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Case Study: Liquidity Analysis through Financial Ratios

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Abstract
This case study, "Liquidity Analysis of Sherwin-Williams Company," is about a top-ranked paint company around the globe. The analysis is based on data extracted from the company's annual report for the year 2021. This study covers the details of Brand Finance (BF) and its ranking activities. Additionally, it provides sufficient information about liquidity ratios and their classification. This case study helps to analyse the liquidity performance of Sherwin-Williams Company through financial ratio analysis. This case study helps students and the reader community understand the liquidity position of the case company. Furthermore, the methodology allows them to perform similar analyses on other businesses. The case is developed to attain certain objectives: to understand the financial ratios for measuring the liquidity of the company, to analyse and interpret the liquidity position of the company, and to conclude the liquidity position of the company based on the financial ratios.

Key words: Ratio analysis, liquidity, Current ratio, Accounts receivable turnover ratio, Quick ratio or acid test ratio, Working capital ratio, Cash ratio.

About the Case

The brand directory is providing Brand Finance (BF), the world's leading independent consultancy for brand valuation and strategy. It was founded in 1996 and is headquartered in London. BF is mainly concentrating on bridging the gap between marketing and finance. since its inception, BF has published rankings, reports, and whitepapers. The main function of the company is to test the world's biggest brands by evaluating them and publishing reports pointing out which are the strongest and most valuable. BF is assessing the strengths and values of over 5,000 branded businesses. The brand value rankings by BF are certified by the Accountability Standards Board (MASB) through the Marketing Metric Audit Protocol (MMAP). Every year, BF ranks the industry and provides details on its website. Accordingly, for the year 2022, a ranking of more than 500 companies is available on its website; this information is presented based on industry sector. The present case study focuses on the paint industry globally. The top-ranked paint company is selected based on BF's ranking report and the value of the company. The top-ranked company is Sherwin-Williams Company.

About the Company

Sherwin-Williams Company is an American company that was founded in 1866 in Cleveland, Ohio, 156 years ago, by Henry Sherwin and Edward Williams based on the paint and coating manufacturing industry. The primary nature of the company is involved in the manufacturing, distribution, and sale of paints, coatings, floor coverings, and associated products to various groups such as professional, industrial, commercial, and retail customers. The areas of operation are mainly focused on North and South America and Europe. The company extended its area of operations into the Caribbean region, Europe, and Asia. This company currently has 4859 stores worldwide.

The company received the award as the "Best Place to Work in IT (Information Technology)" on June 20, 2011. The Builder magazine recognised Sherwin-Williams as the most used brand as well as the winner for

brand familiarity and quality rating in the paint category for the year 2015. The company ranked in the 190th position based on its revenue as ranked by the Fortune 500 list of the largest United States corporations by revenue.

The Sherwin-Williams company and subsidiaries' consolidated information about current assets and current liabilities for the period year ending December 31, 2021, is extracted from their annual report and presented below. (Amount in millions of US dollars).

Data from the Annual Report
The following information is taken from Sherwin-Williams Company's 2021 annual report.

Table 1: Current Assets and Current Liabilities as on December 31, 2021 (Million US dollars).

Current Assets	December 31, 2021
Cash and Cash equivalents	165.7
Accounts receivable, less allowance	2,352.4
Inventories	1,927.2
Other Current Assets	608.4
Total Current Assets	5,053.7
Current Liabilities	December 31, 2021
Short-term borrowings	763.5
Accounts payable	2,403.0
Compensation and taxes withheld	716.6
Accrued taxes	160.3
Current portion of long-term debt	260.6
Current portion of operating lease liabilities	409.7
Other accruals	1,005.8
Total current liabilities	5,719.5

Source: Sherwin-Williams Company 2021 Annual Report

Note: As per the Annual report of Sherwin-Williams Company, the Net sales is 19,944.6 million US dollars.
Liquidity
The liquidity of a company is an important indicator of its ability to meet short-term obligations without raising capital or obtaining loans (Rizal & Musdalipah, 2016; Agriyanto, 2020; Sukmadewi & Refni, 2021; Nadila Mariska et al., 2022). 2, 9, 10. If a company is highly liquid, it can easily meet its short-term debt obligations, whereas low liquidity indicates that the company is in danger of going bankrupt. The terms solvency and liquidity are distinguished on the basis of their obligations: a long-term obligation is called solvency, whereas a short-term obligation is denoted as liquidity. Liquidity also refers to the company's ability to dispose of assets quickly to raise cash. The present case study focused on the liquidity aspects of the selected company. The liquidity ratio measures the ability of the company to meet its short-term obligations and reflects the short-term strength of the company.

The ratios that indicate the liquidity of the companies are as follows:

1. Current ratio
2. Accounts receivable turnover ratio
3. Quick ratio or acid test ratio
4. Working capital ratio
5. Cash ratio

1. Current Ratio

The current ratio is calculated to establish the relationship between the current assets and current liabilities. It attempts to measure the company's ability to meet its short-term obligations (Bordeianu, Gabriela-Daniela, and Florin Radu, 2020; Ciptawan, and Brian Owen Frandjaja, 2022) 3, 4. An appropriate current ratio is 2, which means the company has $2 of current assets for every $1 of current liabilities. The higher the ratio, the more capable the company is of paying off its debts. It is shown as:

Current Assets / Current Liabilities (1)

2. Accounts receivable turnover Ratio

This ratio explains how the company efficiently collects its debts, provided credit is extended (Gorczynska, Maria, 2011) 6. The result of a high ratio indicates higher efficiency and is thus favorable. The company should attempt at least 1.0, which means it collects the entire average amount of accounts receivable at least once during a period. The high level of this ratio indicates that the company's customers pay their invoices on time, and it is clear that the company collects the debts efficiently. The ratio is calculated using the following formula:

Net Credit Sales / Average Accounts Receivable (2)

3. Quick Ratio

This ratio measures the company's efficiency in meeting its short-term obligations with its most liquid assets (Diggowiseiso, Kumba, and Nurul Fadillah, 2022) 5. The ratio focuses primarily on a company's total liquid assets available versus its total current liabilities in a given period. Liquid assets are those parts of the current assets that can be readily converted into cash. Most businesses calculate their liquid assets by deducting inventory from their current assets. The traditional benchmark for this ratio is 1.00. The quick ratio formula is as follows:

Current Assets - Inventory / Current Liabilities (3)

4. Working capital Ratio

The working capital ratio is an indicator of the association between current assets and current liabilities; further, it points out how many times the company can pay off its current liabilities with its current assets (Afrifa, Godfred Adjapong, 2016)1. It is fundamentally defining the liquidity of the company (Lakatos, Vilmos, 2020) 7. The ratio's positive aspect is that it is between 1.2 and 2.0; exceeding 2 is interpreted as a negative result. The formula for the calculation of working capital is

Current Assets – Current Liabilities (4)

5. Cash Ratio

The company's liquidity is measured through the cash ratio, which indicates the company's ability to cover its short-term obligations by managing its cash and its equivalents (Nikolaos et al. 2020) 8. In general, a ratio equal to 1 or greater indicates a company has enough cash or cash equivalents to meet its short-term obligations. The cash equivalents are considered marketable securities or short-term investments. The formula for the cash ratio is as follows:

Cash / Current Liabilities (5)

Requirement

Calculate the appropriate liquidity ratios based on the data provided in the case and comment on the liquidity position of the company for the period ending in 2021.

Suggested Solution

Based on the data provided in the annual report, the liquidity ratios are calculated, and the results show that the current ratio is 0.88. It indicates that current assets' contribution is less than current liabilities during the study period. The net working capital ratio is 8.48, which is higher than the standard of 1. The quick ratio provides a result of 0.55, which is also less than the bench mark of 1. The net working capital is a deficit of $665.8 million at December 31, 2021. The cash ratio is 0.03, and the standard is 1 or greater than 1. The value of current liabilities is higher; therefore, it affects three ratios. Further, when the cash balance is compared with current liabilities, it is not able to reach the benchmark of 1 or greater than 1. The working capital needs attention from the company.

List of abbreviations

BF - Brand Finance

MASB	-	Accountability Standards Board
MMAP	-	Marketing Metric Audit Protocol
IT	-	Information Technology

Data Availability

The case study is based on secondary data. The data has been collected from the annual report on Sherwin-Williams Company's website. The website details are provided in the references.

Conflicts of Interest

Here declare(s) that there is no conflict of interest regarding the publication of this paper.

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Authors' contributions

All the three authors contributed for the preparation of this case study. The data collection and literature review work shared by all the three authors.

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