling any brand. Volkswagen has become a fairly lucrative brand the past few years and it would be best to compensate claims and governments from its own resources, but the company also needs to spend money on innovation. Volkswagen has to invest in new technologies to create better, more efficient engines and environmentally friendly cars. This is why the most feasible option may be to sell one of their brands and dedicate their resources on research and development.

Today, oil demand continues to rise and air pollution becomes an increasingly pressing problem. Volkswagen should sell one of its companies to focus on creating cleaner hybrid and electric vehicles. They should work with policymakers to encourage the expansion of the electric vehicle industry and consumer acceptance. Maybe the money from selling a company can go towards offering lower prices on their new electric vehicles since one of the biggest barriers of expansion is that electric vehicles are still much more expensive than gasoline fueled vehicles.

³⁷ *Annual Report 2010* (MAN Group, 2011). Accessed March 16, 2016
http://web.archive.org/web/20110812235358/http://www.man.eu/MAN-Downloadgalleries/All/3Investor_Relations/Geschaeftsbericht/2010/gb_2010_online_e_s.pdf

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Governments around the world continue to raise fuel prices to push consumers towards higher mileage vehicles and hopefully electric vehicles. If Volkswagen can capitalize on this market, then it has a hope of regaining its leading position in the global auto industry.

Recommendation

At the moment, Volkswagen should dedicate all efforts and resources into re-establishing credibility with the company. Volkswagen may choose to re-brand, although this option is fairly unlikely. It can also join independent verification agencies, which is more feasible and fairly easy to accomplish. Finally, the costliest option would be to sell one of its brands and post a bond. This is the most expensive option and probably a method of last resort, however it would also restore the most faith in the Volkswagen brand.

A combination of the second and third option would be the best recommendation. As consumers slowly regain trust in the brand, then sales will most likely gradually increase. Consumers are currently debating on purchasing the cheap Volkswagen stock because many have faith that the company will take the necessary steps towards mediating the scandal. It is doubtful that the stock prices will return to previous levels anytime soon, but if Volkswagen shows consumers that it regrets deceiving consumers and is dedicated towards better corporate social responsibility practices, then perhaps it can regain its status in the global auto industry.

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