INSTITUTO
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Equity Valuation of Mota-Engil SGPS, SA

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Master in Finance

Supervisor:
PhD António Sarmento Gomes Mota, Full Professor,
ISCTE-IUL

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Department of Finance

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Acknowledgments

This Project was carried out mainly during the year 2021, the same year I started working, and when the whole world had to live differently, as the COVID-19 closed us all at home. Still, this year, I saw some dreams come true, but also, had to take care of my grandmother, who was bedridden for health reasons. Finally, designing such a project is never easy; it requires a high level of perseverance, organization, and mental health, as well as requires having the base of our identity well-founded because today I know and believe that we are not what we do, but whom Jesus says we are. For all these reasons, I want to thank:

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Resumo

O objetivo deste Projeto de Mestrado é estimar o justo valor do grupo Mota-Engil. A Mota-Engil é uma multinacional, líder de mercado em Portugal no setor de Engenharia e Construção, e, além da Europa, está presente ainda em África e América Latina. O justo valor da empresa é estimado com base na avaliação da empresa através do método dos Fluxos de Caixa Descontados e, ainda, como método complementar, a Avaliação Relativa. O ambiente macroeconómico e as projeções feitas do negócio são consideradas ao longo do Projeto. O período de análise decorre entre 2017 e 2025, tendo por base os dados disponíveis on-line e através da plataforma Bloomberg. No final, o objetivo é comparar os resultados obtidos através dos diferentes métodos entre si, e também com os valores de mercado e projeções de outros analistas de mercado. Assim, irá concluir-se acerca da recomendação aos investidores, que é de comprar ou manter as ações da empresa em questão.

Palavras-chave: Mota-Engil; Avaliação de Empresa; Fluxos de Caixa Descontados; *Relative Valuation*.

Classificação JEL: G30, G32.

Abstract

The objective of this Master Project is to estimate the fair value of Mota-Engil Group. This company is a multinational, the leader in Portugal in the Engineering and Construction sector, and, beyond Europe, it is present also in Africa and Latin America. The estimation of the fair value is based on the equity valuation through the Discounted Cash Flow method and a complementary method, the Relative Valuation. The current macroeconomic environment is considered, as well as the firm's projections for the business. The analysis period runs from 2017 to 2025, based on financial data available online and from the Bloomberg Terminal. The results from the different methods are compared with each other, with the market values and with some available projections made by analysts. Then, the recommendation for investors is made to buy or hold Mota-Engil's shares.

Keywords: Mota-Engil; Company Valuation; Discounted Cash Flow; Relative Valuation.
JEL Classification: G30, G32.

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Glossary of acronyms and symbols

r_E – Cost of equity

r_d^* – Cost of debt

r_f – Risk-free rate

β_L – Levered beta

APV – Adjusted Present Value

BV – Book value

CapEx – Capital Expenditures

CAPM – Capital Asset Pricing Model

CCCC – China Communications Construction Company

COGS – Cost of Goods Sold

COVID-19 – Coronavirus disease

CRP – Country Risk Premium

D – Debt

DCF – Discounted Cash Flow

DDM – Dividend Discount Model

DIV – Dividends

E – Equity

E&C – Engineering and Construction

E&S – Environment and Services

EBIT – Earnings Before Interest and Taxes

EBITDA – Earnings Before Interest, Taxes, Depreciation, and Amortization

ECB – European Central Bank

EG – EBITDA growth

EPS – Earnings Per Share

EU – Europe

EV – Enterprise Value

EV/EBITDA – Enterprise Value to EBITDA

F – Forecast

FCFE – Free Cash Flow to Equity

FCFF – Free Cash Flow to the Firm

GDP – Gross Domestic Product

H – Historical

IA – Intangible Assets

IC – Invested Capital

IMF – International Monetary Fund

LATAM – Latin America

M&C – Mota & Companhia

ME – Mota-Engil SGPS

MGP – Mota Gestão e Participações, SGPS, S.A.

MRP – Market Risk Premium

MVA – Market Value Added

MVD – Market Value of Debt

MVE – Market Value of Equity

NOPLAT – Net Operating Profit Less Adjusted Taxes

P/E – Price-to-earnings

PBV – Price-to-book-value

PEG – Price-to-earnings to growth

PPE – Property, Plant, and Equipment

PS – Price-to-sales

PV EP – Present Value of Explicit Period

PV TV – Present Value of Terminal Value

ROA – Return on Assets

ROE – Return on Equity

ROIC – Return On Invested Capital

SOTP – Sum Of The Parts

STD – Standard Deviation

TV – Terminal Value

UK – United Kingdom

WACC – Weighted Average Cost of Capital

WC – Working Capital

YoY – Year on Year

YTM – Yield To Maturity

g – Expected growth rate in perpetuity

t – tax rate

CHAPTER 1

Introduction

The Master Project's primary goal is to present an equity valuation of Mota-Engil Group.

The Mota-Engil Group is a multinational company with a consolidated position in Portugal as the leader in the sector of Engineering and Construction, and in Europe, with a place in the ranks of the 30 largest European construction groups. Apart from Europe, the company operates in Africa and Latin America. The group was founded in 1946 and has been listed on the PSI-20 index since 2005.

All based assumptions for the valuation are supported by publicly available information, macroeconomic conditions, and industry information.

This Project includes five main sections, beginning with the Introduction. The subsequent section is the Literature Review, presenting the main methodologies in Equity Valuation and analyzing the more suitable ones for Mota-Engil.

The following section includes the industry, the company analysis, and the assessment of the macroeconomic framework that will partially support the main assumptions and the business forecast used to evaluate the company.

The fourth section focus on equity valuation. The Discounted Cash Flow methods and Relative Valuation are the methods employed.

Lastly, the results obtained through the different methodologies are compared with each other and with other equity valuations done by analysts and available online. In the end, there is a financial recommendation about the investment in Mota-Engil's stocks.

CHAPTER 2

Literature Review

The valuation of a company allows comparing the value of its shares on the stock market and decide whether the investor should sell, buy, or hold the stakes, making a comparison between different companies, also providing measuring impact and tools for decisions about strategies that the company will do (Fernandez, 2013).

However, as agreed by different authors (Damodaran, 2012; Mota et al., 2012), valuation is not an objective exercise, and investors' or analysts' preconceptions will be reflected in the valuation. In that sense, Damoradan (2006) argues that analysts should give themselves a reasonable margin of error on the final numbers of valuation.

Valuation methods

There are several methods of evaluating companies, but Damodaran (2006) affirms that the quality of a valuation also depends on the time spent on collecting data and understating the sources of value. According to Damodaran (2012), there are three approaches to valuation: the Discounted Cash Flow (DCF) valuation, the Relative Valuation, and the Contingent Claim valuation, which I will cover next.

Within these methods, companies operating in a multi-business and multi-region context make the valuation more complex than companies running in a single business or region.

2.1. Discounted Cash Flow Valuation

DCF methodology is the most accurate and used in corporate finance, capital markets, and mergers and acquisitions processes (Perez & Famá, 2004; Damodaran, 2012; Fernandez, 2013; Koller et al., 2015).

This approach is based on the present value rule, i.e., the present value of an asset is the present value of expected cash flows that it will generate in the future. Thus, Fernandez (2013) states that this model determines its value by estimating the future cash flows that the company will generate, discounting them at a rate matched to the flows' risk. Damodaran (2012) gives the basic formula of the DCF approach:

$$Value = \sum_{t=1}^{t=n} \frac{Cash\ Flows_t}{(1 + Discounting\ rate)^t} \quad (1)$$

"*There are literally thousands of discounted cash flow models in existence*" is an affirmation made by Damodaran (2012), categorizing them into two approaches: *equity valuation,* valuing just the equity stake in the business, and *firm valuation,* which value the entire firm, including equity and other claim holders in the firm.

2.1.1. Equity Valuation

The value of equity "*is obtained by discounting expected cash flows to equity (i.e., the residual cash flows after meeting all expenses, reinvestment needs, tax obligations, and interest and principal payments) at the cost of equity (i.e., the rate of return required by equity investors in the firm)*" (Damodaran, 2012).

$$\text{Value of equity} = \sum_{t=1}^{t=n} \frac{Expected\ Cash\ Flow\ to\ equity_t}{(1 + r_E)^t} \quad (2)$$

where r_E is the cost of equity.

Damodaran (2012) divides equity valuation into the Dividend Discount Model (DDM) and the Free Cash Flow to Equity (FCFE) valuation, presented next.

2.1.1.1. Dividend Discounted Model

Inside equity valuation, the simplest model is the DDM, in which the value of equity is the present value of expected future dividends (Damodaran, 2012).

DDM is often used because of its simplicity and intuitive logic; however, analysts claim about the model's limitations, such as that the simplicity makes the model easy to abuse, and other assumptions made are considered limitations (Damodaran, 2006; Larrabee & Voss, 2013). However, Larrabee and Voss (2013) add that DDM helps analysts as a sanity check supporting other valuation methodologies.

Compared with the other DCF methods described next, the DDM approach considers the expected cash flows received by shareholders, while the other methods consider the cash flows available for distribution to shareholders.

2.1.1.2. Free Cash Flow to Equity

The FCFE is "*the cash flows left over after meeting all financial obligations, including debt payments, and after covering capital expenditure and working capital needs*" (Damodaran,

2012). So, this model discounts potential dividends rather than actual dividends. The same author suggests a measure for FCFE:

$$FCFE = Net\ income - (CapEx - Depreciation) - (Changes\ in\ noncash\ WC) + (New\ debt\ issued - Debt\ repayments) \quad (3)$$

where CapEx stands for Capital Expenditures and WC for Working Capital.

Being the *Net income*, according to Larrabee and Voss (2013):

$$Net\ income = Operating\ Profit - Interest\ expense * (1 - Average\ tax\ rate) \quad (4)$$

The following equation obtains the Operating Profit:

$$Operating\ Profit = EBITDA - Depreciation\ and\ Amortization \quad (5)$$

where EBITDA stands for Earnings Before Interest, Taxes, Depreciation, and Amortization.

The value of equity is obtained by discounting the expected FCFE at the cost of equity, which is the rate of return required by equity investors in the firm. Damodaran (2012) states the case of a firm that expects to grow faster than a stable firm in an initial period, and then at a stable growth rate after that, being the value of equity, V_{FCFE}, represented by:

$$V_{FCFE} = Present\ Value\ of\ FCFE + Present\ Value\ of\ Terminal\ Price = \sum_{t=0}^{\infty} \frac{FCFF_t}{(1+r_E)^t} + \frac{FCFE_{n+1}/r_E - g_n}{(1+r_E)^n} \quad (6)$$

The primary difference defended by Damodaran (2006, 2012) between the DDM and the FCFE model is that the first assumes only the cash flows received by a stockholder as dividends, while FCFE assumes an expansive definition – the cash flows to equity are the residual cash flow after meeting all financial obligations and investments needs.

2.1.2. Firm Valuation

The firm valuation approach reflects the value of all claims on the firm, in which its value is obtained by discounting cash flows to the firm at the Weighted Average Cost of Capital (WACC), represented by the following equation (Damodaran, 2012):

$$Value\ of\ firm = \sum_{t=1}^{t=n} \frac{Cash\ Flows\ to\ firm_t}{(1+WACC)^t} \quad (7)$$

Damodaran (2012), as other authors (e.g., Larrabee & Voss, 2013), consider two paths for firm valuation: Free Cash Flow to the Firm (FCFF) and Adjusted Present Value (APV). The first method determines the firm's value by discounting the cumulated cash flows to all claim holders in the firm by the WACC, and the second, "*by adding the marginal impact of debt on value to the unlevered firm value*" (Damodaran, 2012).

2.1.2.1. Free Cash Flow to the Firm

The FCFF method is the best indicator of a firm's capacity to generate wealth and demonstrates the business's efficiency (Perez and Famá, 2004).

This approach ignores how the company is financed; thus, the FCFF is the operating cash flow (funds generated through operating activity), after meeting all operating expenses and taxes, but before debt payments (Damodaran, 2012; Mota et al., 2012; Fernandez, 2013).

$$FCFF = EBIT * (1 - t) + Depreciation - CapEx - \Delta WC \quad (8)$$

where EBIT – Earnings Before Interest and Taxes; t – tax rate; Δ – variation.

Since the FCFF approach values the firm as a whole, the appropriate discount rate is the required return to debt and to equity in proportion to which the two sources finance the company, the WACC (Fernandez, 2013). Additionally, firm valuation is often done for perpetuity, so if the firm reaches a steady state after n years and then starts to grow at a stable growth rate, g_n. Damodaran (2006) estimates the Enterprise Value (EV) as:

$$EV_{FCFF} = \sum_{t=0}^{\infty} \frac{FCFF_t}{(1 + WACC)^t} + \frac{FCFF_{n+1}/WACC - g_n}{(1 + WACC)^n} \quad (9)$$

EV is the value of the company's core business operations available to shareholders, such as debt, equity, among others. This measure is used to calculate the total value of the company, mentioned as Equity Value (EQV), adding the non-operating assets, cash and marketable securities, and other non-operating assets owned by the firm, subtracting non-equity claims (Damodaran, 2012).

2.1.2.1.1. Weighted Average Cost of Capital

The WACC is a weighted average of the after-tax cost of debt (D) and the cost of equity (E) (Koller et al., 2015):

$$WACC = \frac{E}{E + D} * r_E + \frac{D}{E + D} * r_d^* * (1 - t) \quad (10)$$

WACC has some drawbacks. Assuming WACC is a fixed cost of capital, the company's capital structure remains constant over time. If the firm decides to modify its debt-to-equity ratio in the future, the current cost of capital will under or overvalue the expected tax shield. Hence, this model works best when maintaining a relatively stable debt-to-equity ratio (Larrabee & Voss, 2013).

WACC's main components that we must estimate are the cost of equity, r_E, and the cost of debt, r_D, explained below.

Cost of equity, r_E

The cost of equity is the rate of return required by investors on an equity investment. According to Damodaran (2012), it could be estimated through two approaches: using a risk-and-return model, being the most used by analysts the Capital Asset Pricing Model (CAPM); or applying the Arbitrage Pricing Model (APM) or other multifactor models.

Capital Asset Pricing Model

The CAPM "*measures the risk in terms of diversifiable variance and relates expected returns to this risk measure*" (Damodaran, 2006).

According to CAPM, the appropriate discount rate to value the expected future cash flows of a firm is determined by the risk-free rate, r_f, the market risk premium (MRP), which is the difference between the expected return of the market and the risk-free rate, $\left[E(R_m) - r_f\right]$, the equity beta, β_E, plus the Country Risk Premium (CRP) (Perold, 2004). So, the cost of equity turns into:

$$r_E = r_f + \beta_E * \left[E(R_m) - r_f\right] + CRP \tag{11}$$

The risk-free rate, r_f

The risk-free rate matches the duration of the risk-free security with the duration of the asset being analyzed. This item is commonly calculated based on the long-term government bond rate as the riskless rate and the historical premium between stocks and treasury bonds as the risk premium.

The equity beta, $\boldsymbol{\beta_E}$

According to CAPM, the beta of investment measures how much risk the investment adds to the market portfolio, meaning that it measures the sensitivity of the returns on the firm's stock to changes in the returns on the market (Larrabee & Voss, 2013).

Damodaran (2012) argues that there are three approaches to estimating beta: "*one is to use historical data on market prices for individual investments; the second is to estimate the betas from the fundamental characteristics of the investment; the third is to use accounting data*".

Market Risk Premium, $\boldsymbol{E(R_m) - r_f}$

The MRP is the difference between the expected return on the market and the risk-free rate. It represents the risk premium investors require for investing in the market portfolio, including all risky assets, instead of riskless assets (Damodaran, 2012; Larrabee & Voss, 2013).

Perold (2004) affirms that MRP is the most challenging parameter of CAPM to estimate, and he suggests estimating it from the average of past returns over long periods, which is also agreed by other authors (Damodaran, 2012; Koller et al., 2015). This measurement is done "*by subtracting the return on government bonds from the return (total return to shareholders) on a large sample of companies over some time frame*" (Koller et al., 2015).

Country Risk Premium

CRP is a crucial factor when investing in a foreign country since it measures the riskiness of a market. Its value is given as a percentage, being the additional return investors require to compensate them for the higher risk associated with the investment than investing in the domestic market.

Cost of debt, $\boldsymbol{r_d^*}$

The cost of debt, present on WACC, measures the current cost of borrowing of the firm, so it is the after-tax cost of raising additional debt, i.e., after considering the tax-deductibility of interest. It is defined by Larrabee and Voss (2013) as:

$$r_d^* = r_d * (1 - t) \tag{13}$$

According to Equation 13, the after-tax cost of debt, r_d^*, is a function of the pre-tax cost of debt, r_d, which is the cost of debt per year before considering the tax-deductibility of interest; and the marginal tax rate, t. The pre-tax cost of debt is estimated for investment-grade companies, using its yield to maturity (YTM) of the firm's long-term debt.

2.1.2.1.2. Growth rate

The growth rate is used to forecast future revenues and earnings. Damodaran (2012) argues that there are three basic ways to estimate this input: the first is looking at the historical data; the second one, using the information estimated by analysts' forecasts; and the last one is to estimate the growth from a firm's fundamentals.

2.1.2.2. Adjusted Present Value Approach

Another approach in firm valuation, the APV, was introduced by Myers (1974) and defends that in the company's choice about its financial structure, in a market with no taxes, the value of economic assets will not be affected; the enterprise value will only be affected by market imperfections, such as taxes and distress costs (Koller et al., 2015). Damodaran (2012) suggests that the value of the business will be equal to:

$$\begin{aligned}\text{Value of business} &= \text{Value of business with 100\% equity financing} \\ &+ \text{Present value of expected tax benefits of debt} - \text{Expected bankruptcy costs}\end{aligned} \quad (14)$$

APV approach is more practical and easier to use when a firm changes its capital structure, i.e., when analysts forecast the dollar interest payments rather than the debt-to-value ratio. However, it also presents some limitations, such as estimating the expected bankruptcy costs, since neither the probability nor the cost can be estimated directly (Damodaran, 2016).

2.2. Relative Valuation – Multiples

The Relative Valuation measures assets based on how similar they are currently priced in the market, so it has two inherent big choices: first, is to value assets on a relative basis, converting prices into multiples of earnings, book values, or sales; and, secondly, is to define the peer group (Damodaran, 2012; Fernandez, 2001; Larrabee & Voss, 2013; Koller et al., 2015).

2.2.1. Multiples

To get an overview of the most used multiples, analysts categorize them into different frameworks. Fernandez (2001) suggests the categorization based on: (i) the company's capitalization (equity value); (ii) the company's value (equity and debt value); and (iii) the growth-referenced multiples.

(i) Multiples based on the company's capitalization:

The Price-to-earnings (P/E) ratio is the most widely used of all multiples because of its simpleness; however, it is often misused because of the variation in earnings per share (EPS), and it is susceptible to manipulation by changes in the capital structure (Damodaran, 2012).

$$\text{P/E ratio} = \frac{\text{Market capitalization}}{\text{Total Net Income}} = \frac{\text{Share price}}{\text{EPS}} \quad (15)$$

The Price-to-book-value (PBV) ratio is another equity-based multiple, computed by the difference between the assets and liabilities book value (BV). PBV is a fundamentally consistent multiple (the numerator and denominator are both equity values), but there is a potential for inconsistency linked to multiple classes of shares outstanding and the inappropriate addition of preferred stocks (Damodaran, 2012).

$$\text{PBV} = {}^{\text{Market Value of Equity}}/_{\text{BV of Equity}} \quad (16)$$

(ii) Multiples based on the company's value:

The Enterprise Value to EBITDA (EV/EBITDA) ratio is a multiple that can be applied to a more significant number of firms (because fewer firms have a negative EBITDA than EPS). Different levels of leverage do not impact this ratio.

(iii) Growth-referenced multiples:

The P/E ratio to growth (PEG) is computed by computing the P/E ratio, used as a relative measure.

$$\text{PEG} = {}^{\text{P/E ratio}}/_{\text{Expected Growth Rate}} \quad (17)$$

The growth rate used, for consistency reasons, should be the growth rate used in earnings because this is an equity multiple (Damodaran, 2012).

Koller, Goedhart, and Wessels (2015) recommend that multiples be based on forecasts rather than historical numbers.

2.2.2. Peer group

"*Selecting the right peer group is critical to coming up with a reasonable valuating using multiples."* (Koller et al., 2015). It is in the choice of the peer group where most of the analysts get into the wrong estimation of the firm's value.

The objective is to determine comparable firms to the one being analyzed. The peer group should have some characteristics in common, like the expectations for growth and Return on Invested Capital (ROIC) (Koller et al., 2015); the size of the company, revenue growth prospects, and profit margins (Larrabee & Voss, 2013); and should belong to the same industry or sector.

For more accuracy, it is preferable to have few companies that genuinely compete in the same markets, with similar products or services (Koller et al., 2015).

2.3. Economic Value Added

Another valuation method, the Economic Value Added (EVA) "*is a measure of the dollar surplus value created by an investment or a portfolio of investments*" according to Damodaran (2012), calculated as:

$$\text{EVA} = (\text{ROIC} - \text{Cost of Capital}) * \text{Capital invested} \quad (18)$$

This measure compares the profitability from the invested capital with the total cost of that capital, giving essential inputs to the management team about the impact of investments on the company's future (Mota, 2012).

The Market Value Added (MVA) is associated with EVA and is calculated by the sum of discounted generated EVA through the years. Thus, it is a measure of accumulated performance, which, explained by Mota (2012), is a company valuation based on values of its past activity and projects, believing that it will have the same behavior in the future. For example, if the MVA is positive, the market believes that the company will profit above the Invested Capital (IC). The enterprise value of a company, according to Mota (2012), is:

$$EV = IC + MVA = IC + \sum_{t=1}^{n} \frac{EVA_t}{(1 + WACC)^t} \quad (19)$$

2.4. Valuing multi-business and multi-region companies

Companies operating in a multi-business and multi-region perspective are more complex to evaluate than those operating in a single business or region. It happens because each business and region has certainly an investment associated, a different growth rate for the sector and country, different discount rates influencing the business (such as the country risk, currency risk, among others) and, specifically for Relative Valuation, analysts face the trouble of finding exact matching companies, that is a goal often impossible to achieve.

Given the problem, Damodaran (2009) proposes doing the valuation through the DCF approach and the Relative Valuation as complementary approach.

In terms of the DCF method, the approach used by the author is the Sum-Of-The-Parts (SOTP), where analysts should, first, value the company separating it into the parts that are most dissimilar from the rest and aggregating the remnant, and then aggregating the final value, which will lead to a better estimate of the overall firm's value. Second, the analyst must choose the currency to evaluate the company: all cash flows, growth rates, and discount rates should be consistent with this choice. The third step is to estimate the risk parameters for the different businesses or/and regions where the firm operates. In this perspective, the cost of capital will only express the cost of capital in a specific business and country. Then, the analyst estimates the future cash flows, and the final step is to get the firm value to equity value per share.

As a complementary method, the Relative Valuation is made. The first step is estimating the operating numbers by business and region, and then, the comparable firms should be found for each region and business. The third step is to estimate the relative value, considering the differences in risk and growth. Then, the value should be consolidated, considering if the multiples are based on equity or mixed equity and firm components – for the last option, information regarding outstanding debt and cash holding of each business is needed. The final step is to check losses, like the unallocated costs, which will not be incorporated into the valuation.

2.5. Best model to use

According to most authors, as we saw in the Literature Review, the most appropriate is the DCF method. Koller, Goedhart, and Wessels (2015) defend that DCF works when other methods fail because its economic and finance principles can be applied even when analysts do not know all information about the business. Mota (2012) complements saying that FCFF is the most used methodology, and Fernandez (2013) also agrees, adding that the valuation methods used will depend on the company's nature. As a complementary method, Relative Valuation offers important characteristics on valuation, as the comparison between different firms (Fernandez, 2001).

Mota-Engil is a multinational operating in Europe, Africa, and Latin America (LATAM); thus, the most appropriate methodologies are the FCFF approach following the SOTP, and the Relative Valuation was applied. Since the company has its main operations in Engineering & Construction (E&C) sector, the EV/EBITDA multiple should be used in Relative Valuation, according to Fernandez (2001) and Damodaran (2012).

CHAPTER 3

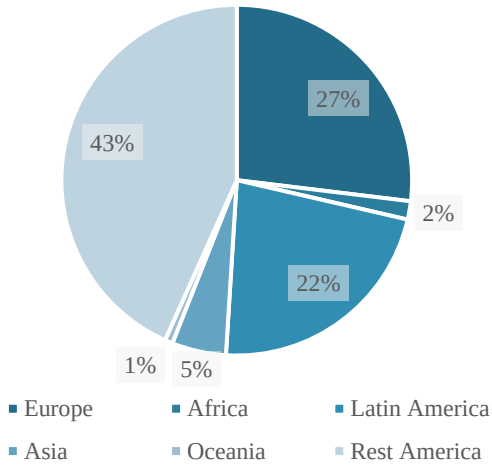
Industry Overview

3.1. Macroeconomic environment

The macroeconomic outlook of Mota-Engil is related to the Engineering & Construction and the countries outlook where ME operates (see Section 4.1.). Some factors impact the business, like the Gross Domestic Product (GDP), inflation, the reference interest rate in the market, and the evolution of the international prices of some commodities, such as oil, steel, and cement.

In 2019, COVID-19 had risen and has been affecting the world since the start of 2020. This pandemic has been responsible for more than 179 million infections and almost 4 million deaths[1] in the whole world, as exhibited in Figure 3.1.

Figure 3.1 - Total COVID-19 cases per 1M of population



Source: Worldpmeters (2021)

According to data from International Monetary Fund (IMF), world GDP declined 3.3% in 2020, and the expectation for subsequent years is the economy's recovery of 6% in 2021 and around 3.5% in the following years.

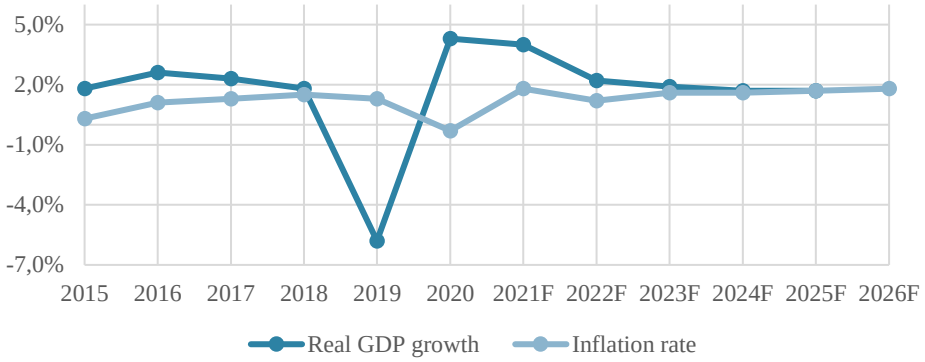
Governments of all countries implemented measures to contain the COVID-19 pandemic, which substantially affected the economy. The main measures imposed by governments, in general, were to prevent the security of risk groups (more vulnerable people) by staying at home, the implementation of disinfection and cleaning stations at work, social distancing, personal protection equipment, agglomerations prevention, among others. Also, most countries of Europe entered in lockdown more than one time between 2020 and 2021.

[1] Source: Worldometer (2021)

3.1.1. Europe

In 2020 the GDP of Europe, according to IMF, registered a decline of 6%. Hopefully, according to the same source and Bloomberg specialists', GDP will grow to around 4% in the following years, a good mark.

Figure 3.2 – Macroeconomic indicators - Europe



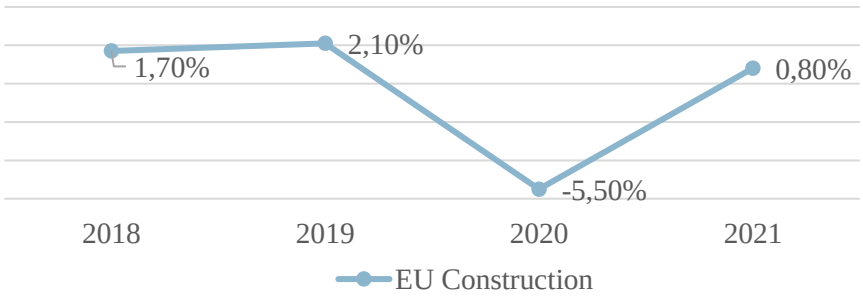
Source: IMF World Economic Outlook

The construction sector in Europe has been growing since 2016 when Europe was coming out of the migratory crisis. In 2020, according to the European Central Bank (ECB), the GDP declined to -5.5% caused by the pandemic situation, and the same source expects an increase to 0.8% in 2021, placing their hope on vaccination. After 2021, the expectations are the GDP growth.

For the sector, the measures implemented by governments mentioned before had consequences in the long run.

- The investments in the sector were affected,
- There was decreasing demand, and
- the oil price dropped (an essential raw material for the sector) and other commodities, diminishing order books.

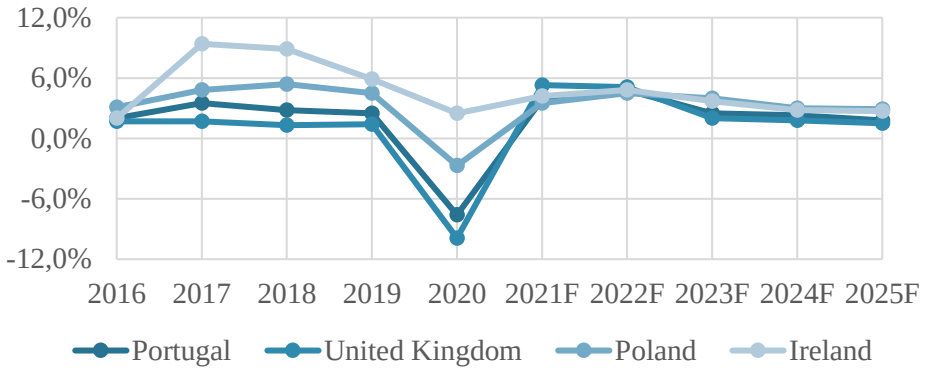
Figure 3.3 – Annual percentage changes - Construction - Europe



Source: European Central Bank

Hopefully, as shown in figure 3.4, the economic forecast is optimistic long-term, with high growth in the next year and finding an equilibrium in the following years.

Figure 3.4 – Real GDP Growth - European countries



Source: IMF World Economic Outlook

Also is possible to observe that all countries suffered a contraction in the economy caused by COVID-19. United Kingdom (UK) saw the highest decrease, to 11% of GDP in 2020. The biggest problem in the UK construction segment was the postponement of projects and difficulties in works. Also, Brexit impacted the industry because it had consequences like postponing investment decisions and delayed investments in new projects.

Despite, Poland is among the countries less affected, which made possible the construction sector's growth in 2020, caused by the increasing price in flats and the highways segment. Also, it is expected that Poland will drive European growth the most, sustained by the number and value of infrastructure projects[2].

The Environment & Services (E&S) sector was less impacted than E&C regarding its importance for public health, so its activities intensified. However, in the waste management segment, the situation was less favorable – COVID-19 had negative impacts on reducing the collection of recycled materials[3].

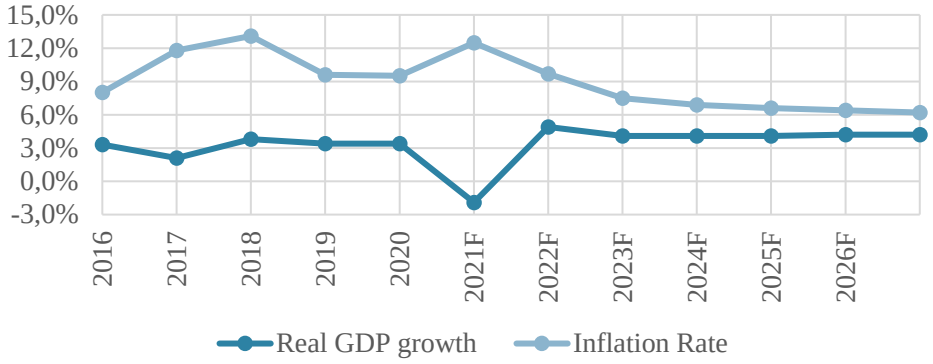
3.1.2. Africa

Africa, as the whole world, has experienced the same pandemic situation. This region has one of the lowest percentages of infections by 1 million of the population (2%), according to Figure

[2] Source: Mordor Intelligence (2021)
[3] Source: Mota-Engil Consolidated Report and Accounts (2020)

3.1. Accordingly, the GDP in Africa decreased to -1.90%, according to IMF, as exhibited in Figure 3.5.

Figure 3.5- Macroeconomic indicators - Africa



Source: IMF World Economic Outlook

The contraction in the economy is mainly the result of the measures to contain the risk of contamination by COVID-19. Consequently, Africa witnessed the reduction of exports and consequent losses in tax revenues, the lack of public investment in infrastructures, difficulties in funding infrastructure projects, constant rising in project costs, the corruption issues involving companies and the government, the lack of skilled labor, the safety on-site and capital supply chain[4].

As a result, it led to an increase in public indebtedness, achieving 68% of the GDP in 2020. The most contributed to this decrease were Uganda, Rwanda, and South Africa, with a percentage of GDP of -2.10, -0.1, and -7, respectively. Despite this, IMF expects a recovery in 2021 to the levels above 2019.

Specifically, there were consequences in projects interruptions, mainly in Angola, Uganda, and Mozambique, the unemployment rate grew, and the number of projects in public works declined from 452 projects in 2019 to 385 in 2020, which represents a decrease in value of 98 billion dollars[5].

However, the forecast is optimistic, expecting a CAGR of 6.4% by 2024[6] supported by the availability natural resources, investment opportunities in the sector, and cheap labor. Also, Africa is expecting to have around 2,5 billion people in 2050, so cities are investing in infrastructure[7].

[4] Source: Mota-Engil Consolidated Report and Accounts (2020)
[5] Source: Deloitte (2021)
[6] Source: African Review (2021)
[7] Source: Muggab & Hill (2018)

South Africa is the second country with the highest number of projects ordered in 2020, recovering from tough times with lower government investments in infrastructure, low business confidence, and low foreign direct investment.

Angola witnessed the worst value ever in oil price. This material is the largest source of public revenue in the country, which led the economy, among other factors, to contract 3.40% in the 2020 Year on Year (YoY). To face the problem, the government is financing the deficit with external debt.

Mozambique and other countries in the region were recovering from the last shocks in the economy before the pandemic, like the debt crisis, natural disasters, and the social and political instability in the region, which led the economy to contract even more.

In contrast with the region, Malawi was nominated by "The Economist" as the country of the year[8], so we can see the effort made.

There is a hope of recovery in 2021 for all countries, with the resolution of military tensions in Africa, an increase of foreign investment, gas exports and cacao exports (the main raw material exported in Ivory Coast), and the measures implemented by the Central Bank to boost the economy.

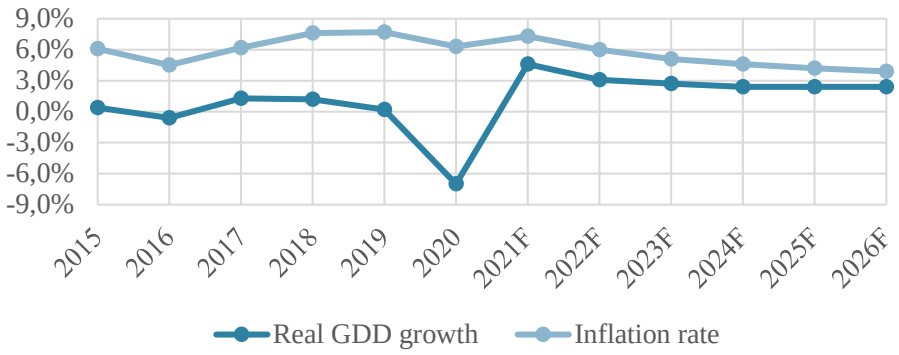
3.1.3. Latin America

Latin America is also one of the regions more affected by the COVID-19 pandemic in terms of infections. The measures enacted by authorities and decisions on the Construction sector made LATAM the region more affected, especially in Mexico and Peru[9].

According to the IMF (see Figure 3.6), the GDP dropped from 0.2% in 2019 to -7% in 2020. The COVID-19 pandemic collapsed in commodities' prices and political and social tension in all regions. The economic recovery is expected to be seen in 2021, depending on different factors, such as the vaccination. Generally, all regions in LATAM saw a fall in 2020, except for Colombia.

[8] The Economist (2021)
[9] Source: Mota-Engil Consolidated Report and Accounts (2020)

Figure 3.6 – Macroeconomic indicators - Latin America



Source: IMF World Economic Outlook

Besides the COVID-19 situation, LATAM simultaneously suffered a political crisis, which led to a decrease in private investment, and the construction sector suffered consequently.

LATAM is expected to see growth in the following years in the construction sector due to the recent US election, Joe Biden, bringing hope that the president promotes a construction US reengagement with LATAM[10]. In 2024 it is expected to achieve a CAGR of 12.6% (2019-2024)[11], being the housing segment and hotel construction the ones with better prospects for recovery.

Along with this, the investment plans developed by the government will help the region to grow. In Peru, the government approved part of the $51 billion stimulus package for transportation infrastructure, so the sector is expecting a growth of 16.8% in 2021[12].

Reasonable expectations are made up also to water treatment, and sanitation segments regarding the investments planned to happen in 2021.

[10] Source: W. Thurston (2021)
[11] Source: ResearchAndMarkets.com (2020)
[12] Source: W. Thurston (2021)

CHAPTER 4

Company Overview

4.1. Company Description

Mota-Engil SGPS is a Portuguese multinational company, the leader in Portugal in the construction sector, and in 2005 became the only construction company included in the PSI-20 index. Outside Portugal, the company has a strong position in the rest of Europe, Latin America, and Africa.

ME resulted from the merge between two companies: Mota & Companhia (M&C) and Engil – Sociedade de Engenharia Civil, Lda. The first was founded in 1946 in Portugal, operating in Construction and Public Works mainly in Angola; Engil was founded in 1952, mainly operating in the residential construction segment. M&C had its first contract in Portugal in 1975, operating for the first 30 years only in Africa.

Both companies (M&C and Engil) merged into Mota-Engil in 2000. Over the years, ME has taken steps in its internationalization, starting operations in different countries, and diversifying the business to new sectors. In the last ten years, according to information from the company, Mota-Engil "*grown more than 8x outside Portugal (Africa and LATAM as the main focus on the internationalization strategy)*"[13]. Thus, the company is present in 3 different geographical areas: Europe, Africa, and Latin America, in 23 countries. Those countries are Portugal, Spain, United Kingdom, Poland, Ireland, Angola, Mozambique, Malawi, South Africa, Zimbabwe, Uganda, Rwanda, Guinea-Conakry, Cameroon, Kenya, Ghana, Nigeria, Mexico, Peru, Brazil, Colombia, Dominican Republic, and Panama.

4.2. 2021 Strategy

The company is expecting to continue being the leader in Portugal in E&S and intends to accelerate the turnover performance in E&C Europe. In Africa, the expectations are the order books growth in all business segments, focusing on substantial infrastructure projects. ME intends to return to the execution velocity of projects experience before in Latin America and respond to the region's new challenges due to the social and political environment lived.

[13] Source: Mota-Engil Consolidated Report and Accounts (2020)

4.3. Stock performance

In 1987, before the companies merged into Mota-Engil Group, M&C was listed in the Lisbon Stock Exchange Maker. Later in 1999, M&C launched a take-over bid for the whole Engil equity capital, leading to the merge of the companies in 2000. As a result, ME became the largest contractor group with operations in Portugal listed on the PSI-20 index.

As exhibited in figure 4.1, Mota-Engil has decreased its stock performance since 2018, now at levels similar to 2016. In 2016 the company suffered adverse effects from the refugee crisis, which began in Africa in 2015, leading Mota-Engil Africa to leave the Stock Exchange[14] (quoted since 2014). Then, in 2018, ME had a colossal decrease due to several reasons such as the political instability from Brexit, Angola had been considered a hyperinflationary economy, and there were investment restrictions in public works[15].

Figure 4.1 - Comparison between Mota-Engil and PSI-20 indexes between 2010 and 2021

Source: Euronext (2021)

Concerning the PSI-20 index, we can see discrepancies between its stock performance and ME, especially during the crisis recovery, when ME performed well. However, at the end of 2020, the company was performing worse than the PSI-20 (a loss of 63.94% compared to 43.57%).

[14] Source: Pedro & Moutinho (2015)
[15] Source: Mota-Engil Consolidated Report and Accounts (2020)

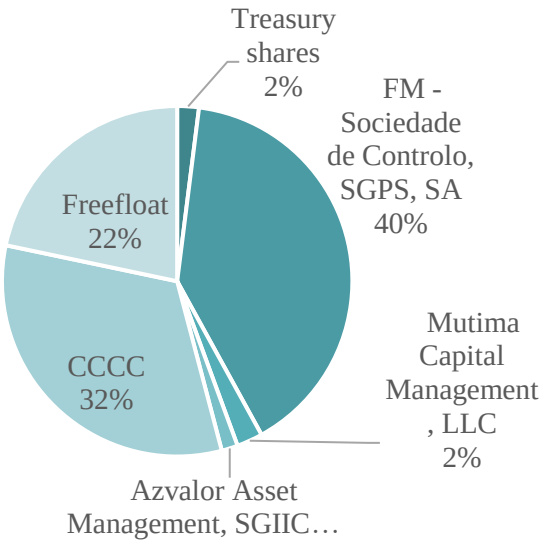
4.4. Shareholder Structure

Mota-Engil is listed on the Euronext Lisbon, with a capital of 306,775,950 euros, represented by 306,775,950 shares with a nominal value of 1 euro each.

Mota-Engil SGPS is directly held in 56.48% by Mota Gestão e Participações, SGPS, S.A. (MGP), which is 100% owned by FM – Sociedade de Controlo, SGPS, S.A. Most of the voting rights (58.48%) and shares (57.97%) belong to the Mota family through MGP.

The free float is small, and it has decreased over the years. On the one hand, this means higher stock volatility because fewer traders are buying and selling shares. On the other hand, a low free float indicates a concentrated ownership structure with a long-term orientation favorable to the major shareholders.

Figure 4.2 – Voting Rights - Mota-Engil



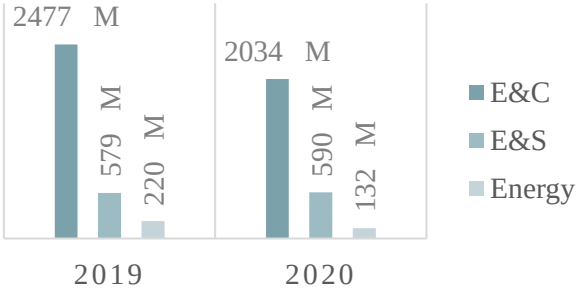
Source: Mota-Engil Consolidated Report and Accounts (2020)

Although most of the shares are owned by the Mota family, this can lead to a preference for debt investments rather than equity to not dilute their participation in ME. Compared with last year, FM reduced his position by 27% due to the new strategic partnership with Chine Communications Construction Company, Ltd., (CCCC), one of the largest infrastructure groups in the world. This partnership contributed to the capital increase of up to 100 million new shares, with a subscription price of 1.5€.

4.5. Business Structure

As mentioned, Mota-Engil has taken a path of diversification over the years, beginning with operations in the E&C sector and then starting in other five different segments along its trajectory. For instance, the significant turnover and investment are mainly in E&C, and then E&S, whose

Figure 4.3 – Turnover – Mota-Engil



Source: Mota-Engil Consolidated Report and Accounts (2020)

segments will be considered along with the Project, as shown in Figure 4.3.

4.5.1. Engineering & Construction

E&C segment comprises activities in infrastructure, civil construction, real estate, among others.

Mota-Engil is the sector leader in Portugal, with a consolidated presence in the rest of Europe (25.º company in the Top Global Contractors), Africa, and Latin America (7.º company in Latin America Top Contractors). Its experience in the segment comprises works in 50 different countries in construction projects, distinguished for roads, motorways, airports, ports, dams, buildings, among other specialties. E&C is the one that contributes most to the overall turnover of the company.

4.5.2. Environment & Services

E&S comprises various segments: Waste Management, Multiservices, and Logistics.

The Waste Management sector includes the collection, treatment, and recovery of waste. Mota-Engil has a majority holding in SUMA (alongside Urbaser), founded in 1995 in Portugal, acting nowadays in the private market in Portugal, Angola, Mozambique, Poland, Brazil, and Mexico, dedicated to managing the lifecycle of waste. Also, ME operates through EGF to treat and recover waste with technological solutions and energy production in 11 multi-municipal systems in Portugal.

Multiservices segment complements construction area and infrastructure management, operating through Manvia, a leading company in Portugal, also operating in Africa and Northern Europe. Also, it includes the area of landscaping, operating through Vibeiras, in the design, construction, and maintenance of green spaces and golf courses. Vibeiras has a presence in Portugal, as the leader in the segment, and Africa.

Furthermore, ME operates in railway freight transport through Takargo, the first private operator in Portugal in the Logistics area.

4.5.3. Transport Infrastructure Concessions

Due to the extensive know-how of ME in infrastructure projects implementation, it took advantage of that and achieved a strong position in the management of road infrastructure concessionaires. Mota-Engil has a stake in Lusoponte, the concessionaire of two bridges in Lisbon (Portugal), and it is also present in Latin America.

4.5.4. Energy

Mota-Engil was the pioneer in Mexico in the energy segment as a private operator through Generadora Fenix, which maintains hydroelectric plants.

In Portugal, EGF operates in waste processing and recovery, using different technologies, such as incineration, biogas, and organic recovery.

4.5.5. Mining

In the mining segment, ME operates in Africa and Latin America in the exploration of mineral resources. This segment was created based on the extensive experience obtained from the construction area.

4.5.6. Martifer

Mota-Engil has held strategic participation of 37.5% since 2008 in Martifer, a company operating in metallic structures and renewable energies, fully consolidated by the equity method.

The valuation of Martifer will be performed to estimate the stock price, multiplying the number of outstanding shares, to get the company's market capitalization. The stock price of Martifer is considered to be 0.7€[16] and the shares outstanding are 97.784 million shares[17], which totalized a market capitalization of 68.449 million euros. Therefore, the estimation of its enterprise value is 25.668 million euros for the Mota-Engil stake in Martifer.

4.6. Financial Performance

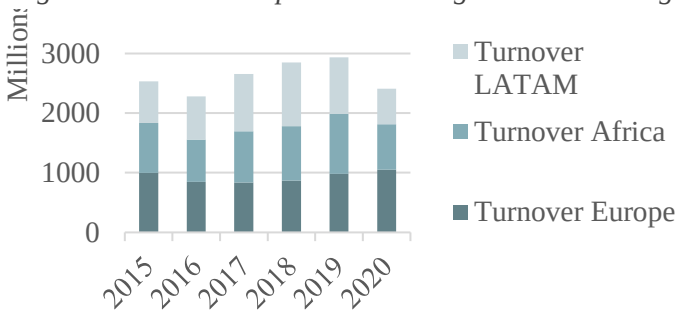
4.6.1. Turnover

Turnover corresponds to the caption Sales and Services Rendered in the Consolidation Income Statement for E&C and E&S business areas.

Mota-Engil has been growing in turnover, reaching 2,407 million euros in 2019. However, in 2020 Mota-Engil decreased turnover by 18% due to the world pandemic crisis caused by COVID-19, as exhibited in Figure 4.4.

[16] Source: Euronext (2021)
[17] Source: Finbox (2021)

Figure 4.4 - Turnover per business segment – Mota-Engil



Source: Mota-Engil Consolidated Report and Accounts (2020)

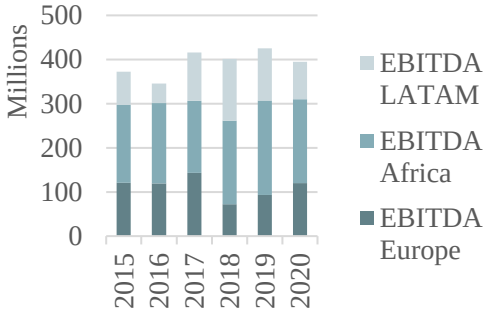
The segments most contributed to this decrease were Africa and LATAM, respectively, due to their decline of 24% and 37%. ME still expects negative impacts in 2021 at the production level in some countries where recovery from the crisis is challenging[18]. Moreover, the decrease is aligned with the decrease in the construction market of 14% in turnover[19].

Mota-Engil had long-term results from the investment in internationalization. Before the pandemic crisis, Africa and LATAM were the significant contributors to the company's turnover – in 5 years, Africa increased from 835 million euros in sales to 1,000 million, similar to LATAM, which grew 250 million euros in sales. However, the COVID-19 had considerable impacts in these regions, despite Europe hitting the most excellent turnover since 2012.

4.6.2. EBITDA

EBITDA had a contraction of 9%, influenced mainly by Africa (-11%) and LATAM (-28%), while Europe increased EBITDA by 26%. It is possible to conclude that Europe is a region more stable than others.

Figure 4.5 - EBITDA per segment – Mota-Engil



Source: Mota-Engil Consolidated Report and Accounts (2020)

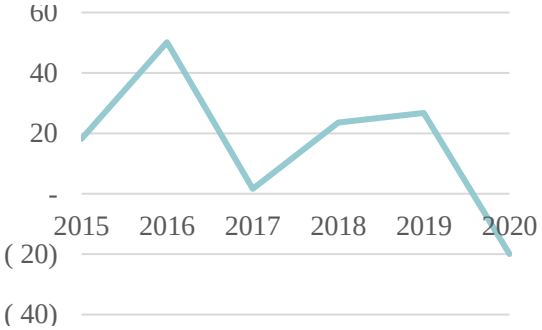
Still, the EBITDA margin increased to 15.7% in 2020, mainly due to strategic decisions, like the conclusion of projects with lower profit rates and the reduction in the cost structure.

[18] Source: Mota-Engil Consolidated Report and Accounts (2020)
[19] Source: Bloomberg Terminal

4.6.3. Net Profit

Figure 4.6 shows a changeable net profit over the years. In 2017, the item Gains and Losses on disposals had a significant influence on net profit explained by the gain from the disposal of the Ports and Logistics business and Indaqua company. Then, ME tried to recover, until 2020 where the pandemic affected negatively balanced the figure. In 2020, the net profit reached a negative result of almost 20 million euros (a decrease of 175% compared to 2019).

Figure 4.6 - Net Profit of Mota-Engil in thousands of euros



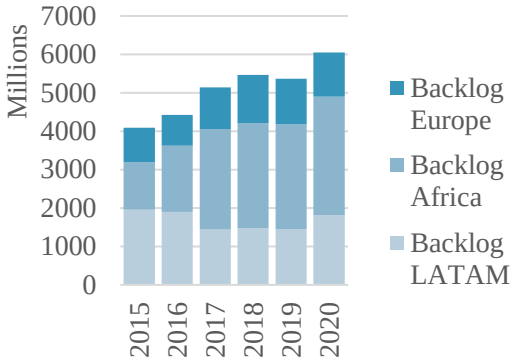
Source: Mota-Engil Consolidated Report and Accounts (2020)

4.6.4. Backlog

Backlog is an essential indicator in the construction sector, which could estimate future business activity.

The backlog increased over the years (see Appendix D and Figure 4.7), emphasizing Africa and LATAM.

Figure 4.7 - Backlog per segment – Mota-Engil



Source: Mota-Engil Consolidated Report and Accounts (2020)

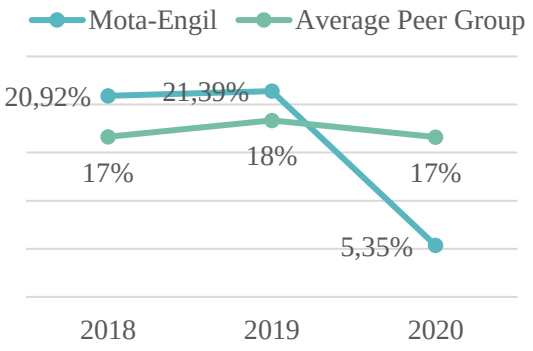
The year 2020 was relevant in terms of backlog since Mota-Engil achieved the record level with 6,052 million euros, due to the effort on the commercial front, with Africa and LATAM contributing 81%. Also, E&C represents 89% of the backlog achieved, which led to a reduction in the pandemic's impact in the following years.

4.6.5. Return on Equity

Return on equity (ROE) is a financial indicator analyzing the firm's profitability concerning shareholders' equity. This measure will express whether the company is using the reinvestment earnings to create additional earnings.

According to Figure 4.8, Mota-Engil's ROE was stable until 2020, where almost all ROEs decreased due to the world pandemic crisis (see Appendix F).

Figure 4.8 - ROE of Mota-Engil and average of peer group



Source: Trading View (2021)

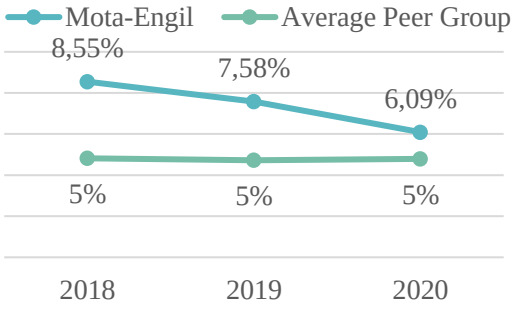
In 2020, Net Income decreased 89%, and shareholders' equity also went down to half, consequently leading to a decrease of 16% in ROE. Before that, ME was at a reasonable level compared with the peer group.

4.6.6. Return on Assets

Return on Assets (ROA) is also a profitability indicator relative to the total assets, displaying how efficiently a company manages its assets to generate earnings.

Mota-Engil decreased its ROA over time (see Appendix F), as exhibited in Figure 4.9, which means that the company is less effective in converting its investment into net income. In 2020, net income was significantly down, whereas the Total Assets decreased just by 0.05% due to the effort made by the company in the pandemic. ME over-invested in assets, however, fall in revenue growth.

Figure 4.9 - ROA of Mota-Engil and average of peer group



Source: Trading View (2021)

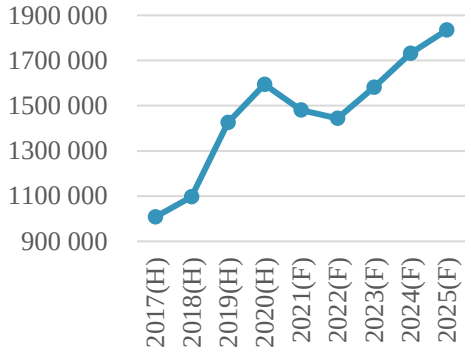
4.6.7. Debt structure

Despite the historical profile of growth, the company has, its debt structure has some troubles.

ME has been growing mainly in Africa and LATAM, with vast order books in these regions; however, it is struggling to convert this in profit due to the high investment costs. These investment costs can have two main reasons: the need to invest in the construction sector, a sector that requires vast investments, and the last crisis in the world and the construction sector.

As exhibited in Figure 4.10, net debt is increasing its value. Also, as Appendix J shows, the loans and liabilities still increase over time. The ratio of current assets divided by current liabilities, which allows analyzing if the firm could now pay all its obligations, has decreased over the years. Its value in 2020 was 0.82x. Consequently, according to the Annual Report, ME has increased loans and broke loans covenants in 2019 and 2020. Before the COVID-19 pandemic, the company was unable to pay its debt, and in 2020, the situation would get worst.

Figure 4.10 - Net debt - Historical (H) and Forecast (F) – Mota-Engil



Source: Mota-Engil Consolidated Report and Accounts (2020) and own forecast

Another sign of this problem is the Net Debt to EBITDA ratio, which tells how long the company took to pay its debt if these two items hold constant. This ratio has been increasing since 2018[20].

4.6.8. Return on Invested Capital

The Return on Invested Capital is a performance ratio that measures the amount of money made above the average cost paid for its debt and equity capital[21].

$$ROIC = {}^{NOPLAT}/_{IC} \tag{20}$$

The numerator of ROIC's calculation is the Net Operating Profit Less Adjusted Taxes (NOPLAT), a measure of profitability, representing the earnings generated after subtracting income taxes related to core operations, summing back overpaid taxes during a period.

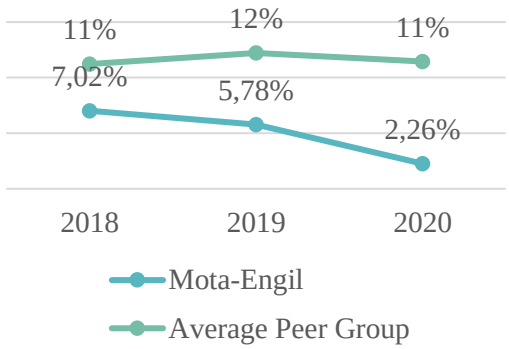
On denominator, the Invested Capital represents the amount of money invested by issuing securities and debt. This measure is calculated by assuming the total debt issued, the equity sold to investors, and the capital reported. Also, it can be calculated as:

$$IC = Operating\ Non\ Current\ Assets + WC \tag{21}$$

[20] Source: Finbox (2021)
[21] Source: Investopedia (2021)

Comparing ROIC with the peer group, Mota-Engil is lower than its peer. Thus, we can conclude that ME cannot create more value for its shareholders than companies in the same sector.

Figure 4.11 - ROIC compared between Mota-Engil and peer group



Source: Mota-Engil Consolidated Report and Accounts (2020)

Also, dividing the analysis by region, ROIC and WACC can be compared. The difference between ROIC and WACC can be named Economic Profit, so it is possible to analyze a return in the business. Table 4.3 shows that LATAM and Africa have the potential to generate a return to investors. Also, it is possible to see the situation of the overall company, which is not generating Economic Profit, as the difference between both indicators is negative.

Table 4.1 - Economic Profit calculation

	Europe	**Africa**	**LATAM**
ROIC 2020(H)	1.26%	5.36%	4.05%
ROIC 2025(F)	4.28%	10.71%	15.80%
WACC	5.72%	9.32%	8.29%
Difference between ROIC 2025(F) and WACC	**-1.44%**	**1.39%**	**7.51%**
ROIC Mota-Engil 2020(H)	2%		
WACC 2020(H)[22]	10%		
Difference	**-8%**		

[22] Source: Finbox (2021)

CHAPTER 5

Valuation

5.1. Methodology

The valuation of Mota-Engil, as prior referred, will be performed through the DCF-FCFF approach for each region, following the SOTP method. Some features are calculated independently for each region, such as WACC, growth rate, and others, described below. As a complementary approach, the Relative valuation will be performed.

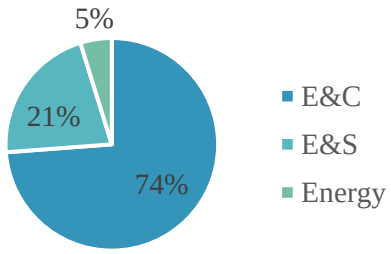
5.2. Assumptions

The following assumptions consider information from Bloomberg's, banks' analysts, and the company's expectations for subsequent years. Also, to determine the fair value of Mota-Engil, the assumptions are made for the period between 2021 and 2025.

5.2.1. Turnover

As mentioned previously, turnover corresponds to the caption Sales and Services Rendered in the Consolidation Income Statement of ME, resulting from the turnover of E&C and E&S, the ones with more weigh in the total of turnover, as exhibited in figure 5.1.

Figure 5.1 - Turnover in 2020 – Mota-Engil



Source: Mota-Engil Consolidated Report and Accounts (2020)

Mota-Engil's turnover is calculated based on predictions from Bloomberg analysts from 2021 until 2024. They predict a percentage of growth for the whole group, as Table 5.1 shown. Appendix D also exhibits how Mota-Engil has recovered from other crises in the past years, supporting the predictions implemented. For example, in 2016, the turnover of ME contracted 10% (explained in Section 4.6.1.) and recovered in 2017, increasing the turnover by 16%. For 2025, it is expected to be a gradual growth, aligned with the past years.

Table 5.1 - Turnover Forecast

Million euros	**2020 (H)**	**2021 (F)**	**2022 (F)**	**2023 (F)**	**2024 (F)**	**2025 (F)**
Total Group Revenues	2,407	2,768	3,155	3,502	3,782	4,009
YoY changes	-18%	15%	14%	11%	8%	6%

Each region's sales were calculated based on the average historical values from the last ten years, where Europe is forecasted to represent 43% of the turnover of the whole company, Africa 34%, and Latin America 23%. However, this was adjusted, assuming that Europe is a more stable region, with fewer opportunities to grow, considering its market share. Europe, in 2020, increased turnover by 7%, whereas LATAM and Africa suffered a contraction of 37% and 24%, respectively. So, the perspective is to see a higher increase in these last regions, and for Europe is expected to grow stably, 9% in 2021.

5.2.2. Operating Costs

After calculating the estimated turnover value, it is easier to determine the operating costs, directly or indirectly correlated with the prior estimation.

To see more information about the values of Operating Costs, go to Appendix G.

Cost of Goods Sold (COGS)

In 2020, Mota-Engil decreased COGS to respond to the new adverse situation, aligned with the decrease in sales. Therefore, this figure is forecasted as a percentage of sales, using the average historical weighted values of the last six years for each region.

Third-party suppliers and services

Third-party supplies and services include the values of subcontractors, supplies, and services, such as specialized works (outsourcing and technical assistance), transport, and leases.

The value is estimated as a percentage of the services rendered through an average historical weighted of the last six years. As exhibited in Appendix G, the fiscal year 2020 was an unusual year regarding the pandemic situation since all percentages were above the average of the last years. However, 2020 is considered in the average weighted since untypical years can happen again. So, in perpetuity, it was considered a scenario that includes regular and crisis seasons.

Wages and salaries

Wages and salaries comprise the expenses of payroll and social security charges. This expense is forecasted as a ratio of the services rendered:

$$Wages\ and\ salaries\ /_{Services\ rendered} \tag{22}$$

This item is expected to decrease over the years since the services rendered are expected to grow, the standard behavior of Mota-Engil in the last years. For example, in Europe, as exhibited in Appendix G, in 2019, turnover increased by 12.5%, and Wages and Salaries reduced the Equation 22. As the prediction is services rendered increase in the following years, the forecast of the ratio of Equation 22 is to decrease gradually.

Other operating income or expenses

This item includes gains and losses from exchange differences related to changes in investments, taxes, from the sale of assets and donations.

The forecasted value is based on the historical average of the last six years as a turnover weight.

5.2.3. Depreciation and Amortization

Depreciations and amortizations are related to property, plant, and equipment of intangible and tangible assets and rights of use assets, such as development costs, software, concessions operation rights, land and buildings, and equipment.

The value of this item varied between 11% and 18% of the Net Property, Plant and Equipment (Net PPE) and Intangible Assets (IA) in the last six years, with an average value of 12.47%.

So, the forecasted value is based on the average values of the last six years of the ratio between depreciation and amortizations and the sum of Net PPE and IA.

Table 5.2 - Depreciation and amortization - historical (H) and forecast (F)

Million thousand euros	**2020 (H)**	**2021 (F)**	**2022 (F)**	**2023 (F)**	**2024 (F)**	**2025 (F)**
Total ME	197	169	167	191	214	233
as % of Net PPE + Net IA	*18.0%*	*15.5%*	*15.5%*	*15.5%*	*15.5%*	*15.5%*
Europe	89	80	80	91	102	111
Africa	81	72	72	82	92	100
LATAM	23	16	16	18	20	22

5.2.4. CapEx

CapEx includes investments in property, plants, buildings, technology, and equipment, which varied between 5.76% and 8.19% of the turnover in the last six years.

For the forecasted period, the values are estimated from 2 sources: for the next four years, the values are based on Bloomberg analysts' assumptions, and for the 2025 period, the percentage of CapEx as Sales will decrease gradually to 6%.

Table 5.3 - CapEx - historical (H) and forecast (F)

Million thousand euros	**2020 (H)**	**2021 (F)**	**2022 (F)**	**2023 (F)**	**2024 (F)**	**2025 (F)**
Total ME	197	230	237	252	273	241
as % of Net PPE + Net IA	*8.1%*	*8.3%*	*7.5%*	*7.2%*	*7.2%*	*6%*
Europe	103	103	106	112	122	108
Africa	63	97	100	106	115	102
LATAM	29	30	31	33	36	31

5.2.5. Working Capital

The value of Working Capital is calculated by the difference between current assets and current liabilities, which measures the company's liquidity, operational efficiency, and short-term financial health.

The current assets include inventory, accounts receivable, contract assets, and other current assets, and the current liabilities include accounts payable, deferred income, contract liabilities, and other current liabilities.

All these items are forecasted based on their financial performance as a percentage of the historical turnover values of the last six years, except accounts payable, which is based on the historical values of COGS.

Table 5.4 - Working Capital - historical (H) and forecast (F)

Million thousand euros	**2020 (H)**	**2021 (F)**	**2022 (F)**	**2023 (F)**	**2024 (F)**	**2025 (F)**
Total ME	242	377	429	477	515	546
Changes in WC	*88,004*	*-134,925*	*-52,727*	*-47,228*	*-38,126*	*-30,882*
Europe	105	156	170	188	206	224
Africa	76	128	145	162	175	185
LATAM	60	92	114	126	134	136

5.2.6. Tax rate

The effective tax rate is determined considering the nominal rate and tax income, which is assumed to be constant at 22.5%, summing the autonomous taxation, which has fluctuated

between 1.4% and 3.3% in the last eight years, and it is considered to be 2.03% over time. So, the effective tax rate is forecasted to be 25%.

5.2.7. Growth rate

The growth rate used to calculate the FCFF for perpetuity is based on the IMF's GDP forecast for each region until 2025. The growth rates estimations are the following:

Table 5.5 - Growth rate prediction

	Europe	Africa	LATAM
Growth rate	1.5%	3.5%	2.25%

5.2.8. WACC

When performing the FCFF approach, the discounted cash flows need to be discounted at the cost of capital, as mentioned in Chapter 2. The cost of the capital method used was WACC, whose core inputs are the capital structure, the cost of equity, and debt.

It was estimated a WACC for each region where ME is present.

Capital Structure

The Capital Structure of Mota-Engil is composed of the market value of equity (MVE) and debt (MVD).

MVE is the result of the multiplication of outstanding shares (237 million thousand shares[23]) and value per share (1.49 €/share[24]), equaling 353 million thousand euros. MVD results from the sum of short and long-term debt and the operational leases, equal to 2,192 million thousand euros[25].

Table 5.6 - MVE and MVD estimated

Numbers in thousands	**Explicit Period**
Nº outstanding shares	237,517
Value per share	1.49€
Market Value of Equity	**353,900**
Short-term debt	1,017,600
Long-term debt	1,174,900
Market Value of Debt	**2,192,500**

[23] Source: Bloomberg Terminal
[24] Source: Bloomberg Terminal
[25] Source: Bloomberg Terminal

This capital structure is the base for all estimated WACC.

Cost of Debt

The cost of debt is calculated for each region based on the assumption of Damodaran[26].

Table 5.7 - Regions' cost of debt estimated

Thousand	**Cost of debt**
Europe	5.9%
Africa	8.4%
LATAM	7.4%

Cost of Equity

The cost of equity depends on different factors, and it is calculated as follows:

$$r_E = r_f + \beta_L * MRP + CRP \quad (23)$$

where β_L stands for Levered Beta.

Risk-free rate

The Risk-Free rate of each region is based on the government bond of the most significant countries.

In Europe, the return of the 10-year German bond is the most used as a proxy for the risk-free rate since the German economy is one of the strongest economies in the Eurozone, with the best rating. The same approach was used for Africa, and Latin America, where the chosen risk-free rates were from South Africa and Brazil.

Table 5.8 - Risk-free rate in the regions

	r_f	**10-year Government bond of**
Europe	0.88%	Germany
Africa	8.75%	South Africa
LATAM	6.91%	Brazil

Levered Beta

Levered Beta measures the firm's risk with debt and equity in its capital structure, given by Thomson Reuter's analysts. For Mota-Engil, the estimation is 1.63[27].

[26] Source: Damodaran (2021)
[27] Source: Thomson Reuters (2021)

Market Risk Premium

The MRP assumed is the equity risk premium provided by Damodaran[28], which is 6.18% for Europe, 9.64% for Africa, and 8.78% for Latin America.

Country Risk Premium

The final factor, the CRP, is calculated for each region, assuming a weighted average value of the CRP for each country[29], weighting according to each GDP[30].

Table 5.9 shows all values mentioned above, which results in a different cost of equity for each region.

Table 5.9 - Cost of Equity and its parameters estimated for regions

	Europe	**Africa**	**LATAM**
r_f	0.88%	8.75%	6.91%
β_L	1.63	1.63	1.63
CRP	1.37%	5.30%	1.84%
MRP	6.18%	9.64%	8.78%
$\boldsymbol{r_E}$	12.32%	29.77%	23.06%

The overall WACC items can be described in the following Table:

Table 5.10 - WACC estimation

	Europe	**Africa**	**LATAM**
$D/D+E$	86.10%	86.10%	86.10%
$E/D+E$	13.90%	13.90%	13.90%
Tax[31]	18.98%	27.46%	27.21%
r_E	12.32%	29.77%	23.06%
r_D	5.90%	6.09%	7.40%
$r_D * (1-t)$	4.78%	6.09%	5.39%
$\boldsymbol{WACC}$	**5.72%**	**9.32%**	**8.29%**

[28] Source: Damodaran (2021)
[29] Source: Bloomberg Terminal
[30] Source: IMF data
[31] Tax rate according to KPMG report of Corporate tax rate (2021)

5.3. DCF – FCFF

5.3.1. Enterprise Value

Enterprise Value is determined by discounting the future cash flows using the discount rate previously mentioned (see Section 5.2.8.). The total EV of Mota-Engil was computed through the SOTP, calculating each region independently and summing up the Equity Value (EQV) of Martifer (see Section 4.5.6.).

5.3.1.1. Free Cash Flows (Firm Approach)

The free cash flows are measured by adding the value of depreciation and amortization to NOPLAT, deducting the reinvestment needs (see Appendix H).

Table 5.11 – Historical (H) and estimated (F) FCFF for regions

Million thousand euros	**2020 (H)**	**2021 (F)**	**2022 (F)**	**2023 (F)**	**2024 (F)**	**2025 (F)**
Europe	-760	-73,642	-27,720	-22,735	3,375	29,044
Africa	84,176	-23,620	24,417	38,958	48,701	78,200
LATAM	52,852	-10,332	15,980	34,185	45,123	60,151

5.3.1.2. Terminal Value

Terminal Value (TV) is the company's value into perpetuity to the forecasted period until 2025, discounting it at the WACC and considering that cash flows grow at a constant growth rate.

The growth rate assumed is different for each region (see Section 5.2.7.).

The Terminal Value of each region can be calculated as follows:

$$Terminal\ Value = \frac{FCFF_{2025}}{WACC - g} \tag{24}$$

Additionally, to calculate EV, the Present Value of the Terminal Value (PV TV) is added to the Present Value of the Explicit Period (PV EP). PV EP is the discounted cash flows estimated between 2021 and 2025, depending on the free cash flows for the specific period and the discount factor.

Table 5.12 - Estimated Enterprise Value

	Europe	Africa	LATAM
Terminal Value	698,605	1,390,433	1,017,698
PV TV	528,994	890,498	683,293
PV EP	-188,198	112,825	104,197
Enterprise Value (regions)	**340,796**	**1,003,323**	**787,490**
Martifer	26,668		
Enterprise Value	**2,157,277**		

5.3.2. Equity Value

Equity Value is estimated considering EV above mentioned, adding non-operating assets, and subtracting the values of net debt and minority interests.

5.3.2.1. Non-operating assets

Non-operating assets include values from financial investments in associates and others, financial assets, derivative financial instruments, assets held for sale, and values related to loans to related parties. In 2020, the value achieved by ME was 559 million euros (see Appendix K), and the value forecasted to 2021 is 457 million euros due to the decrease in financial investments.

5.3.2.2. Net debt

The value of net debt is calculated by the difference between loans, leases, cash and cash equivalents in the short and long term, as Mota-Engil calculated in its Annual Report.

In 2020, the estimated net debt was around 1,595 million euros, and the forecasted net debt of 2021 is 1,480 million euros due to the decrease in loans and increase in cash and cash equivalents.

5.3.2.3. Minority interest and others

The minorities subtracted from EV make up 42 million euros forecasted to 2021. This value is calculated from its average historical value.

In 2020, minorities' value was down, compared with last year, summing up 28 million euros, due to the response ME to the pandemic situation.

To calculate EV, also other items cannot be considered, like the assets held for sale as liabilities, leasing, factoring, and provisions values, which added up to 626 million euros forecasted for 2021.

In table 15 exhibits the equity value.

Table 5.13 - Estimated – value per share

Million euros	**Mota-Engil**
Enterprise Value	2,157
+ Non-operating assets	457
- Net debt	-1,480
+ Assets held for sale	+88
- Factoring	-224
- Provisions	-155
- Minorities	-42
Equity Value	**841**
Outstanding shares	237,517
Value per share	**3.54€**

5.3.3. Sensitivity analysis

DCF-FCFF is very sensitive to changes, mainly in WACC and growth rate in the future cash flows, assumed to be perpetual.

For that reason, a sensitivity analysis for each region individually was performed to conclude how sensitive the value per share to changes in these two factors, considering all other assumptions and values remain constant. It was assumed a change of 0.05% above and below the value estimated for each item.

In Appendix L, it is possible to conclude that the fair value estimated is more sensitive to changes in the FCFF of Africa due to its weight in the total Equity Value. Then, Europe could impact the share price, and in the end, Latin America is the region with a lower impact. The extreme values in share price came from Africa analysis, with the highest price of 5.85 euros per share and the lowest of 2.41 euros per share.

5.4. Relative Valuation

The Relative Valuation estimates the EQV of the company comparing it with its peer group, a comparable group chosen, which performs in the same industry, and has similar financial performance. This valuation is complementary to the DCF method.

The selected group of comparable firms was initially composed of 28 companies operating in the same business and similar regions as Mota-Engil (see Appendix M), so the financial performance of each company (data from TradingView) was analyzed through the multiples EV/Sales, EV/EBITDA, PBV, and P/E, and other factors such as the Market Capitalization and the risk of the company[32].

Whitin the prior analysis, the outliers were selected through a distributional test, using the average and standard deviation (STD). The final peer group is composed by 5 companies, operating in the E&C sector: Bouygues SA, ACS, Actividades de Construcción y Servicios, S.A., Peab AB-Class B, Severfield PLC and Skanska AB. Table 5.14 shows the multiples of this peer group.

Table 5.14 - Multiples of peer group

[33]	**EV/Sales**	**EV/EBITDA**	**PBV**	**P/E**
Bouygues SA	0.52	5.24	1.24	18.38
ACS Actividades Cons Y Serv SA	0.35	11.11	2.16	14.69
Peab AB-Class B	0.63	8.26	2.13	8.31
Severfield PLC	0.68	8.60	1.27	13.93
Skanska AB	0.49	6.82	2.24	8.75
Average + STD (initial group)	**1.11**	**16.6**	**4.0**	**18.54**
Average – STD (initial group)	**0.17**	**1.5**	**0.5**	**7.13**

Multiples peer group average was computed in order to calculate the EQV of Mota-Engil. For EV/Sales and EV/EBITDA, firstly, EV was calculated, as for the DCF-FCFF approach. For PBV and P/E, the EQV was directly computed. Table 5.15 demonstrates the estimated results according to each multiple.

[32] Source: Thomson Reuters (2021)
[33] Source: Trading View website

Table 5.15 - Implied value per share in Multiples

Thousand's euros	**EV/Sales**	**EV/EBITDA**	**PBV**	**P/E**
Enterprise Value	1,473	2,606		
Non-operating assets	457	457		
Net debt	-1,480	-1,480		
Minorities interests	-294	-294		
Equity Value	**-19**	**1,114**	**389**	**744**
Shares outstanding	237,517	237,517	237,517	237,517
Implied Value per share	**0.66€**	**5.43€**	**1.64€**	**3.13€**
Average Share Price		**2.72€**		

Table 5.15 shows significant differences between each ratio. In the case of EV/Sales and EV/EBITDA, there are high discrepancies regarding the numerator of the ratio. For the first, Sales represents a high value for 2021, but also there are high costs to consider in the construction sector, which are not being considering in this ratio.

EV/EBITDA does not consider costs from CapEx, which is a considerable expense in the sector. As mentioned in Section 2.5., this would be the best estimate in Relative Valuation, for construction sector.

For P/E, the value is similarly high for not considering the debt and cash the company had. As explained in Section 4.6.7., the debt of ME has a significant impact on its Equity Value.

CHAPTER 6

Share Price through the valuation methods and Recommendation

The Project consists of estimating the fair value Mota-Engil, so the DCF-FCFF and the Relative Valuation were performed.

Table 6.16 – Value per share estimation using different valuation methods

Million euros	**Share price**
DCF – FCFF	3.54€
Relative Valuation (average)	2.72€
Market Price (31/12/2020)	1.48€[34]
Market Price (11/10/2020)	1.35€[35]
Analysts – ESN (03/12/2020)[36]	2.30€
Analysts – JBCapital (31/03/2021)[37]	2.00€

According to Table 5.16, DCF-FCFF is getting the higher value for the share price of Mota-Engil, followed by the Relative Valuation and then the analysts' estimation. The analysts' estimations led to the recommendation of **Buy** shares on ME.

The recommendation of this Project is to **Hold** or **Buy** Mota-Engil shares.

Mota-Engil has been increasing turnover; and shows a good EBITDA margin aligned with its peers[38]. Also, construction is a stable sector, which is expected to recover nicely from the COVID-19 situation, as other sectors. Thus, investing in the company could be an excellent strategy for investors to diversify their portfolios.

However, Mota-Engil is dealing with negative results in 2020 and 2021, having high debt values, as mentioned in Section 4.6.7.

[34] Source: Yahoo Finance (2021)
[35] Source: Bloomberg (2021)
[36] Source: European Securities Network LLP (2020)
[37] Source: Ganboy & Tella Ruíz (2021)
[38] Source: Finbox (2021)

Moreover, there is a new shareholder in the company, the CCCC company. Since most of the voting rights belong to the Mota family, they have the power of decision, and, even if CCCC tries to lead ME in other directions, implement another strategy, change some services or even implement measures to reduce debt, the Mota family may not accept. But FM - Sociedade de Controlo, SGPS, SA still have the major of voting rights. For that reason, the relationship between shareholders may be managed perfectly or result in serious conflicts.

On the one hand, the construction sector is continually growing and could diversify the investors' portfolio. Also, the CCCC on the board could lead to positive changes in Mota-Engil. From this perspective, the recommendation is to buy its shares. On the other hand, if an investor wants to avoid the risk associated with the items mentioned above, the recommendation is to hold.

As strategic recommendations for the company, Mota-Engil should continue to operate in all regions where it is present, as it is now.

Regarding Europe, the turnover growth has been stable over the years, but the average historical growth is negative (-1.05%). The environment is more competitive than in the other regions, and consequently, Mota-Engil had only 0.8% of the market share in 2020. Thus, the recommendation is to continue operating and increase the market share.

Africa represents an excellent return to ME, and the projections of new projects are also optimistic since the record of order books was reached in 2020. The recommendation is to increase the market share above the current value of 11% (see Appendix E), continue investing in the region, and take advantage of the raw materials from the region, which led to a reduction of costs.

LATAM also gives a great return to the whole company turnover; however, this region has an environment of political crisis and heavy competition in the sector, which the last item consequently led the company's market share down (-1.34% 2020 YoY). The recommendation is to invest in new strategic partnerships in the region and continue seeking opportunities in the different business segments where ME operates.

CHAPTER 7

Conclusion

The main goal of this Project is to evaluate the fair value of Mota-Engil shares as of December 31st, 2021, and give a recommendation regarding the decision to buy, hold or sell the stock of this company.

This company is a Portuguese company, with more than 70 years of history, operating in three different regions: Europe, Africa, and Latin America, mainly in Engineering & Construction sector.

From the different methodologies presented in Chapter 2, the DCF-FCFF and the Relative Valuation were applied. Due to the structure of Mota-Engil, the DCF-FCFF valuation was done through the SOTP approach by the different regions.

To achieve the company's fair value was necessary to define several assumptions, explained in Section 5.2. Most of the assumptions were endorsed in the company's historical data and the analysis of Bloomberg experts.

After estimating both methods, DCF-FCFF shows the higher share price (3.54€ per share), followed by the Relative Valuation (2.72€ per share). Comparing these results, analysts estimated a lower value (average 2.15€ per share), and the market selected the lower price (1.48€ per share).

Mota-Engil has been increasing its activities, achieving the order books record in 2020; however, it has high values of debt, it was affected by the pandemic situation of COVID-19, and a Chinese company, CCCC, acquired 32.4% of the capital, which causes uncertainty for the future. These topics are explained in Chapter 4.

For the reasons above mentioned, the recommendation is to hold or buy Mota-Engil shares.

CHAPTER 8

References

8.1. Books and Published Articles

Cochrane, J. H. (2005). Writing Tips for Ph. D. Students. 13. http://schwert.ssb.rochester.edu/aec510/phd_paper_writing.pdf

Damodaran, A. (2006). Damodaran on Valuation: Security Analysis for Investment and Corporate Finance (A. Damodaran (ed.); 2o edition). John Wiley & Sons, Inc.

Damodaran, A. (2009). The Octopus: Valuing Multi-business, Multi-national companies. Stern School of Business, New York University, November, 1–42.

Damodaran, A. (2012). Investment Valuation: Tools and Techniques for Determining the Value of any Asset, University Edition. In John Wiley & Sons (3rd ed.). John Wiley & Sons, Inc. https://www.wiley.com/en-pe/Investment+Valuation%3A+Tools+and+Techniques+for+Determining+the+Value+of+any+Asset%2C+University+Edition%2C+3rd+Edition-p-9781118206591

European Securities Network LLP. (2020, December). Mota Engil. Members of ESN.

Fernández, P. (2001). Valuation Using Multiples: How do analysts reach their conclusions? SSRN Electronic Journal, 1–13. https://doi.org/10.2139/ssrn.274972

Fernandez, P. (2013). Company Valuation Methods. SSRN Electronic Journal, 1–20. https://doi.org/10.2139/ssrn.1267987

Ganboy, D., & Tella Ruíz, G. (2021, March). Equity Research - Spain & Portugal: Mota Engil. JB Capital Markets S.V., S.A.

Koller, T., Goedhart, M., & Wessels, D. (2015). Valuation: Measuring and Managing the Value of Companies (6th Editio). John Wiley & Sons, Inc. https://doi.org/10.1017/CBO9781107415324.004

Larrabee, D. T., & Voss, J. A. (2013). Valuation Techniques: Discounted Cash Flow, Earnings Quality, Measures of Value Added, and Real Options. John Wiley & Sons, Inc.

Mota, A. G., Barroso, C. D., Nunes, J. P., & Ferreira, M. A. (2012). Finanças da Empresa - Teoria e Prática (M. Robalo (ed.); 4a). Edições Sílabo, Lda.

Perez, M. M., & Famá, R. (2004). Métodos de avaliação de empresas e o balanço de determinação. Revista Administração Em Diálogo, 6, 101–112. https://doi.org/10.20946/rad.v6i1.686

Perold, A. F. (2004). The capital asset pricing model. Journal of Economic Perspectives, 18(3), 3–24. https://doi.org/10.1007/978-3-319-47458-8_19

8.2. Internet References

African Review. (2021, January 12). Africa's construction sector to grow at a CAGR of 6.4% by 2024. Retrieved June 26, 2021, from https://www.africanreview.com/construction-a-mining/buildings/africa-s-construction-sector-to-grow-at-a-cagr-of-6-4-by-2024

COVID Live Update - Worldometer. Worldometers. (2021). Retrieved 21 June 2021, from https://www.worldometers.info/coronavirus/.

Damodaran, A. (2021). Useful Data Sets. Damodaran Online. Retrieved June 2021, from http://people.stern.nyu.edu/adamodar/New_Home_Page/datacurrent.html#discrate

Deloitte. (2021). Africa Construction Trends Report 2020. Johannesburg: Creative Solutions. Retrieved from https://www2.deloitte.com/za/en/pages/energy-and-resources/articles/africa-construction-trends-2020.html

Investopedia. Investopedia. (2021). Retrieved 14 July 2021, from https://www.investopedia.com/.

KPMG. (2021). Corporate Tax Rates Table. Retrieved April 20, 2021, from https://home.kpmg/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html

Latin America Construction Market | Growth, Trends, and Forecasts (2020 - 2025). Mordor Intelligence. (2021). Retrieved 5 July 2021, from https://www.mordorintelligence.com/industry-reports/latin-america-construction-market.

Mordor Intelligence. (2021). Poland Construction Market | 2021 - 26 | Industry Share, Size, Growth. Retrieved 20 June, 2021, from https://www.mordorintelligence.com/industry-reports/poland-construction-market

Muggah, R., & Hill, K. (2018). African cities will double in population by 2050. Here are 4 ways to make sure they thrive. World Economic Forum. Retrieved June 26, 2021, from https://www.weforum.org/agenda/2018/06/Africa-urbanization-cities-double-population-2050-4%20ways-thrive/

Mwai, P. (2021). Coronavirus in Africa: Concern grows over third wave of infections. BBC News. Retrieved 30 June 2021, from https://www.bbc.com/news/world-africa-53181555.

O'Neill, A. (2021). Mozambique- inflation rate 1986-2026. Statista. Retrieved 30 June 2021, from https://www.statista.com/statistics/507333/inflation-rate-in-mozambique/.

Pedro, C., & Moutinho, P. (2015, October 26). Mota-Engil inicia retirada da ME África de bolsa. Bolsa - Jornal de Negócios. Retrieved July 1, 2021, from https://www.jornaldenegocios.pt/mercados/bolsa/detalhe/mota_engil_incia_retirada_da_me_africa_de_bolsa

PIB - Produto Interno Bruto 2021. countryeconomy.com. (2021). Retrieved 30 June 2021, from https://pt.countryeconomy.com/governo/pib.

PwC & Society of Chartered Surveyors Ireland. (2020). SCSI/PwC Construction Market Monitor 2020. Retrieved from https://mk0societyofchag3d3v.kinstacdn.com/wp-content/uploads/2020/11/Construction-Market-Monitor-Report-2020_FINAL-VERSION-2.pdf

ResearchAndMarkets.com. (2020, September 2). Latin America Construction Industry (2015–2024). Business Wire. Retrieved July 5, 2021, from https://www.businesswire.com/news/home/20200902005489/en/Latin-America-Construction-Industry-2015-2024-by-Value-and-Volume-Across-40-Market-Segments---ResearchAndMarkets.com

The Economist. (2020, December 16). Which is The Economist's country of the year? Retrieved June 25, 2021, from https://www.economist.com/leaders/2020/12/19/which-is-the-economists-country-of-the-year

Tolosa, L., & Nicolas, M. (2018). Effect of Free Float Ratio on the Behavior of Shares Valuation in Companies Listed in Latin American Capital Market. IntechOpen. Retrieved 6 June 2021, from https://www.intechopen.com/books/firm-value-theory-and-empirical-evidence/effect-of-free-float-ratio-on-the-behavior-of-shares-valuation-in-companies-listed-in-latin-american.

Uduor, M. (2020). Malawi named country of the year. Africanews. Retrieved June 2021, from https://www.africanews.com/2020/12/17/malawi-named-country-of-the-year/

W. Thurston, C. (2021). Latin America Construction Restart In Key Markets. Coatings World. Retrieved 5 July 2021, from https://www.coatingsworld.com/issues/2021-01-01/view_latin-america-reports/latin-america-construction-restart-in-key-markets/.

W. Thurston, C. (2021, January 11). Latin America Construction Restart in Key Markets. Coatings World. Retrieved July 5, 2021, from https://coatingsworld.com/issues/2021-01-01/view_latin-america-reports/latin-america-construction-restart-in-key-markets/

Worldometer. (2021). COVID-19 Coronavirus Pandemic. Retrieved June 26, 2021, from https://www.worldometers.info/coronavirus/.

8.3. Data Sources

Bloomberg Terminal

Bloomberg. (2021). Bloomberg. Retrieved 2021, from https://www.bloomberg.com/europe

Euronext. (2021). Retrieved 2021, from https://live.euronext.com/

European Central Bank database

Finbox. (2021b). The Complete Toolbox For Investors | finbox.com. Retrieved September 21, 2021, from https://finbox.com/watchlist

IMF World Economic Outlook

Mota-Engil. (2020). https://www.mota-engil.com/en/

Reuters. (2021). Thomson Reuters. Retrieved October 2021, from https://www.reuters.com/

Yahoo Finance. (2021). Yahoo Finance. Retrieved 2021, from https://finance.yahoo.com/

CHAPTER 9

Appendixes

Appendix A. Consolidated Income Statement by natures (2020 and forecasted years)

Thousand euros	2020	F'2021	F'2022	F'2023	F'2024	F'2025
Sales and Services rendered (a)	2 429 134	2 767 542	3 154 998	3 502 047	3 782 211	4 009 144
COGS, mat. cons., changes in production and Subcontractors (b)	(560 591)	(592 692)	(677 592)	(752 127)	(811 721)	(859 203)
Gross Profit (c) = (a) + (b)	**1 868 544**	**2 174 849**	**2 477 406**	**2 749 920**	**2 970 490**	**3 149 941**
GM (%)	77%	79%	79%	79%	79%	79%
Third-party supplies and services (d)	(970 194)	(1 280 488)	(1 453 959)	(1 613 894)	(1 744 743)	(1 853 111)
Wages and salaries (e)	(519 644)	(590 732)	(655 435)	(711 021)	(737 531)	(765 025)
Other operating income / (expenses) (f)	1 550	21 911	24 050	26 695	29 109	31 446
Operational Profit (EBITDA)	**380 256**	**325 540**	**392 062**	**451 700**	**517 325**	**563 250**
EBITDA margin (%)	*15,7%*	*11,8%*	*12,4%*	*12,9%*	*13,7%*	*14,0%*
Amortization and depreciations (h)	(196 743)	(168 985)	(167 391)	(191 942)	(213 579)	(232 736)
Provisions and impairment losses (i)	(39 027)	(39 489)	(45 774)	(50 809)	(54 647)	(57 446)
impairment for non-current assets	(7 293)	(2 001)	(2 001)	(2 001)	(2 001)	(2 001)
EBIT / j = g + h + i	**144 486**	**117 066**	**178 897**	**208 949**	**249 099**	**273 068**
%	*5,9%*	*4,2%*	*5,7%*	*6,0%*	*6,6%*	*6,8%*
Financial income and gains	256 419	189 958	189 958	189 958	189 958	189 958
Interest Income	(42 145)	(29 428)	(29 428)	(29 428)	(29 428)	(29 428)
Income from other financial assets	8 203	10 709	10 709	10 709	10 709	10 709
Income Tax Expense (Benefit)	17 725	30 726	30 726	30 726	30 726	30 726
Financial costs and losses	**(391 216)**	**(238 221)**	**(238 221)**	**(238 221)**	**(238 221)**	**(238 221)**
Interest expense	(131 347)	(78 086)	(78 086)	(78 086)	(78 086)	(78 086)
Other financial costs	(45 545)	(27 809)	(27 809)	(27 809)	(27 809)	(27 809)

Gains/(losses) in associates and jointly controlled companies	(6 049)	1 458	1 458	1 458	1 458	1 458
Gains/(losses) on the disposal of subsidiaries, jointly controlled and associated companies	11 146	(35)	(35)	(35)	(35)	(35)
Net monetary position	10 748	6 754	1 448	1 448	1 448	1 448
Income before taxes (EBT)	**25 534**	**76 980**	**133 505**	**163 557**	**203 707**	**227 676**
%	*1%*	*3%*	*4%*	*5%*	*5%*	*6%*
Taxes	(17 725)	(18 879)	(32 742)	(40 112)	(49 959)	(55 838)
Effective tax rate	69%	25%	25%	25%	25%	25%
Net profit from continuing operations	**126 761**	**98 187**	**146 155**	**168 837**	**199 140**	**217 231**
Net profit from discontinued operations						
Consolidated net profit of the year (Net Income)	**7 809**	**58 101**	**100 763**	**123 445**	**153 748**	**171 838**
Attributable to:						
Owners of the company (Net Profit)	(19 944)	16 069	58 731	81 413	111 716	129 807
Non-controlling interests (Minorities)	27 753	42 032	42 032	42 032	42 032	42 032

Appendix B. Consolidated Statements of Financial Position (2020 and forecasted years)

Thousand euros	2020	F'2021	F'2022	F'2023	F'2024	F'2025
Non-current assets	**2 381 695**	**2 638 524**	**2 872 602**	**3 100 028**	**3 315 854**	**3 591 832**
Goodwill	20 717	35 798	40 810	45 299	48 923	51 858
Intangible Assets	707 988	593 819	541 638	512 658	521 494	629 811
Tangible Assets	384 589	687 120	783 317	869 482	939 041	995 383
Rights of use assets	218 246	241 401	275 197	305 469	329 906	349 701
Financial investments in associated companies	123 606	97 569	111 229	123 464	133 342	141 342
Financial investments in jointly controlled companies	17 496	12 660	14 432	16 020	17 301	18 339
Financial assets available for sale	-	26 133	29 792	33 069	35 714	37 857
Financial assets held to maturity	-	58 759	66 985	74 354	80 302	85 120
Other financial investments recorded at amortized cost	177 915	91 237	104 010	115 451	124 687	132 168
Other financial investments recorded at fair value through other comprehensive income	42 675	26 420	30 118	33 431	36 106	38 272
Investment properties	173 565	125 567	143 147	158 893	171 604	181 900
Customers and other debtors	176 428	133 625	152 333	169 089	182 617	193 574
Other non-current assets	9 546	6 038	6 884	7 641	8 252	8 747
Derivative financial instruments	39	71	81	90	97	103
Deferred tax assets	201 918	184 279	210 079	233 187	251 842	266 953
Non-current assets held for sale	126 967	318 027	362 550	402 431	434 625	460 703
Current assets	**2 433 787**	**2 522 153**	**2 988 820**	**3 317 590**	**3 582 998**	**3 797 977**
Inventories	252 220	334 409	381 226	423 161	457 014	484 434
Customers and other debtors	941 678	1 136 394	1 295 489	1 437 993	1 553 033	1 646 215

Contract assets	668 882	307 853	350 953	389 558	420 722	445 965
Other current assets	76 243	298 045	339 772	377 146	407 318	431 757
Derivative financial instruments	-	1 770	2 018	2 240	2 419	2 564
Corporate tax income	23 824	24 777	28 246	31 353	33 861	35 893
Other financial investments recorded at amortised cost	21 088	9 201	10 489	11 643	12 574	13 329
Cash and cash equivalents with recourse - Term deposits	79 646	67 455	76 899	85 358	92 186	97 718
Cash and cash equivalents without recourse - Demand deposits	31 507	36 985	98 757	109 621	118 390	125 494
Cash and cash equivalents with recourse - Demand deposits	338 699	305 263	404 971	449 518	485 479	514 608
Total Assets	**4 815 482**	**5 160 677**	**5 861 422**	**6 417 618**	**6 898 851**	**7 389 809**
Shareholders' equity	**146 012**	**215 241**	**404 214**	**426 896**	**457 199**	**475 290**
Share capital	237 505	237 505	237 505	237 505	237 505	237 505
Own shares	(10 232)	(10 306)	(10 306)	(10 306)	(10 306)	(10 306)
Reserves, retained earnings and share premiums	(295 963)	(302 074)	(155 763)	(155 763)	(155 763)	(155 763)
Consolidated net profit of the year	(19 944)	16 069	58 731	81 413	111 716	129 807
Own funds attributable to the Group	**(88 634)**	**(58 806)**	**130 167**	**152 849**	**183 152**	**201 243**
Non-Controlling Interests	234 646	274 047	274 047	274 047	274 047	274 047
Total shareholders' Equity	**146 012**	**215 241**	**404 214**	**426 896**	**457 199**	**475 290**
Non-current liabilities	**1 733 262**	**2 038 365**	**2 117 220**	**2 329 269**	**2 538 123**	**2 690 411**
Loans without recourse	133 303	181 010	206 351	229 050	247 373	262 216
Loans with recourse	797 917	963 256	968 064	1 053 706	1 160 515	1 230 146
Lease liabilities	243 707	133 840	152 578	169 361	182 910	193 885

Derivative financial instruments	482	590	673	747	806	855
Suppliers' financial instruments	70 418	106 645	121 576	134 949	145 745	154 490
Contract liabilities	6 614	18 599	21 202	23 535	25 417	26 942
Other non-current liabilities	165 299	198 468	226 253	251 141	271 232	287 506
Provisions	103 598	115 396	131 552	146 023	157 705	167 167
Deferred tax liabilities	181 695	232 555	188 644	209 395	226 146	239 715
Non-current liabilities held for sale	30 229	88 007	100 328	111 364	120 273	127 489
Current liabilities	**2 936 207**	**2 796 520**	**3 188 032**	**3 538 716**	**3 821 813**	**4 051 122**
Loans without recourse	45 443	41 854	47 714	52 962	57 199	60 631
Loans with recourse	914 624	875 268	997 805	1 107 564	1 196 169	1 267 939
Other financial liabilities	224 233	160 586	183 069	203 206	219 463	232 630
Lease liabilities	57 554	22 015	25 097	27 857	30 086	31 891
Derivative financial instruments	108	27	31	34	37	39
Suppliers and sundry creditors	801 317	987 981	1 126 298	1 250 191	1 350 206	1 431 218
Contract liabilities	277 100	142 240	162 154	179 991	194 390	206 054
Other current liabilities	595 088	545 085	621 396	689 750	744 930	789 626
Corporate income tax	20 740	21 464	24 469	27 161	29 334	31 094
Total Liabilities	**4 669 469**	**4 834 885**	**5 305 252**	**5 867 985**	**6 359 937**	**6 741 533**
Total Shareholders' Equity & Liabilities	**4 815 481**	**5 050 126**	**5 709 466**	**6 294 881**	**6 817 136**	**7 216 823**

Appendix C. Sales forecast

M = million euros	2018	2019	2020	F'2021	F'2022	F'2023	F'2024	F'2025
Europe - E&C	**870 M**	**979 M**	**1 050 M**	**1 149 M**	**1 246 M**	**1 383 M**	**1 513 M**	**1 644 M**
YoY change	*4%*	*13%*	*7%*	*9%*	*9%*	*11%*	*9%*	*9%*
as % of Total Group Sales	*31%*	*33%*	*44%*	*42%*	*40%*	*40%*	*40%*	*41%*
Africa	**908 M**	**1 007 M**	**761 M**	**941 M**	**1 073 M**	**1 191 M**	**1 286 M**	**1 363 M**
YoY change	*6%*	*11%*	*-24%*	*24%*	*14%*	*11%*	*8%*	*6%*
as % of Total Group Sales	*32%*	*34%*	*32%*	*34%*	*34%*	*34%*	*34%*	*34%*
Latin America	**1 069 M**	**949 M**	**595 M**	**678 M**	**836 M**	**928 M**	**983 M**	**1 002 M**
YoY change	*11%*	*-11%*	*-37%*	*14%*	*23%*	*11%*	*6%*	*2%*
as % of Total Group Sales	*38%*	*32%*	*25%*	*25%*	*27%*	*27%*	*26%*	*25%*
Total Group Revenue	**2 847 M**	**2 934 M**	**2 407 M**	**2 768 M**	**3 155 M**	**3 502 M**	**3 782 M**	**4 009 M**
YoY change	*7%*	*3%*	*-18%*	*15%*	*14%*	*11%*	*8%*	*6%*

Appendix D. Historical sales – Mota-Engil

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Revenues	2 243 M	2 314 M	2 368 M	2 434 M	2 210 M	2 597 M	2 802 M	2 912 M	2 429 M
Growth	*3,08%*	*3,14%*	*2,35%*	*2,77%*	*-9,19%*	*17,52%*	*7,87%*	*3,95%*	*-16,59%*
EBITDA	287 M	363 M	409 M	367 M	338 M	405 M	407 M	417 M	380 M
EBITDA margin	*12,81%*	*15,68%*	*17,28%*	*15,07%*	*15,29%*	*15,58%*	*14,53%*	*14,32%*	*15,65%*
Backlog	3 357 M	3 870 M	4 413 M	4 087 M	4 422 M	5 138 M	5 465 M	5 365 M	6 052 M

Appendix E. Market share and Annual sales

Europe

M = million euros	2015	2016	2017	2018	2019	2020
Market Value €	**147 446 M**	**142 735 M**	**142 664 M**	**148 291 M**	**148 144 M**	**131 790 M**
Growth		*-3%*	*0%*	*4%*	*0%*	*-11%*
Market Share	**0,68%**	**0,59%**	**0,59%**	**0,59%**	**0,66%**	**0,80%**
Difference		*-0,09%*	*-0,01%*	*0,00%*	*0,07%*	*0,14%*

	2015	2016	2017	2018	2019	2020
Turnover	998 M	845 M	835 M	870 M	979 M	1 050 M
Growth		*-15,37%*	*-1,19%*	*4,21%*	*12,50%*	*7,32%*

Africa

M = million euros	2015	2016	2017	2018	2019	2020
Market Value €	**17 695 M**	**18 172 M**	**14 187 M**	**14 369 M**	**11 929 M**	**6 936 M**
Growth		*3%*	*-22%*	*1%*	*-17%*	*-42%*
Market Share	**4,72%**	**3,90%**	**6,06%**	**6,32%**	**8,44%**	**10,97%**
Difference		-1%	2%	0%	2%	3%

	2015	2016	2017	2018	2019	2020
Turnover	835 M	708 M	860 M	908 M	1 007 M	761 M
Growth		-15,21%	21,52%	5,58%	10,83%	-24,41%

Latin America

	2015	2016	2017	2018	2019	2020
Market Value	**11 034 M**	**7 873 M**	**7 564 M**	**8 647 M**	**9 201 M**	**6 635 M**
Growth		*-29%*	*-4%*	*14%*	*6%*	*-28%*
Market Share	**6,35%**	**9,23%**	**12,70%**	**12,36%**	**10,31%**	**8,97%**
Difference		*3%*	*3%*	*0%*	*-2%*	*-1%*

	2015	2016	2017	2018	2019	2020
Turnover	700 M	727 M	960 M	1 069 M	949 M	595 M
Growth		*3,81%*	*32,12%*	*11,25%*	*-11,22%*	*-37,23%*

Appendix F. Financials

ROE

Peer Group	2018	2019	2020
BOUYGUES SA	14%	11%	7%
PEAB AB-CLASS B	19,4%	23,0%	25,8%
Severfield PLC	12,0%	11,0%	9,0%
ACS	22,0%	27,0%	14,0%
SKANSKA AB	16,2%	19,4%	27,6%
Mota-Engil	20,92%	21,39%	5,35%
Average Peer Group	17%	18%	17%

ROA

Peer Group	2018	2019	2020
BOUYGUES SA	3%	3%	2%
PEAB AB-CLASS B	5,8%	5,7%	7,5%
Severfield PLC	8,0%	7,0%	5,0%
ACS	3,0%	3,0%	2,0%
SKANSKA AB	4,0%	4,9%	7,7%
Mota-Engil	8,55%	7,58%	6,09%
Average Peer Group	**5%**	**5%**	**5%**

ROIC

Peer Group	2018	2019	2020
BOUYGUES SA	8%	7%	4%
PEAB AB-CLASS B	14,3%	16,9%	18,4%
Severfield PLC	11,2%	10,8%	8,3%
ACS	8,2%	10,2%	4,9%
SKANSKA AB	14,3%	15,8%	21,6%
Mota-Engil	7,02%	5,78%	2,26%
Average Peer Group	**11%**	**12%**	**11%**

Appendix G. Operating Costs – Europe, Africa and LATAM

Europe

Thousand euros	2020	F'2021	F'2022	F'2023	F'2024	F'2025
Operating Costs	**(707 772)**	**(828 804)**	**(890 578)**	**(980 242)**	**(1 049 369)**	**(1 131 920)**
% of Sales	67,4%	72,2%	71,5%	70,9%	69,4%	68,9%
Third-party supplies and services	(513 246)	(589 671)	(639 829)	(710 210)	(776 736)	(843 924)
% of Services Rendered	*56,7%*	*51,3%*	*51,3%*	*51,3%*	*51,3%*	*51,3%*
Wages and salaries	(208 181)	(261 865)	(275 416)	(297 411)	(302 577)	(320 531)
% of Services Rendered	*23,0%*	*22,8%*	*22,1%*	*21,5%*	*20,0%*	*19,5%*
Other operating income / (expenses)	13 655	22 733	24 666	27 380	29 944	32 534
% of Revenues	*-1,3%*	*-2,0%*	*-2,0%*	*-2,0%*	*-2,0%*	*-2,0%*

Africa

Thousand euros	2020	F'2021	F'2022	F'2023	F'2024	F'2025
Operating Costs	**(377 116)**	**(576 749)**	**(654 276)**	**(722 674)**	**(777 916)**	**(821 865)**
% of Sales	49,6%	61,3%	61,0%	60,7%	60,5%	60,3%
Third-party supplies and services	(241 422)	(404 995)	(461 694)	(512 480)	(553 479)	(586 687)
% of Services Rendered	*36,8%*	*43,0%*	*43,0%*	*43,0%*	*43,0%*	*43,0%*
Wages and salaries	(123 642)	(167 492)	(187 722)	(204 800)	(218 612)	(229 002)
% of Services Rendered	*18,8%*	*17,8%*	*17,5%*	*17,2%*	*17,0%*	*16,8%*
Other operating income / (expenses)	(12 052)	(4 263)	(4 860)	(5 394)	(5 826)	(6 175)
% of Revenues	*1,6%*	*0,5%*	*0,5%*	*0,5%*	*0,5%*	*0,5%*

LATAM

Thousand euros	2020	F'2021	F'2022	F'2023	F'2024	F'2025
Operating Costs	**(379 184)**	**(443 756)**	**(540 490)**	**(595 304)**	**(625 880)**	**(632 905)**
% of Sales	*63,7%*	*65,4%*	*64,6%*	*64,1%*	*63,6%*	*63,1%*
Third-party supplies and services	(224 514)	(285 822)	(352 436)	(391 204)	(414 529)	(422 500)
% of Services Rendered	*43,7%*	*42,2%*	*42,2%*	*42,2%*	*42,2%*	*42,2%*
Wages and salaries	(146 785)	(161 375)	(192 297)	(208 810)	(216 342)	(215 491)
% of Services Rendered	*28,6%*	*23,8%*	*23,0%*	*22,5%*	*22,0%*	*21,5%*
Other operating income / (expenses)	(7 885)	3 441	4 243	4 710	4 991	5 087
% of Revenues	*1,3%*	*-0,5%*	*-0,5%*	*-0,5%*	*-0,5%*	*-0,5%*

Appendix H. FCFF – Europe, Africa and LATAM

Europe

	2020H	F'2021	F'2022	F'2023	F'2024	F'2025
Sales and Services rendered	1 050 250	1 148 530	1 246 224	1 383 309	1 512 884	1 643 749
COGS, mat. cons., changes in production and Subcontractors	(222 499)	(234 288)	(254 217)	(282 181)	(308 613)	(335 308)
Gross Profit	**827 751**	**914 241**	**992 007**	**1 101 128**	**1 204 271**	**1 308 441**
GM (%)	78,8%	79,6%	79,6%	79,6%	79,6%	79,6%
Third-party supplies and services	(513 246)	(589 671)	(639 829)	(710 210)	(776 736)	(843 924)
Wages and salaries	(208 181)	(261 865)	(275 416)	(297 411)	(302 577)	(320 531)
Other operating income / (expenses)	13 655	22 733	24 666	27 380	29 944	32 534
Operational Profit	**119 979**	**85 438**	**101 429**	**120 886**	**154 903**	**176 520**
EBITDA (%)	*11,4%*	*7,4%*	*8,1%*	*8,7%*	*10,2%*	*10,7%*
- Amortization and depreciations	(88 688)	(80 485)	(79 726)	(91 420)	(101 725)	(110 850)
- Provisions and impairment losses	(440)	(5 524)	(5 994)	(6 653)	(7 276)	(7 906)
EBIT	**30 851**	**(571)**	**15 709**	**22 813**	**45 901**	**57 765**
%	*2,9%*	*0,0%*	*1,3%*	*1,6%*	*3,0%*	*3,5%*
- Effective Tax Rate	(21 416)	140	(3 853)	(5 595)	(11 257)	(14 167)
NOPLAT	**9 435**	**(431)**	**11 856**	**17 218**	**34 644**	**43 598**
+ Amortization and depreciations	88 688	80 485	79 726	91 420	101 725	110 850
Operating Cash Flow	**98 123**	**80 054**	**91 582**	**108 638**	**136 369**	**154 448**
Δ Working Capital	4 497	(50 819)	(13 295)	(18 655)	(17 633)	(17 809)
CapEx	(103 380)	(102 877)	(106 008)	(112 717)	(122 111)	(107 595)
Free Cash Flow to the Firm	**(760)**	**(73 642)**	**(27 720)**	**(22 735)**	**(3 375)**	**29 044**
Growth %	*-96,3%*	*-9585,9%*	*62,4%*	*18,0%*	*85,2%*	*960,6%*
ROIC	**1,26%**	**-0,06%**	**1,50%**	**2,04%**	**3,81%**	**4,28%**

Invested Capital	749 131	777 720	790 423	842 388	908 425	1 018 585

Present Value of Explicit Period	(188 198)
Terminal Value	698 605
Present Value of Terminal Value	528 994
Enterprise Value	**340 796**

Africa

	2020H	F'2021	F'2022	F'2023	F'2024	F'2025
Sales and Services rendered	760 907	940 964	1 072 699	1 190 696	1 285 952	1 363 109
COGS, mat. cons., changes in production and Subcontractors	(193 642)	(199 432)	(227 352)	(252 361)	(272 550)	(288 903)
Gross Profit	**567 265**	**741 532**	**845 347**	**938 335**	**1 013 402**	**1 074 206**
GM (%)	*74,6%*	*78,8%*	*78,8%*	*78,8%*	*78,8%*	*78,8%*
Third-party supplies and services	(241 422)	(404 995)	(461 694)	(512 480)	(553 479)	(586 687)
Wages and salaries	(123 642)	(167 492)	(187 722)	(204 800)	(218 612)	(229 002)
Other operating income / (expenses)	(12 052)	(4 263)	(4 860)	(5 394)	(5 826)	(6 175)
Operational Profit	**190 149**	**164 783**	**191 071**	**215 661**	**235 486**	**252 341**
EBITDA (%)	*25,0%*	*17,5%*	*17,8%*	*18,1%*	*18,3%*	*18,5%*
- Amortization and depreciations	(81 419)	(72 437)	(71 754)	(82 278)	(91 553)	(99 765)
- Provisions and impairment losses	(13 567)	(22 583)	(25 744)	(28 576)	(30 862)	(32 714)
EBIT	**95 163**	**69 763**	**93 573**	**104 807**	**113 071**	**119 862**
%	12,5%	7,4%	8,7%	8,8%	8,8%	8,8%
- Effective Tax Rate	(66 060)	(17 109)	(22 949)	(25 704)	(27 731)	(29 396)
NOPLAT	**29 103**	**52 654**	**70 624**	**79 103**	**85 340**	**90 466**
+ Amortization and depreciations	81 419	72 437	71 754	82 278	91 553	99 765

Operating Cash Flow	**110 522**	**125 091**	**142 378**	**161 381**	**176 893**	**190 231**
Δ Working Capital	36 700	(51 631)	(17 927)	(16 058)	(12 963)	(10 500)
CapEx	63 046	97 079	100 034	106 365	115 229	101 532
Free Cash Flow to the Firm	**84 176**	**(23 620)**	**24 417**	**38 958**	**48 701**	**78 200**
Growth %	*-12,3%*	*-128,1%*	*203,4%*	*59,6%*	*25,0%*	*60,6%*
ROIC	**5,36%**	**8,26%**	**10,38%**	**10,91%**	**11,05%**	**10,71%**
Invested Capital	542 746	637 168	680 364	725 094	772 161	844 680

Present Value of Explicit Period	112 825
Terminal Value	1 390 433
Present Value of Terminal Value	890 498
Enterprise Value	**1 003 323**

LATAM

	2020H	F'2021	F'2022	F'2023	F'2024	F'2025
Sales and Services rendered	95 401	678 048	836 074	928 043	983 375	1 002 286
COGS, mat. cons., changes in production and Subcontractors	(131 607)	(158 972)	(196 023)	(217 585)	(230 558)	(234 992)
Gross Profit	**463 794**	**19 075**	**640 052**	**710 458**	**752 817**	**767 294**
GM (%)	*77,9%*	*76,6%*	*76,6%*	*76,6%*	*76,6%*	*76,6%*
Third-party supplies and services	(224 514)	(285 822)	(352 436)	(391 204)	(414 529)	(422 500)
Wages and salaries	(146 785)	(161 375)	(192 297)	(208 810)	(216 342)	(215 491)
Other operating income / (expenses)	(7 885)	3 441	4 243	4 710	4 991	5 087
Operational Profit	**84 610**	**75 319**	**99 562**	**115 154**	**126 936**	**134 389**
EBITDA (%)	14,2%	11,1%	11,9%	12,4%	12,9%	13,4%

- Amortization and depreciations	(22 586)	(16 062)	(15 911)	(18 244)	(20 301)	(22 122)
- Provisions and impairment losses	(21 894)	(11 383)	(14 036)	(15 580)	(16 509)	(16 826)
EBIT	**40 130**	**47 874**	**69 615**	**81 330**	**90 127**	**95 441**
%	6,7%	7,1%	8,3%	8,8%	9,2%	9,5%
- Effective Tax Rate	(27 857)	(11 741)	(17 073)	(19 946)	(22 104)	(23 407)
NOPLAT	**12 273**	**36 133**	**52 542**	**61 384**	**68 023**	**72 034**
+ Amortization and depreciations	22 586	16 062	15 911	18 244	20 301	22 122
Operating Cash Flow	**34 859**	**52 195**	**68 453**	**79 628**	**88 324**	**94 156**
Δ Working Capital	46 807	(32 475)	(21 505)	(12 515)	(7 530)	(2 573)
CapEx	(28 814)	(30 053)	(30 967)	(32 927)	(35 671)	(31 431)
Free Cash Flow to the Firm	**52 852**	**(10 332)**	**15 980**	**34 185**	**45 123**	**60 151**
Growth %	88,7%	-119,5%	254,7%	113,9%	32,0%	33,3%
ROIC	**4,05%**	**11,57%**	**14,09%**	**14,95%**	**15,27%**	**15,80%**
Invested Capital	303 281	312 339	372 835	410 539	445 569	455 913

Present Value of Explicit Period	104 197
Terminal Value	1 017 698
Present Value of Terminal Value	683 293
Enterprise Value	**787 490**

Appendix I. Equity Value – Mota-Engil

Sum Of The Parts Approach	
+ Europe	341 M
+ Africa	1 003 M
+ LATAM	787 M
+ Martifer	26 M
Total Enterprise Value	**2 157 M**
+ Non-Operating Assets	457 M
- Adj. Net Debt	-1 480 M
- Assets held for sale (net of liabilities)	88 M
- Factoring	-224 M
- Provisions	-115 M
- Non controlling interests	-42 M
Equity Value	**841 M**
Outstanding shares	238 M
Value per share	**3.54 €**

Appendix J. Debt Structure

	2020H	F'2021	F'2022	F'2023	F'2024	F'2025
Net Debt	1 594 641	1 480 312	1 443 941	1 581 930	1 730 997	1 834 857
Loans	1 891 287	2 061 387	2 219 934	2 443 281	2 661 256	2 820 932
Lease Liabilities	301 261	155 855	177 675	197 219	212 996	225 776
Cash and Cash Equivalents	597 907	736 931	953 667	1 058 570	1 143 256	1 211 851
$\frac{Current\ assets}{Current\ liabilities}$	0,8289	0,9019	0,9375	0,9375	0,9375	0,9375

Appendix K. Non-Operating Assets Historical and Forecast

	2020H	F'2021	F'2022	F'2023	F'2024	F'2025
Non-Operating Assets	559 247	457 445	521 488	578 851	625 159	662 669
Financial Investments	361 692	227 886	259 790	288 366	311 436	330 122
Financial Assets held for sale	0	84 892	96 777	107 423	116 017	122 978
Customers and debtors	176 428	133 625	152 333	169 089	182 617	193 574
Derivative instruments	39	1 841	2 099	2 330	2 516	2 667

Appendix L. Sensitive Analysis for regions

Europe

Euros per share		WACC				
		4,72%	**5,22%**	**5,72%**	**6,22%**	**6,72%**
Growth Rate (g)	**2,50%**	5,76 €	4,87 €	4,26 €	3,82 €	3,49 €
	2,00%	4,92 €	4,30 €	3,85 €	3,52 €	3,26 €
	1,50%	4,34 €	3,88 €	3,54 €	3,27 €	3,06 €
	1,00%	3,91 €	3,56 €	3,29 €	3,08 €	2,91 €
	0,50%	3,59 €	3,31 €	3,10 €	2,92 €	2,77 €

Africa

Euros per share		WACC				
		8,32%	**8,82%**	**9,32%**	**9,82%**	**10,32%**
Growth Rate (g)	**4,50%**	5,85 €	5,02 €	4,36 €	3,83 €	3,39 €
	4,00%	5,12 €	4,45 €	3,91 €	3,46 €	3,09 €
	3,50%	4,55 €	4,00 €	3,54 €	3,16 €	2,83 €
	3,00%	4,08 €	3,62 €	3,23 €	2,89 €	2,61 €
	2,50%	3,70 €	3,30 €	2,96 €	2,67 €	2,41 €

LATAM

Euros per share		WACC				
		7,29%	**7,79%**	**8,29%**	**8,79%**	**9,29%**
Growth Rate (g)	**3,25%**	5,23 €	4,63 €	4,14 €	3,75 €	3,42 €
	2,75%	4,71 €	4,22 €	3,81 €	3,48 €	3,20 €
	2,25%	4,29 €	3,88 €	3,54 €	3,25 €	3,00 €
	1,75%	3,95 €	3,60 €	3,31 €	3,06 €	2,84 €
	1,25%	3,66 €	3,36 €	3,11 €	2,88 €	2,69 €

Appendix M. Initial Peer Group

Companies	Market Cap (M)	Revenue Growth (5Y) %	Levered beta	EV/Sales	EV/EBITDA	PBV	P/E
SACYR SA	1 352	9,1%	1,91	1,29	9,7	2,1	32,63
BOUYGUES SA	13 580	1,4%	1,01	0,52	5,2	1,2	18,38
AVAX SA	154	4,8%	1,23	1,11	54,0	1,6	107,66
BUDIMEX	1 656	10,3%	0,65	0,71	7,3	6,8	17,09
TEIXEIRA DUARTE SA	40	-13,5%	1,33	1,26	17,2	0,2	10,64
ACS ACTIVIDADES CONS Y SERV	7 220	1,0%	1,22	0,35	11,1	2,2	14,69
WEBUILD	2 188	-1,7%	1,28	0,66	34,9	0,7	7,18
Royal Boskalis Westminster N.V.	3 416	-4,9%	1,24	1,12	7,8	1,3	47,17
VINCI SA	54 481	2,3%	1,3	1,66	12,7	2,2	39,2
STRABAG SE-BR	4 022	2,4%	0,77	0,08	1,3	0,7	7,39
NCC AB-B SHS	1 507	0,3%	0,99	0,34	6,6	4,1	12,84
PEAB AB-CLASS B	2 396	6,2%	1,15	0,63	8,3	2,1	8,31
EIFFAGE	8 599	3,5%	1,43	1,20	8,3	1,4	20,62
KONINKLIJKE BAM GROEP NV	767	-1,8%	2,46	-0,06	-3,9	0,8	3,54
HEIJMANS N.V.-CVA	268	3,8%	1,3	0,09	1,8	0,9	5,05
FOMENTO DE CONSTRUC Y CONTRA	4 456	-1,0%	0,87	1,20	7,3	1,6	13,42
FERROVIAL SA	18 781	-8,2%	0,84	3,47	54,2	5,2	71,24
VEIDEKKE ASA	1 487	9,6%	0,9	0,33	5,9	5,2	13,86
BALFOUR BEATTY PLC	2 057	1,0%	1,03	0,24	13,1	1,4	61,83
KIER GROUP PLC	624	-3,9%	1,07	0,14	6,4	0,6	3,63
YIT OYJ	975	12,1%	1,29	0,56	16,8	1,1	33,73
SEVERFIELD PLC	273	8,7%	0,95	0,68	8,6	1,3	13,93
HOCHTIEF AG	4 901	1,7%	1,29	0,25	176,6	8,1	12,92
LARSEN & TOUBRO LIMITED	27 866	5,9%	1,16	2,21	12,7	2,6	13,16
QUANTA SERVICES INC	13 996	8,2%	1,18	1,05	12,2	2,3	23,48
SKANSKA AB	8 787	0,9%	1,37	0,49	6,8	2,2	8,75

ACCIONA	7 801	-0,2%	0,79	1,80	12,8	1,9	16,73
Average	7 172	2,1%	1,19	0,87	19,1	2,3	23,67
Standard Deviation	11 520	5,8%	0,36	0,77	34,3	1,9	23,95
Average + Standard Deviation	**18 692**	**8,0%**	**1,55**	**1,64**	**53,4**	**4,2**	**47,62**
Average - Standard Deviation	**-4 348**	**-3,7%**	**0,82**	**0,09**	**-15,2**	**0,3**	**-0,28**