Chapter 9

THE IMPACT OF CARBON CONSTRAINTS ON COMPETITIVENESS AND VALUE CREATION IN THE AUTOMOTIVE INDUSTRY

Niki Nikolaus Rosinski
Generation Investment Management LLP, London, United Kingdom, niki.rosinski@generationim.com

Abstract: The purpose of this article is to quantify the financial risks and opportunities faced by the automotive industry from “carbon constraints”—policy measures designed to mitigate climate change by limiting emissions of carbon dioxide (CO₂) and other greenhouse gases. This article is derived from Austin D, Rosinski N, Sauer A and Le Duc C (2003) Changing Drivers, a report which explores how carbon constraints in global automotive markets may affect value creation in 10 leading automotive companies between now and 2015. The full report and other relevant materials can be downloaded free of charge from Internet URL <http://www.sam-group.com/changingdrivers/> or <http://capitalmarkets.wri.org>. The Original Equipment Manufacturers (OEMs) assessed are BMW, DaimlerChrysler (DC), Ford, GM, Honda, Nissan, PSA, Renault, Toyota and Volkswagen (VW)—the world’s largest independent automotive companies. The geographical scope of the assessment is the United States, European Union and Japanese markets, which together account for nearly 70 percent of current global sales.

Changing Drivers is the result of collaboration between SAM Sustainable Asset Management (SAM)—a Zurich-based independent asset management company specialising in sustainability-driven investments—and the World Resources Institute (WRI)—an environmental research and policy organisation based in Washington D.C. Drawing on the respective strengths and expertise of the two organisations, the report analyses both the risks and opportunities of carbon constraints, and then estimates the combined implications for the OEMs’ future earnings. The analysis is explicitly forward-looking, focusing on the main factors affecting the OEMs’ exposure to carbon constraints, and drawing on the latest publicly available information about the 10 assessed OEMs.

S. Schaltegger, M. Bennett and R. Burritt (Eds.), Sustainability Accounting and Reporting, 207-229. © 2006 Springer.
1. INTRODUCTION

Climate change is a relatively new issue for the automotive industry, and one that may have significant financial impacts for the sector. Climate change policies (or “carbon constraints”) are already in place in several major automotive markets and appear likely to spread, forcing automotive Original Equipment Manufacturers (OEMs) to lower the carbon emissions profile of new vehicles. At the same time, new technology options in various states of development offer the potential to meet new carbon constraints while increasing profitability. Carbon constraints thus create a combination of risk and opportunity for OEMs.

In view of the growing carbon constraints on automotive markets, a key challenge for sector investors and OEM managers is to quantify the impact of carbon constraints on competitiveness. In this article we analyse how carbon constraints could affect the shareholder value creation of 10 leading OEMs: BMW, DC, Ford, GM, Honda, Nissan, PSA, Renault, Toyota and VW. The geographical focus is the US, EU and Japanese markets, which account for nearly 70 percent of current global sales. The time period analysed is from 2003 to 2015.

Carbon constraints create both risks and opportunities for OEMs. Risks principally take the form of possible increases in costs to meet new standards and/or loss of market share to more fuel-efficient producers. Opportunities lie in the potential to develop successful strategies to reduce carbon emissions that translate into technological leadership, enhanced market share and greater profits.

To assess risks and opportunities, we performed two complementary analyses:

- A Value Exposure Assessment identifies the risks of carbon constraints in terms of the estimated costs for each OEM to meet new CO₂ emissions standards by 2015.
- A Management Quality Assessment identifies the opportunities for OEMs to capitalise on carbon constraints and enhance their competitiveness, by virtue of their superior management quality and focus on lower-carbon technologies.

A key challenge for analysts is to determine the implications of these findings for shareholder value creation. Consequently, we translate the results of both the Value Exposure and Management Quality assessments into changes in forecasted EBIT (Earnings before Interest and Taxes) for the period 2003 through 2015. EBIT is a foundation for valuation estimates in this sector and so changes in an OEM’s EBIT offer useful insight into possible changes for overall Return on Invested Capital (ROIC) and thus shareholder value.