GDF SUEZ Case Study - Evaluation of Capital Structure, Short-Term Financing and Working Capital

Paul Eisenberg

DOI: http://dx.doi.org/10.15294/ibarj.v3i1.53

University of Portsmouth, United Kingdom

Abstract

This article analyses the financial structure of GDF SUEZ for the years 2013 – 2014 by the way of a case study. The company, one of the global players of the energy market, offers rich opportunities to test finance theories reaching from the work of Modigliani and Miller (1958) and Altman (1968) to the more recent approaches of working capital analysis by Panigrahi and Chaudhury (2015), to mention but a few. The study shows a company struggling to accelerate sales and to collect receivables, while over relying on costly short-term finance and stretching accounts payable. Thus, GDF SUEZ forgoes prompt payment discounts and loses supplier goodwill. Taken together with declining revenues, the study provides for a company profile raising going concern issues. The paper may be of interest for finance students, scholars and financial reports analysts as it offers a comprehensive real-life study based on commonly accepted financial modelling.

Keywords:
Capital Structure, Matching Principle, Debt Finance, Funding Strategy, Working Capital

Address Correspondence:
E-mail: eisenberg.scholar@gmail.com

p-ISSN 2550-0368
e-ISSN 2549-0303
INTRODUCTION

Arguably, not least from the viewpoint of its balance sheet, GDF SUEZ represents one of the big players of the global energy sector. Further, one would expect the company to be well structured financially and well managed operatively - no doubt, GDF SUEZ can offer best advice and highly remunerated experts. To test these assumptions, it may be worthwhile to undertake basic financial analysis using its publicly available financial statements. Finance theories based on decades of academic research are considered a suitable choice of weapon. Hence, the paper is structured as follows: the theories are introduced in the methodology section. The results derived from applying the theories are assessed in the discussion section. Finally, the conclusion provides for a summary of central findings.

METHODS

This case study is built around the theories of finance widely accepted in the academia and the analyst's community. The starting point is provided by Modigliani and Miller (1958, 1963). The matching principle is identified as a major issue of the GDF SUEZ financial structure, as represented by the works of Agar (2005), Demodaran (2010), Gitman and Zutter (2015) and Harc (2015). It is followed by a thorough discussion of working capital issues which are introduced by Altman (1968) and are more recently explored by Pinkowitz (2000), Myddelton (2000), Droletz et al. (2010), Bolek (2013), Panigrahi and Chaudhury (2015), to mention just a view. The results are compared to industry benchmarks and numerous empirical studies like that of Opler et al. (1999), Dichev and Scinner (2002), Ogier et al. (2004), Ozkan and Ozkan (2004), Saddour (2006) and Ratshikuni (2009). The study offers various formulas of financial ratios and provides for a comprehensive list of references.

DISCUSSION

Appraisal of GDF SUEZ's capital structure

The capital structure of a firm deals with the sources of finance used by the company (Myers, 2001). Capital is to be invested in assets which are needed for the company's operations (Eccles and Serafeim, 2014). On the asset-side of the Statement of Financial Position of GDF SUEZ for the year 2014, goodwill, available-for-sale-securities, loans granted to affiliated companies, other assets (tax receivables), deferred tax assets and cash account for €45,484m, i.e. 91.8% of shareholder equity and 27.5% of total assets.

Formula for Goodwill

\[
\text{Goodwill} = \varepsilon 21,222m
\]

Available-for-sale-securities

\[
\varepsilon 2,893m
\]

Loans granted to affiliated companies

\[
\varepsilon 1,237m
\]

Current other assets (tax receivables)

\[
\varepsilon 10,049m
\]

Non-current other assets (tax receivables)

\[
\varepsilon 557m
\]

Deferred tax assets

\[
\varepsilon 980m
\]

Cash

\[
\varepsilon 8,546m
\]

Total 1

\[
\varepsilon 45,484m
\]

Formula Goodwill as % of Shareholder equity

\[
\text{Shareholder equity} = \varepsilon 49,527m
\]

Total 1 as % of Shareholder equity

\[
\varepsilon 45,484m \times 100 / \varepsilon 49,527m = 91.8
\]

Formula for Goodwill as % of Total Assets

\[
\text{Total assets} = \varepsilon 165,305m
\]

Total 1 as % of Total assets

\[
\varepsilon 45,484m \times 100 / \varepsilon 165,305m = 27.5
\]

Goodwill is an accounting measure resulting from prior acquisitions of other entities (ACCA,
It is not related to operations (Briloff, 1972). Available-for-sale-securities are financial assets acquired to generate gain from a later sale (Needles and Powers, 2010). These are not genuine GDF SUEZ operations. The same is true for lending money to affiliates. Tax receivables may be challenged and reduced by tax authorities (Mills, 1996). Deferred tax assets are a measure to account for book-tax-differences and are not generated by operations (Colley et al., 2012). Thus, 91.8% of GDF SUEZ equity is used to finance assets that arise from accounting conventions or non-core operations. Hence, to finance genuine operations, GDF SUEZ incurs debt at a cost of €2,462m, which is 79.2% of its net profit for the year 2014.

Formula for Interest expense as % of Net profit

\[
\begin{align*}
\text{Interest expense} & = \text{€ 2,462m} \\
\text{Net profit for the year 2014} & = \text{€ 3,110m} \\
\text{Interest expense as % of net profit} & = \frac{\text{€ 2,462m} \times 100}{\text{€ 3,110m}} = 79.2
\end{align*}
\]

GDF SUEZ has significant cash holdings of €8,546m that could be utilised to reduce this costly debt burden. However, finance theory makes different suggestions about how to use funds to adjust the company’s capital structure.

Modigliani and Miller (1958) claim that firm value does not depend on sources of corporate finance (debt or equity), but on the firm’s operational success. From this point of view, GDF SUEZ should only focus on generating the rate of return required by its shareholders without trying to adjust its capital structure. This view is based on perfect market conditions like the absence of agency costs (banking and legal fees), perfect information among all market participants and no taxes (Gifford Jr., 1998). These assumptions do not hold under real world conditions (Glickman, 1996). Therefore, Modigliani and Miller (1963) add the tax shield of debt finance to their original model. Tax deductible interests help reduce tax payments and thus increase firm value (Brealey et al., 2011). From this viewpoint, GDF SUEZ should incur even more debt to benefit from this tax shield. But under real world conditions unlimited leverage is hardly manageable. Shareholders may request higher profits in return for accepting higher borrowing risks (Wyplosz, 1998). Finance providers may impose restrictive debt covenants, limiting the company’s capability to raise additional debt (Armstrong et al., 2014). Finally, a company could have not enough valuable assets to serve as collateral for further debt (Davydenko, 2013).

GDF SUEZ’s cash holdings of €8,546m account for 17.3% of the company’s net assets.

Formula for Cash as % of Net assets

\[
\begin{align*}
\text{Cash} & = \text{€ 8,546m} \\
\text{Shareholder equity (Net assets)} & = \text{€ 49,527m} \\
\text{Cash as % of Net assets} & = \frac{\text{€ 8,546m} \times 100}{\text{€ 49,527m}} = 17.3
\end{align*}
\]

This is above average cash holdings of US companies of 17% (Opler et al., 1999), of UK companies of 9.9% (Ozkan and Ozkan, 2004) and of mature French companies of 13% (Saddour, 2006). Jung and Kim (2008) argue that firms with high cash holdings retain flexibility in adjusting their capital structure to benefit from the tax shield: cash reserves can be used as collateral or demonstrate financial strength, thus increasing the lender’s confidence.

However, GDF SUEZ’s interest expense of €2,462m provides for an interest cover ratio (ICR) of 2.7.

Formula for Interest cover

\[
\begin{align*}
\text{Interest expense} & = \text{€ 2,462m} \\
\text{Earnings before interest and tax (EBIT)} & = \text{€ 6,547m} \\
\text{Interest cover} & = \frac{\text{€ 6,547m}}{\text{€ 2,462m}} = 2.7
\end{align*}
\]

This is 32.5% below the ICR of 4 of the US electric utility sector (Ogier et al., 2004). Dichev and Scinner (2002) show that companies with a
median ICR of 3.9 do not violate debt covenants, but 25% of lenders with ICR of 2.8 do. Standard & Poor’s (2006) assigns a BB-rating to companies with an ICR of 2.5, slightly below that of GDF SUEZ. Such companies are considered “significant speculative” and facing “major exposures to adverse conditions” (Standard & Poor’s, 2016). According to Ratshikuni (2009) 54.7% of BB-rated companies face bankruptcy over 15 years.

Thus, although GDF SUEZ relies on debt finance and cash holdings in line with finance theory, in practice an ICR below 3 may constitute a major risk for investors and lenders (Page, 2008).

Critical evaluation of theoretical advantages and disadvantages of the company’s capital structure with regards to the debt and equity structure of the business

GDF SUEZ can generate advantages from its capital structure beyond the tax shield. 20.9% of its total liabilities result from bond issues (GDF SUEZ, 2014).

Formula for Bond issues as % of Total liabilities

\[
\text{Total 1 as % of total liabilities} = \frac{22,860}{109,346} \times 100 = 20.9
\]

The rate of return required by bondholders is below that of shareholders, because shareholders require a risk premium. Shareholders bear a higher risk as their claims against the company are satisfied after lenders are paid (Brealey et al., 2011). This makes debt cheaper than equity (McDaniel, 1988). Otherwise GDF SUEZ would not borrow funds to invest in projects, but issue new shares (Peleg, 2014). A further advantage is that bondholders are not assigned shareholder voting rights (Rowe, 2013). Thus, equity holders do not lose control as would be the case if additional shares were issued (Gillet and De La Bruslerie, 2010). However, Baird and Henderson (2008) argue that the obligation to repay the principle and to pay interests can result in cashflow to bondholders of a magnitude which deprives shareholders of any meaningful factual control. Indeed, at GDF SUEZ interest expense accounts for 79.2% of net profit, leaving just 20.8% to equity holders. 10.4% of total liabilities result from bank borrowings and commercial papers backed by bank credit lines (GDF SUEZ, 2014).

Borrowing from banks can be advantageous as lending terms may be renegotiated and adjusted. If bonds are issued, change of terms may call for complicated debt restructuring (Thakor and Wilson, 1995). Also, banks maintain an information advantage through close relationship with the company. This reduces information asymmetry and as a consequence the bank's required rate of return (Leitner, 2006).

The disadvantages of operating a portfolio of debt arise from high administrative burden. The borrowings should be properly accounted for, increasing the costs of the accounting department (ACCA, 2012a). The statutory auditors of GDF SUEZ’s financial statements must check the borrowings, resulting in higher audit fees (ACCA, 2012b). Borrowings made in different currencies call for hedging against currency fluctuations. Thus,
costs of hedging occur (ACCA, 2012c). As a further disadvantage, various debt obligations may be perceived as risky by lenders, increasing the company's costs of borrowing (Whitehead, 2009).

Assessment of GDF SUEZ from a short-term financing perspective and commentary on the application of the matching principle

According to the maturity matching principle, long-term assets should be financed by long-term liabilities and short-term assets by short-term debt, respectively (Harc, 2015). Repayment of principle and payment of interest expenses should be aligned with cash flows generated by the very assets. Stable and lasting cash flows call for long-term finance, whereas fluctuating cash flows should be matched to finance available and repayable on demand (Agar, 2005). There should be enough assets available for immediate sale to meet debt repayment deadlines (Demodaran, 2010).

According to conservative funding strategy short-term assets may be partly financed with long-term debt to save on refinancing costs, because short-term debt requires refinancing after becoming due (AFP, 2013).

Under aggressive funding strategy long-term assets are partly financed with short-term debt. This policy can work as long as short-term finance remains available (Law and Smullen, 2008). Long-term finance charges are avoided, so that profitability increases, but running out of finance constitutes a major risk (Watson and Head, 2013). However, in times of rising interest rates repeated refinancing may lead to falling profits (Fosberg, 2012).

At GDF SUEZ short-term debt amounts to €34,991m (derivative instruments: €5,895m, borrowings: €10,297m, trade payables: €18,799m; provisions which form part of total current liabilities are not included, because they do not constitute cash borrowings (Ryan, 2004). Other current liabilities include tax-liabilities and employee-related liabilities which are also not borrowed (GDF SUEZ, 2014).

These €34,991m are used to finance current assets of €45,256m (loans and non-trade receivables: €925m, derivative instruments: €7,886m, trade receivables: €21,558m, inventories: €4,891m, current financial assets: €1,450m, cash: €8,546m; other current assets are not included, because they consist of tax receivables that may be contested by tax authorities (Mills, 1996).

Obviously, the surplus of current assets in the amount of €45,256m–€34,991m=€10,265m is financed by long-term debt. Thus, GDF SUEZ applies the conservative funding strategy.

In absence of financing needs surplus funds may be invested to generate interest income (Gitman and Zutter, 2015). But GDF SUEZ earns interest income of only €586m against interest expenses of €2,462m and thus struggles to offset interest expenses. Furthermore, under the conservative funding strategy, interest expenses occur constantly, even in absence of urgent financing needs like seasonal fluctuations (McLaney, 2014). Seasonal fluctuations in the energy industry in which GDF SUEZ operates may not be predicted in a linear manner (Svehla, 2011). But general variations in demand are known and may be anticipated in advance (Abdelkader et al., 2015). Therefore, financing conservatism may be misleading for GDF SUEZ. Instead, the company should switch to the maturity matching principle. In doing so, it could reduce long-term debt and save profits which are eroded by interest expenses.

Critical evaluation of the potential advantages and disadvantages of the GDF SUEZ’s strategy around the working capital

Working capital is calculated as current assets – current liabilities. The idea behind working capital management is to maintain enough current assets (cash, receivables and inventory) to meet the company’s current liabilities (short-term finance and trade payables) (ACCA, 2011). Table 1 shows that GDF SUEZ may run out of liquidity to pay for liabilities that become due in the short-term, increasing bankruptcy risk (Qazi et. al, 2011).
Table 1. Working Capital at GDF SUEZ for the years 2013-2014

<table>
<thead>
<tr>
<th>Working capital component</th>
<th>Financial Year 2014 €m</th>
<th>Financial Year 2013 €m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans and receivables</td>
<td>925</td>
<td>1,470</td>
</tr>
<tr>
<td>Trade and other receivables</td>
<td>21,558</td>
<td>21,057</td>
</tr>
<tr>
<td>Inventories</td>
<td>4,891</td>
<td>4,973</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>8,546</td>
<td>8,706</td>
</tr>
<tr>
<td>Total current assets</td>
<td>35,920</td>
<td>36,206</td>
</tr>
<tr>
<td>Short-term borrowings</td>
<td>10,297</td>
<td>10,316</td>
</tr>
<tr>
<td>Trade and other payables</td>
<td>18,799</td>
<td>16,398</td>
</tr>
<tr>
<td>Other current liabilities*</td>
<td>14,370</td>
<td>13,521</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td>43,466</td>
<td>40,235</td>
</tr>
<tr>
<td>Total working capital</td>
<td>-7,546</td>
<td>-4,029</td>
</tr>
</tbody>
</table>

*Other current liabilities include tax-liabilities and employee-related liabilities which become due during the next 12 months according to GDF SUEZ (2014). Other current assets (2014: €10,049m / 2013: €8,157m) are not offset, because they consist of tax receivables that may be contested by tax authorities (Mills, 1996).

The company’s working capital is negative. Panigrahi and Chaudhury (2015) claim that negative working capital may be tolerable for a company to finance growth. But this is not the case at GDF SUEZ, which is not growing. Its revenue has declined since 2012 by 23% (GDF SUEZ, 2012, 2014).

Bolek (2013) argues that negative working capital may result from a short cash conversion cycle (CCC) if the company extends its trade payables, but aggressively tries to cash trade receivables and to generate cash sales. However, contrary to Bolek (2013) the 2013/2014 receivables of GDF SUEZ amount to €21,057m and €21,558m, respectively, being higher than payables of €18,799m and €16,398m. Table 2 shows the cash conversion cycle of GDF SUEZ.

Table 2. Cash Conversion Cycle* of GDF SUEZ for the years 2013-2014

<table>
<thead>
<tr>
<th>Cash Conversion Cycle component</th>
<th>Financial Year 2014 (rounded)</th>
<th>Financial Year 2013 (rounded)</th>
<th>Change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory turnover Period (ITP)</td>
<td>40</td>
<td>36</td>
<td>+11%</td>
</tr>
<tr>
<td>(year end inventory ./ cost of sales * 365 days)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts receivable collection period (ARCP)</td>
<td>105</td>
<td>87</td>
<td>+21%</td>
</tr>
<tr>
<td>(year end trade receivables ./ revenue * 365 days)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable payment period (APPP)</td>
<td>155</td>
<td>119</td>
<td>+30%</td>
</tr>
<tr>
<td>(year end trade payables ./ cost of sales * 365 days)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Conversion Cycle</td>
<td>-10</td>
<td>4</td>
<td>-350%</td>
</tr>
</tbody>
</table>

*Cash conversion cycle is calculated according to ACCA (2012d). ITP growth means that fewer sales are generated (Garcia et al., 2011). This is consistent
with the fall in revenue. ARCP has increased by 21%, showing that GDF SUEZ has become less efficient in managing its debtors. The low CCC is caused by expanding the APPP. In 2014 GDF SUEZ has prolonged the payment period by 30% to almost half a year. Relying on trade payables as a source of finance may preserve cash flow and prevent bank borrowings or overdrafts (Peterson and Rajan, 1997). But fast payment is often honoured by suppliers with early payment discounts. The rate of discounts is usually higher than that of bank borrowings (Cuñat and Garcia-Appendini, 2012). Thus, the forgone discounts constitute a cost of trade credit to GDF SUEZ which should be avoided.

Table 3 shows that even if working capital includes other current assets (tax receivables), it is still in decline, albeit not negative.

<table>
<thead>
<tr>
<th>Working capital component</th>
<th>Financial Year 2014 (€m)</th>
<th>Financial Year 2013 (€m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total working capital</td>
<td>-7,546</td>
<td>-4,029</td>
</tr>
<tr>
<td>without tax receivables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other current assets</td>
<td>10,049</td>
<td>8,157</td>
</tr>
<tr>
<td>(tax receivables)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total working capital</td>
<td>2,503</td>
<td>4,128</td>
</tr>
<tr>
<td>with tax receivables</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Altman (1968) argues that declining working capital as a percentage of total assets may be a warning sign for discontinuance. At GDF SUEZ this ratio falls by 80% from 2.7 in 2013 to 1.5 in 2014.

Formula for Working capital as % of Total asset

\[
\text{Working capital 2013 as per Table 3} = \frac{4,128}{155,932} = 2.7
\]

Working capital 2014 as per Table 3

\[
\text{Working capital 2014} = \frac{2,503}{165,305} = 1.5
\]

Working capital calculated as a percentage of revenue amounts to 4.7% in 2013 and 3.4% in 2014, respectively.

Formula for Working capital as % of Revenue

\[
\text{Working capital 2013 as per Table 3} = \frac{4,128}{87,898} = 4.7
\]

Working capital 2014 as per Table 3

\[
\text{Working capital 2014} = \frac{2,503}{74,686} = 3.4
\]

It is significantly below the average of 15.5% of large European businesses (Atrill and McLaney, 2010). Maintaining low working capital may have various advantages. Jensen (1986) argues that high working capital may mislead managers to follow a low-risk strategy to the detriment of returns and shareholders. Also, the disciplining monitoring by debt finance providers is weakened if investments are backed by high working capital generated internally (Pinkowitz, 2000). Thus, low working capital may prevent inefficient usage of funds (Drogetz et al., 2010). Furthermore, positive working capital has to be financed by long-term debt (Myddelton, 2000). But long-term finance is best suited for long-term projects, not to meet current needs (Gillespie, 2001). Also, low working capital may impose pressure on management to improve operational efficiency because management cannot rely on high working capital reserves (Wasiuzzaman and Arumugam, 2013).
However, at GDF SUEZ operational efficiency deteriorates given its falling ITP and ARCP.

CONCLUSION

GDF SUEZ maintains low working capital deploying trade payables as a source of finance. In doing so, it jeopardizes supplier goodwill and forgoes significant early payment discounts to the detriment of net profits. Its working capital to total assets deteriorates, raising going concern issues.

To master these challenges, GDF SUEZ should change its working capital strategy. It should accelerate sales and cash receivables more aggressively. With cash generated, it should pay trade creditors faster to benefit from discounts. This could help to reduce costly borrowings and improve net profits.

REFERENCES


