Lisbon School of Economics & Management
Universidade de Lisboa

MASTERS IN
FINANCE

MASTERS FINAL WORK
PROJECT

EQUITY RESEARCH:
STRABAG SE

DANIEL DRAGOJEVIC

JUNE 2023

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SUPERVISOR:
PAULO FRANCISCO

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ABSTRACT

STRABAG SE is one of the largest construction companies in Europe, and the largest in Germany and Austria. The Company is capable of building anything from simple residential buildings to complex infrastructure projects and everything in between. While this is an impressive commendation, it makes it exponentially difficult to value properly due to many unpredictable unknown variables.

The report conducted calls for a STRONG BUY recommendation for STRABAG SE stock with a price target of €47.0 per share at 2023YE as of May 2023. This represents a 22.9% return for the holding period and 44.0% on an annualized basis.

The main drivers of the investment are: i) the expected growth of construction in Europe, ii) STRABAG's positioning in the industry, and iii) financial strength of the Company. Most of these factors remain constant for long periods of time and that is what makes this a stable recommendation with a MEDIUM LOW risk investment.

The risk of the investment is MEDIUM LOW due to a multitude of factors. Those are: the financial stability of STRABAG, diversified business activities, low leverage, a strong market share and a solidified position in the industry. The risks that are posed to the Company are either direct competition or large, black swan events in the market and, most notably, the illiquidity of its stock due to large institutional ownership.

In any case, we live in uncertain times with many unknowns so the recommendation will get adjusted according to new and relevant information.

JEL Classification: G00, G10, G30, G32

Keywords: STRABAG SE, Construction and Infrastructure, Valuation, Equity Research

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I would like to thank everyone who supported me up until this moment and who believed in me, even when I did not do so myself.

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My parents will always have my eternal gratefulness for guiding me in life and always supporting me in whatever I decided to do. I would not be here without them, so this work is as much for me as it is for them.

And lastly I would like to thank myself. For proving that I can accomplish anything I set my mind on with hard work, perseverance, discipline, and dedication.

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Level of Risk	SELL	REDUCE	BUY	STRONG BUY
High Risk	0%≤	>0% & ≤10%	>20% & ≤45%	>45%
Medium Risk	-5%≤	>-5% & ≤5%	>15% & ≤30%	>30%
Low Risk	-10%≤	>-10% & ≤0%	>10% & ≤20%	>20%

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Figure 1 – 5-year STRABAG Stock

Source: Refinitiv and Author

Table 1 - STRABAG at a glance (2022)

STRABAG at a glance	
Output volume (€ mln)	17,700
Order backlog (€ mln)	23,700
EBIT (€ mln)	706
EBIT margin	4.2%
Net income (€ mln)	472
EPS (€)	4.6
DPS (€)	2.0
CFO (€ mln)	813
Net debt (+)/cash(-) (€	-1,928
Employees	79,000
Equity ratio	31.70%
Locations	> 2,400
S&P Rating	BBB, stable
Countries	> 50
SID employees	2,300

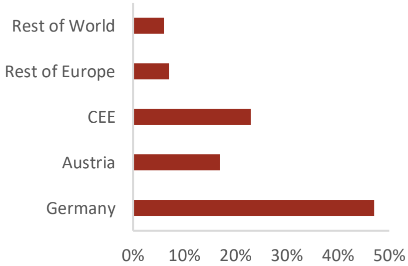
Source: Author Analysis

Table 2 - General Information (2022)

General Information	
Market Capitalization (€ bln)	3.92
Shares outstanding (mln)	102.6
52 Week Range	€27.0-43.8
Industry	Construction
Current Price	€ 38.3
Target Price	€ 47.0

Source: Author Analysis

Figure 2 - Output volume by region in 2022 (%)



Source: Author Analysis

STRABAG SE is a key player in construction in Europe through innovation and financial strength and has a **STRONG BUY recommendation** with a price target of **€47.0 per share** for 2023YE. This represents a **potential upside of 22.9%** as of 30th May 2023 with a **LOW risk.**

STRABAG's **vertical integration along the construction chain** allows it to be much more flexible than its competitors. STRABAG offers a unique one-stop solution to all its customers with everything from designing and projecting to building and maintaining. With over 400 companies in its portfolio, STRABAG can leverage its position to deliver projects on time and within budget – all over the world.

Because of such strong vertical integration from building material manufacturers to other contractors, the Company has **low need for debt capital** and thus has a better net debt position than many of its peers. Moreover, not only does it have less debt, but the Company is able to generate **more free cash flow** and have a **stronger cash position**, allowing it to be flexible and bid on projects it otherwise would not have been able to. Additionally, this means that the Company is safer to invest in because of lower risk of default and subsequently that means that it is able to get better terms of financing in future debt capital raises – if they happen.

However, the Company does not use the cash just for projects or internal financing, the Company uses the cash to **pay out regular dividends** to its shareholders. The dividend is of crucial importance to STRABAG and its management as the Company is majority institutionally owned with top 4 shareholders having more than 80% ownership.

STRABAG is one of the first construction companies to launch its own **full-scale technological department, called STRABAG Innovation and Digitalization (SID)** to research new technologies to be used in the construction industry. This puts the Company in a position where it can reduce its costs and provide better services to clients through the use of technology. Items such as drones or BIM 5D imaging software give advantage to STRABAG in terms of customer service.

The construction industry is one of the most polluting industries in the world, accounting for nearly 40% of all emissions and energy consumption. The Company is well aware of the impact of construction and the impact the Company itself has on the environment. Moreover, because times are changing, **the biggest and most desirable construction bids are not being won based exclusively on price**, but rather the **ecological impact** of the construction itself as well as the impact over the lifetime of the building, road, or whatever is being constructed.

Moreover, because of this, **the Company is implementing a goal of reaching net zero emissions all along its construction value chain by 2040**. All the way from their own offices to full net zero emissions construction sites. And to do this, the Company **has established clear strategies and performance indicators** to measure performance against the targets. This makes it one of the most sustainable construction companies in Europe, if not the most sustainable.

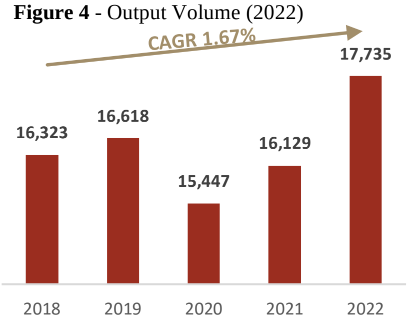
All in all, the Company is all you could want from a stable, mature Company that is able to adapt to current times and over and above that, initiate new advancements and lead the charge among its peers.

2. Business Description

Figure 3 – STRABAG Values

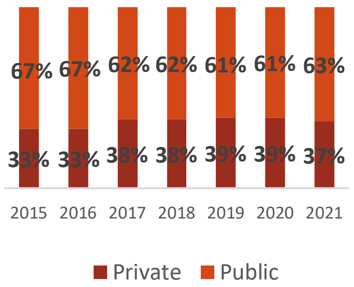
Source: STRABAG

Figure 4 - Output Volume (2022)



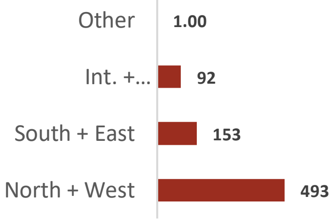
Source: STRABAG, Author analysis

Figure 5 - Partnership structure



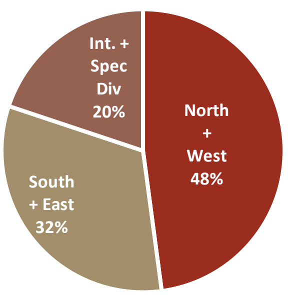
Source: STRABAG & Author Analysis

Figure 6 - EBIT per segment (2022)



Source: STRABAG & Author Analysis

Figure 7 - Output volume by segment (2022)



Source: STRABAG & Author Analysis

STRABAG SE ("STR" or "Company") is one of the largest construction companies in Europe with **€17.7Bn in output volume in FY2022 alongside €23.7Bn in total order backlog**. These two metrics are common metrics within the construction industry where output volume represents the money value of construction built and backlog how much is yet to be built. With almost **74,000 employees worldwide**, the Company is one of the few construction companies that **offers services along the entire construction value chain** from designing, planning and construction all the way to demolition. The reason the Company can offer all services mentioned, and more, is due to its vast portfolio of subsidiaries of which it counts more than 400.

STRABAG operates as a general contractor in the construction industry, and as mentioned previously, provides a full range of construction services to its clients. The Company's business model is based on several key elements:

a. **Project-based approach**: STRABAG's business is centered around executing individual construction projects, which can range from small-scale renovations to large-scale infrastructure projects. The company typically enters contracts with its clients to provide construction services and to complete projects within a specified timeframe and budget.
b. **Full-service offerings**: STRABAG offers a full range of construction services, from the early stages of planning and design, through to the construction phase, and finally to the completion and maintenance of the finished project. This comprehensive approach enables STRABAG to provide its clients with a one-stop solution for their construction needs.
c. **In-house capabilities**: STRABAG has a large and diverse pool of in-house capabilities, including design and engineering, construction management, and specialized trades. This in-house expertise enables the company to control quality and to ensure that projects are completed on time and within budget.
d. **Partnership with sub-contractors**: STRABAG partners with a network of sub-contractors, suppliers, and consultants to deliver its projects. The company leverages its relationships with these partners to access specialized skills and resources, and to ensure that projects are completed to the highest standards.
e. **Financial strength**: STRABAG has a strong financial position, with a strong balance sheet and a stable cash flow. This financial strength enables the company bid, and eventually get awarded large and complex projects and to provide its clients with the necessary resources to complete projects successfully.

The main source of revenue for the group comes from **the public-private partnerships** of which the Company has **39** in its portfolio **with more than €10Bn total investment volume** with **€566Mln equity invested** by the way of special purpose vehicles (SPVs). These projects are infrastructure projects such as transportation (roads, bridges, highways, etc.), school construction, power plants, civil engineering, and special divisions such as tunnelling and many more.

Business Segments and Geographic Division

The Company provides services in **four main operating segments:** i) North + West, ii) South + East, iii) International + Special Divisions and iv) Other. The first three segments account for 99% of the output volume of the group with the "Other" segment relating to intra-company Central Divisions and Central Staff Divisions.

North + West

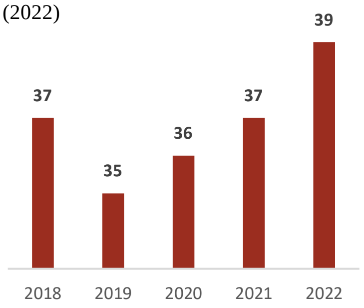
The North + West segments operates in Central and Western Europe with a focus on **Germany, Poland, the Benelux countries, and Scandinavia** executing construction services of nearly any kind. Ground engineering can also be found in this segment, and it relates to subsoil freezing, deep drilling, ground anchors and others.

Table 3- Management Board (2022)

Management Board		
Name	**Position**	**Tenure (Years)**
Klemens Haselsteiner	CEO	0.4
Christian Harder	CFO	10.4
Jörg Rösler	Member	0.4
Siegfried Wanker	Member	12.4
Alfred Watzl	Member	4.4

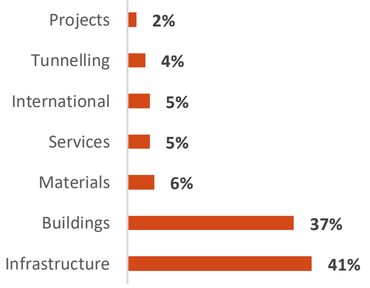
Source: STRABAG & Author Analysis

Figure 8 - Public-private Partnerships (2022)



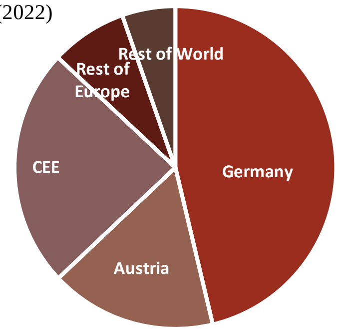
Source: STRABAG & Author Analysis

Figure 9 - Output Volume by Business Segment (2022)



Source: STRABAG & Author Analysis

Figure 10 – Output Volume by Region (2022)



Source: STRABAG & Author Analysis

The North + West segment is the group's largest segment with output volume of **€8.7Bn in 2022, with EBIT of €493Mln resulting in 17.3% CAGR** for the period 2017-2022. The main driver being strong demand for transportation infrastructure in Germany. **Order backlog grew by 2% to the level of €11.8Bn**, again mainly due to developments in Germany which accounts for **80% of the total output volume** with the projects ranging from apartment buildings for developers, highways, and motorways as well as industrial buildings.

This segment was the main reason the Company managed to survive the pandemic and the fallout from it with good results and a strong and stable outlook for 2023 and beyond. The positive contributions to earnings resulted from the German building construction and civil engineering business as well as in Poland. The outlook for the future is to stay consistent and at a high level.

South + East

The South + East segment operates with a focus on **Austria, Czech Republic, Slovakia, Hungary, South-East Europe, Russia, and Switzerland**. Environmental technology activities are also handled in this segment such as solid waste landfills, sorting plants, asbestos removal, sewage incineration plants etc.

The home segment of the group saw a **11% increase in the output volume**, totaling **€5.5Bn for FY2022**, driven mainly by the Company's home market of Austria as well as Czech Republic and Croatia. Notwithstanding, all other countries in this segment showed improvements in growth as well. Main takeaway from this segment is the record **13% increase of order backlog, totaling €6.3Bn**, which is well above group average. There are numerous projects the Company is working on and the momentum is continuing in 2023 as well as in the future.

The South + East segment saw a decrease in **EBIT of 21%** due to provisions and as a result of strong cost inflation in Southern and Eastern Europe. The segment is still not up to its pre-crisis levels and given that it is accounting for 31% of group output volume, it is an important factor, and we can expect that the growth of the Company will be linked to projects in this segment.

International + Special Divisions

This segment includes the fields of tunnelling, concessions business, real estate business and global project development activities in transportation infrastructures. The construction materials business, such as concrete and cement, and the Companies dense network of construction material operations belong to this segment except for asphalt. Additionally, all of the services offered in non-European countries such as Chile and Saudi Arabia, are also bundled in this segment.

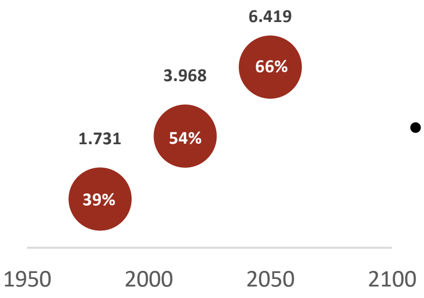
The segment saw **a 9% increase in output volume YoY**, and accounts for **20% of total group output volume**. Compared to 2021, the extraordinary growth in EBIT did not continue in 2022. However, the **revenue increased by 15%**

Trends Impacting the Growth of Construction

Construction is a vast and diverse industry with many competitors; however, they all are experiencing the same trends in the industry and can see in which direction the industry is moving. In this case, the main trends identified that will impact the industry in the following years (non-exhaustive): i) urbanization, ii) climate change, iii) technology/digitalization and iv) risk management.

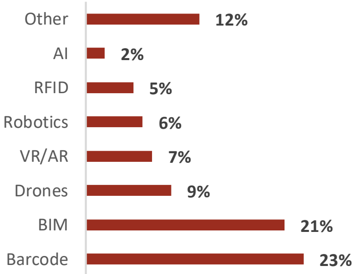
- **Urbanization** – The anticipated rise in the global urban population by 2.5 billion individuals by 2050, leading to an increase from 55% to 68% of the population living in cities, is expected to create a significant growth opportunity for the construction industry. Moreover, 9 largest European cities are projected to have a gap of 1.2 million flats

Figure 11 - Total Urban Population (bln) and % of Total Population (2022)



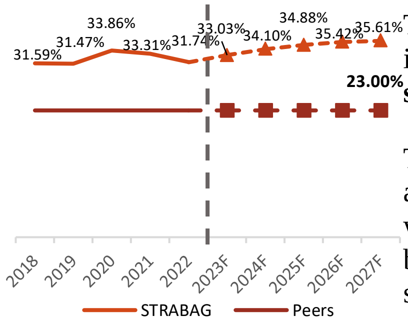
Source: URBANET & Author Analysis

Figure 12 - Use of Different IT in Construction (2022)



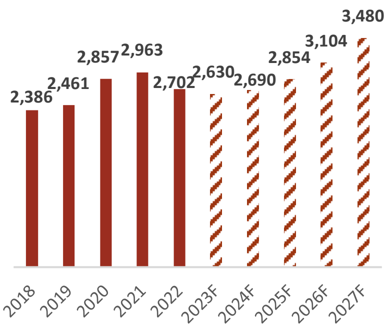
Source: FrontiersIN & Author Analysis

Figure 13 - Group Equity Ratio



Source: STRABAG & Author Analysis

Figure 14 - Cash Position (mln €)



Source: STRABAG & Author Analysis

2030.**This development would generate demand for infrastructure and real estate construction**, as well as services offered by companies such as STRABAG.

- **Climate change** – Buildings in the EU account for **40% of final energy consumption and 36% of CO2 emissions**. Clients are demanding existing buildings to be converted to higher energy efficiency and lower-emission operation. Digitalization and environmentally friendly technologies are expected to drive energy efficiency in buildings.
- **Technology/digitalization** – Digitalization in the construction industry remains low compared to other sectors such as automotive. However, digitalization and data networking throughout the building lifecycle can benefit various stakeholders. The increasing digitalization of processes is expected to lead to significant productivity growth in the construction industry. **STRABAG is at the forefront of leveraging digitalization efforts to transform the construction industry.**
- **Risk management –** The construction industry is known for various risks, such as cost overruns, delays, and potential project failure, especially in infrastructure projects. To stand out in the market, **companies must be capable of effectively managing these risks, particularly in environments where risks are constantly changing**. It is crucial to acknowledge that construction project risks extend beyond financial and operational issues, including corruption and resource scarcity. Inadequate risk management can severely impact a company's reputation, a valuable asset in the construction industry.

Strategic Principles of the Company

The risks of construction are vast and plentiful, and STRABAG is aware of that, however through their strategic principles they try to contain those risks within a reasonable range and remain open to opportunities as they arise – maximizing shareholder value.

Staying Diversified

The Company is using both geographical and service diversification to mitigate the risks inherent to the construction industry. **The ability to perform well even when the economic situation is declining is a competitive advantage that diversification brings**.

The Company is well diversified by operating in more than 80 countries and offers services all along the value chain, making it flexible and providing massive benefit for their clients worldwide. This also brings economies of scale to the firm, helping it reach critical mass to be able to successfully bid for and pre-finance large projects. Moreover, the company offers services along the entire construction value chain and in different construction segments.

Maintaining Financial Strength

To be assigned a lucrative project, a company must have two things – reputation and financial strength. This is why the Company is focusing on **financial strength as the foundation as well as the framework for its business activity**. The goal of management for the company is to have an equity ratio (group equity/total equity) above 25%. Moreover, the cornerstone of STRABAG's financial strength is the continuous dividend policy since its IPO in 2007. The goal is to stick to distributing 30% to 50% of net income after minorities to shareholders.

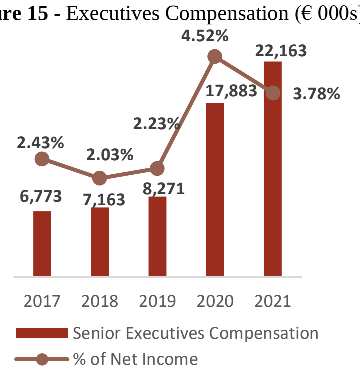
Showing Flexibility

Company's flexibility is an important competitive advantage that allows them to respond quickly to changes in the market. This flexibility is supported by their financial strength, as well as the ability to serve markets outside of Europe and **subcontract specific works**, depending on the market environment. To maintain this flexibility, the Company is focused on sustaining their geographic presence in non-European countries, reducing the dependence of the Company on their home markets in Europe. Furthermore, the expansion to new markets brings a lot of potential profitability, but with more risk.

Driving Innovation and Digitalisation

In 2021, led by now-CEO Klemens Haselsteiner, STRABAG defined its digital strategy and implemented digital transformation projects through its central division, STRABAG Innovation & Digitalisation (SID). **This allowed the company to drive digital**

Figure 15 - Executives Compensation (€ 000s)



Source: Refinitiv & Author Analysis

Table 4 – Top shareholders

Top 5 Shareholders		
	Shareholder	%
1	Haeselsteiner Family	28.34%
2	MKAO Rasperia Trading Ltd.	27.78%
3	Uniqa Insurance Group AG	15.29%
4	Raiffeisen mbH	14.15%
5	Dimensional Fund Advisors LP	0.56%
Total		86.11%

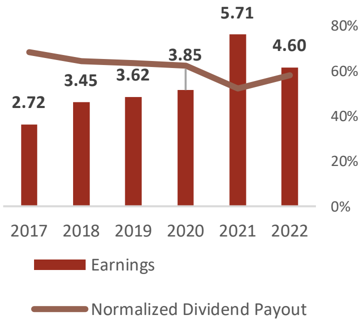
Source: Refinitiv & Author Analysis

Table 5 - Ownership by Investor Type

Type	Investors
Institutions	78
Investment Managers	78
Investment Advisor	51
Pension Fund	3
Investment Advisor/Hedge Fund	23
Sovereign Wealth Fund	1
Strategic Entities	4
Holding Company	2
Individual Investor	1
Other Insider Investor	1
Grand Total	82

Source: Refinitiv & Author Analysis

Figure 16 - Earnings per Share (€) and Normalized Dividend Payout



Source: Refinitiv & Author Analysis

transformation, improve efficiency, implement structured innovation processes, foster collaboration, analyze data-based risks, and ensure sustainable supply chains. SID is also focusing on robotics and automation to enhance productivity and reduce CO2 emissions.

Rebalancing Sustainability and Risk Management

STRABAG aims to achieve climate neutrality all along its value chain by 2040 and is committed to environmentally compatible and sustainable construction methods. Its sustainability strategy is based on three pillars - economy, environment, and social welfare - with a focus on reducing CO2 emissions, managing materials and waste, optimizing the supply chain, and improving the construction life cycle. Technology plays a crucial role in this strategy.

Management

The company is organized and managed in three levels: 1) Management Board/Board of Directors, 2) Supervisory Board and 3) Committees. The CEO of the company is **Klemens Haselsteiner** and has been the CEO since January 1st, 2023. The rest of the Management Board can be seen in Table 3. The **Management Board regularly and extensively informs the Supervisory Board** as to all relevant matters in the company. To make sure the group is heading in the right direction, there are three committees as well: 1) Executive Committee, 2) Presidential and Nomination Committee and 3) Audit Committee.

New CEO

Klemens Haselsteiner is the new CEO of STRABAG since the start of 2023. Previously he has held various positions within STRABAG, starting in 2011 in STRABAG Russia and then moving to the German subsidiary of STRABAG - Ed. Züblin AG in Stuttgart. But in the last years he has spearheaded the modernization efforts of the Company as the Chief Digital Officer by helping establish the Digitalization, Corporate Development, and Innovation portfolio of the company and has **implemented a corporate-wide digitalization and sustainability strategy**.

As the new CEO, Haselsteiner will be tasked with building on top of the Company's strong foundation, as well as implementing new strategies and initiatives to ensure its continued growth and competitiveness in the global construction market, with the focus on making the construction industry more digital, and above all, more sustainable. With his leadership, the Company is poised for a bright future and is well-positioned to meet the evolving demands of its stakeholders.

Dividend Policy

The Company has maintained a stable dividend policy of distributing between 30-50% of its net income after minorities to its shareholders. The consistency of this policy has resulted in a **CAGR of almost 8% in DPS between 2017 and 2022**, indicating a commitment to shareholders' interests. The total dividend per share of €2.00 in 2022 was significantly lower than the 2021 figure of €6.90, however that was a one-off as result of the pandemic. More specifically, it was a €5.00 extra dividend per share, and if we take that away, the true dividend was €1.90 which means that the 2022 figure of €2.00 is an improvement over the previous year. This indicates a positive development in the Company's financial performance.

Moreover, the Company's EPS has grown at a CAGR of 9% over the past six years, if we take away the special dividend, which is an indication of the Company's ability to generate profits and create shareholder value. Additionally, the Company's strong cash position provides it with the financial flexibility to grow the DPS at a constant rate in the mid-term future.

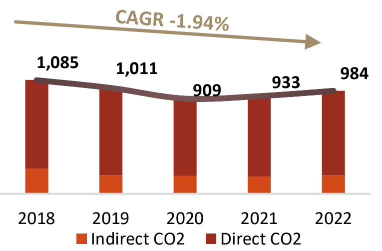
3. ESG – Environment, Social and Governance

Figure 17 - ESG Scores (2021)

B+ ESG Score	A+ ESG Controversies Score	B+ ESG Combined Score
B Environmental Score	A- Social Score	B+ Governance Score

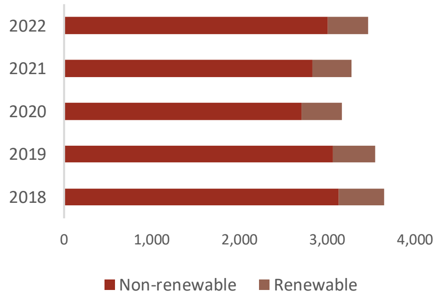
Source: Refinitiv & Author Analysis

Figure 18 - CO2 Emission (kiloton)



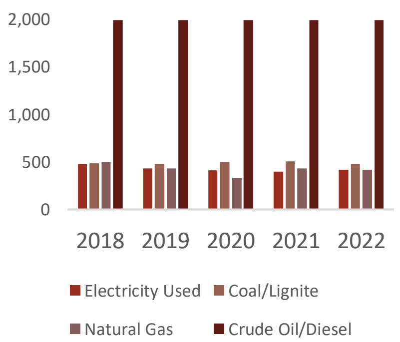
Source: Bloomberg & Author Analysis

Figure 19 - Energy Consumption (KWh)



Source: Bloomberg & Author Analysis

Figure 20 - Energy Sources (MWh)



Source: Bloomberg & Author Analysis

Through its ESG initiatives, the Company strives to not only meet the needs of its stakeholders but also contribute to a better future for society as a whole. STRABAG's **combined ESG score is B+**, which is better than 2020 but the same as 2019. This can be explained by a lower controversies score due to bribery, anti-competition and profit warning controversies in 2020.

Environment

Given that construction industry is the most polluting industry in the world, accounting for almost 40% of all emissions, **an environmental score of B** for STRABAG is promising. The Company is above the average and median for the industry although it is still trailing by the leading ESG companies by quite a lot. There is still a lot of progress to be made and the Company is taking the steps necessary. The Company managed to **lower consumption of energy at a CAGR of -2.66%** for the past 5 years, and **CO_2 emissions at a CAGR of -3.45%** for the same period. STRABAG is committed to reducing its environmental impact and promoting sustainability in its operations and to stay true to its word, **STRABAG claims that it will be carbon neutral all along its value chain by 2040**.

To improve its environmental impact and lead by example in the construction industry, STRABAG has undertaken many initiatives to make improvements on the environment side of the business. To do this STRABAG focuses on four sources of contribution:

1. **Materials** – STRABAG is **processing and recycling raw construction materials** such as asphalt to reduce the dependency on newly produced raw material. This **reduces greenhouse gas emissions** and **saves valuable primary raw materials**. Additionally, STRABAG collects data on the sustainability of its suppliers and takes it into account in the decision-making process.
2. **Waste and Circularity –** Instead of throwing away raw materials after they have been used as construction waste, **STRABAG reuses and recycles construction waste between its construction sites using its in-house application called STRAmaps**. It allows the Company to improve coordination between construction sites and the various recycling and disposal points.
3. **Energy and Emissions –** To reduce energy consumption and reduce emissions, STRABAG is actively taking steps to make production plants, construction sites and buildings more efficient. Moreover, since 2021, **the Company purchases their electricity exclusively carbon-neutral from hydropower**. Additionally, the Company has **developed a tool to optimize the fuel usage in the fleet of vehicles** it operates.
4. **Sustainable Building** – Given that bidders are increasingly taking into consideration the lifetime cost of the project, **STRABAG is optimizing its building strategy so that the buildings they make consume little to no energy**, with some even generating their own.

Furthermore, the SID division alongside other partners have managed to get through various materials breakthroughs that will change the landscape of construction in the future. Some of those are: **green concrete** where carbon emissions are cut by 50%, asphalt that is incorporated with a special aggregate **that reduces the concentration of nitrogen dioxide in the air by 26%**, climate-friendly insulation and many more innovative solutions.

Another pin in the suit is the fact that STRABAG **had the first construction site to be awarded the Gold Sustainability Certificate by the German Sustainable Building Council** (DNBG) for its resource-saving and energy-efficient construction of an office building in Stuttgart.

Social

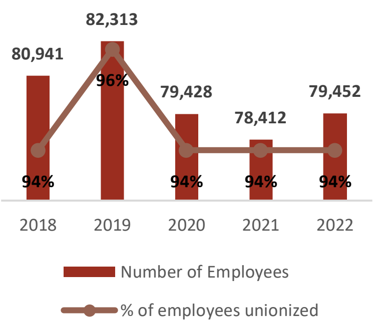
Social score has been stable for the past 5 years at an A- In this regard, the company is well above the average and median for the industry, **with human rights and community sections**

Table 6 - ESG Policies

Policy	Implementation
Renewable Electricity Target	✕
Energy Efficiency	✓
Emissions Reduction Initiatives	✓
Environmental Supply Chain Management	✓
Environmental Quality Management	✓
Green Building	✓
Sustainable Packaging	✕
Waste Reduction	✓
Water	✕
Biodiversity	✕
Climate Change	✓
New Products - Climate Change	✕
Climate Change Opportunities Discussed	✕
Risks of Climate Change Discussed	✓

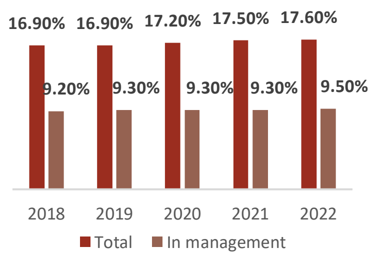
Source: Bloomberg & Author Analysis

Figure 21 - Employees (thousands) and Unionization (%)



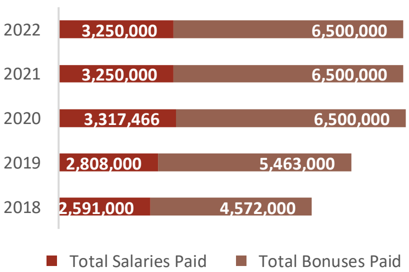
Source: Bloomberg & Author Analysis

Figure 22 - Women in the Workforce



Source: Bloomberg & Author Analysis

Figure 23 - Total Management Compensation (€)



Source: Bloomberg & Author Analysis

leading the result with a score of A and workforce and product responsibility scores of B+ and B- respectively.

Construction sites are inherently dangerous and exposed to a particularly high risk of accidents and health hazards compared to other sectors in the economy. This is why STRABAG puts major emphasis on the occupational safety of its workers – both at the construction site or at the office. The Company took up the challenge of "Vision Zero – Zero Accidents" by launching a corporate initiative "1>2>3 Choose Safety".

The initiative's main goal is to reduce the number of slips, trips and falls (STF hazards) because they are the most common cause of accidents at the construction sites, accounting for about 25% of the accidents reported. To measure this, the Company has two metrics:

- **Lost-time accident rate** – calculated as number of working hours lost to accidents versus productive working hours.
- **Accident incident rate** – calculated as the number of accidents at work per 1 million productive hours.

Both metrics are down compared to the previous year and show a sign of continuous improvement in the social aspect of the Company.

The Company is improving the number of female employees, as they are traditionally underrepresented in the construction industry. Over and above that, the Company is active in improving the skills of its employees through continuous training, appraisal interviews and opportunities for individual development plans.

Governance

The Company has been improving its governance score the most, moving from C+ in 2017 to B+ in 2021, caused by management and CSR strategy parts of the score, however in this aspect of ESG the company is not as good as the previous two. Even though it still above the average and median, the difference is not as big in the other pillars.

The main reason for the relatively poor governance score was the shareholder structure which is quite complicated. **There is a shareholder syndicate between the top shareholders** and the agreement regulates the following: *i*) Right to nominate supervisory board members, *ii*) Coordination of voting and *iii*) Restrictions on the transfer of shares.

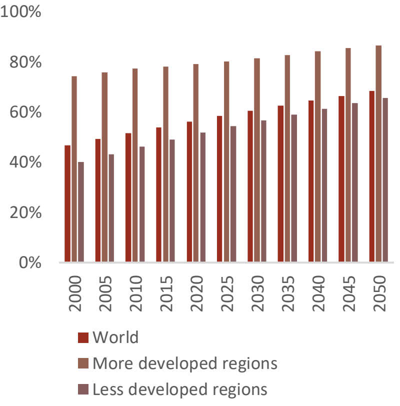
Previously the syndicate involved a company called MKAO "Rasperia Trading Limited" which is controlled by Oleg Deripaska, a Russian oligarch which has been put on the EU sanctions list on 8 April 2022**. However, the shares registered with his firm as well as any control over the firm ended at the end of 2022**.

Given that its governance score is not the best and that the industry is susceptible to various forms on non-ethical behavior, such as corruption and non-fair treatment of customers, STRABAG strongly enforces good governance and transparency, with a focus on ethical business practices and compliance with relevant laws and regulations. **The company has established a robust system of internal controls and risk management processes** to ensure that its operations are conducted in an ethical and transparent manner. The Company also regularly engages with stakeholders, including shareholders and regulatory bodies, to ensure that its governance practices are aligned with their expectations.

The company holds board meetings at least every 2 months, although lately it has been more frequent. The compensation of its top executives is complicated, but it mostly remains at a constant level with minimum variance on a year-to-year basis. Total executives' compensation can be seen in Figure 15.

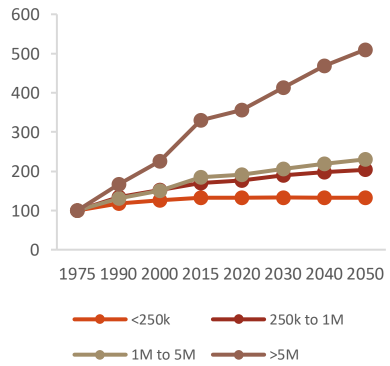
4. Industry and Competitive Positioning

Figure 24 - Percentage of Urbanized Population



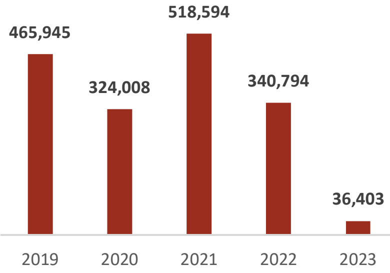
Source: United Nations

Figure 25 - Changes in Global Population in Urban Areas (1975 = 100)



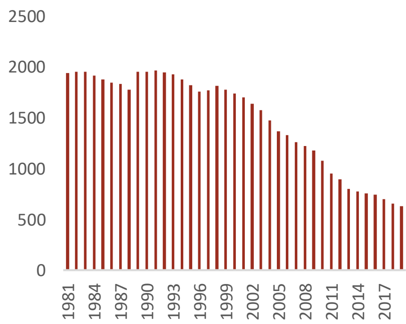
Source: OECD

Figure 26 - Total Infrastructure Spending (€ mln)



Source: Refinitiv & Author Analysis

Figure 27 - Population Living in Poverty



Source: WorldBank

Construction depends on many different factors which all have their own cycles and movements. **We can look at the industry as a culmination of many different exogenous factors that dictate the behavior of the incumbents**. Below are described some of the major influences on the industry in current times.

Urbanization

Urbanization is the population shift from rural to urban areas. This means as nations get more developed, the concentration of the population will be tighter in certain areas. This will inevitably call for infrastructure improvements in order to handle the influx of people. Moreover, **this is the perfect conduit for a rise in "smart cities"** – cities which leverage the use of internet of things (IoT) to adapt and improve the lifestyle of its inhabitants.

The smart cities phenomenon expects to bring **at least $41 trillion in investment in the US alone, resulting in a 20% CAGR** over the next 20 years, and that the market for smart cities will reach **nearly $7 trillion by 2030**. Smart cities are a unique opportunity in our times, and the Company is aware of that and actively seeks new acquisitions that will give it the edge over its peers.

The rise in urbanization is directly related to the lowering in number of people living below the poverty line. **In the 1980s that number was around 2 billion people, whereas in 2019 that number dropped to just 681 million**. As the poorer parts of the world develop and move out of poverty, this will mean more urban population and larger cities and it will mean more investment needed in the infrastructure sector. **The infrastructure investment between 2016 and 2030 should be around $3.3 trillion per year**, according to McKinsey & Co. Failure to meet the infrastructure investment needs will result in massive costs. Only in the US this will cost $10 trillion in GDP and more than 3 million jobs by 2039.

Environmental Impact

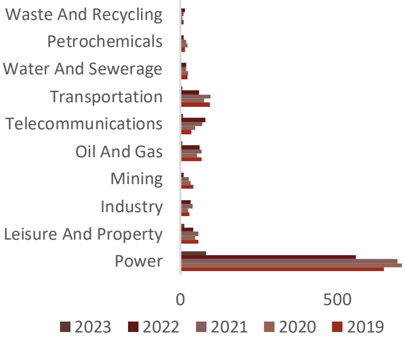
The biggest impact on the industry itself is also, coincidentally, the area on which construction has one of the largest impacts in the world – environment. **Construction accounts for 4-7% of every developed nation's GDP** which is undoubtedly the reason for such high emissions.

In 2020 energy related to usage in buildings was 17.5% of total global greenhouse gas emissions. Moreover, construction is more than just buildings, it is all along the supply chain, from the raw materials to the buildings themselves and everything in between. This is why it is so difficult for construction companies to fully control the extent of their impact on the environment. There are many moving pieces and independent companies which might not hold to the same standards as the company employing them. In general, it is safe to assume that smaller companies are less likely to adapt to new emission and energy regulations as compared to larger firms.

On top of that, in 2020, the year where construction was at a lowest level in recent history, the construction's share in emissions and energy remained extremely high with **36% of global energy being attributed to construction and 37% of all global emissions**. As construction ramps up, this number will most likely remain high until companies adopt new technologies and new regulations are put in place to limit that number.

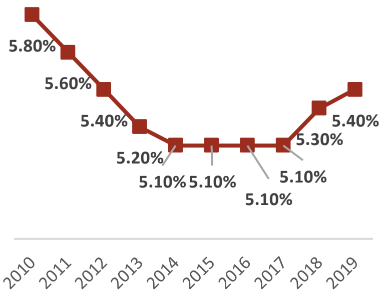
When it comes to Europe, the domicile region of the Company, the situation is not any better when compared to the world statistics. **In Europe the construction industry is responsible for 36% of all emissions and 40% of all energy consumption.** These numbers are a bit worse than when compared to the world, especially regarding the energy consumption and the recent developments with between Russia and Ukraine and the sourcing of that energy. Also, **construction accounts for 50% of all raw material extraction and a 1/3rd of all drinkable water usage**. But this is not in vain as the industry is a major source of employment in the region, bringing the total number of jobs to a staggering 18 million.

Figure 28 - Infrastructure Projects by Sector



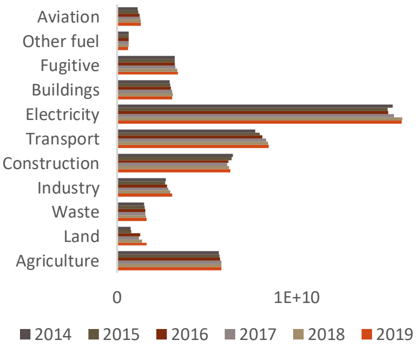
Source: Refinitiv & Author Analysis

Figure 29 - GVA by Construction in Europe



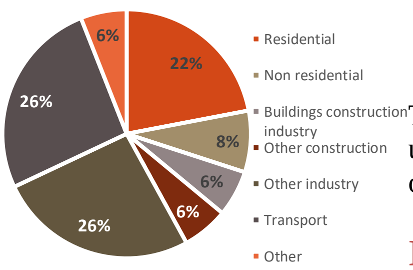
Source: Eurostat

Figure 30 - CO2 Emissions by Sector (kg)



Source: Eurostat

Figure 31 - Construction Industry Energy Consumption Breakdown



Source: World in Data

The European Union is aware of the impact of construction and other industries on emissions and energy and that is why it is undertaking **multiple steps to limit and control that**. Such as looking to introduce policies to reduce whole-life carbon emissions from buildings and construction.

On a specific country basis, Denmark, Netherlands, and France have introduced CO2 limits for a large share of new buildings. Germany, UK and Switzerland have **life-cycle assessment requirements** for certain public buildings; Belgium is planning similar requirements.

European Green Deal and the Circular Economy

European Green Deal is a sustainable growth initiative by the European Union where one of the main goals is to have no net emissions of greenhouse gases by 2050. **It is a €1.8 trillion investment in the sustainability of the EU**. This means that there are plenty of opportunities to take advantage of the investments for companies within the construction industry as the initiative mainly relates to building renewable sources of energy – essentially infrastructure.

Through the Green Deal, Europe is striving to be the first climate-neutral continent by 2050 and **have at least 55% less net greenhouse gas emissions by 2030. On top of that, the EU aims to plant 3 billion additional trees by 2030**.

Within the Green Deal, one of the main building blocks is the Circular Economy. The transition to a circular economy will reduce the consumption of non-renewable natural resources and will create sustainable growth and jobs. The initiative targets the entire life cycles of products and projects, and the main application in construction is three-fold.

Durability – Durability of buildings depends on better design, improved performance of construction products and information sharing.

- Favor construction systems that incorporate circular economy thinking. For instance, enabling systems to be easily maintained, repaired, and replaced as this will prolong the life cycle of buildings.
- Ask for detailed information from providers and designers on products, materials, and the design of the buildings. Conserve, update and share the information so that it can remain valid and relevant during the whole life cycle of the building.

Adaptability – Prevent premature building demolition by developing a new design culture.

- Anticipate changes in requirements.
- Enable adaptations and transformations of the building for better use and reuse, new ways of using it, and prepare for the end-of-life and future lives of the building and its components.

Reduce waste – Design products and systems so that they can be easily reused, repaired, recycled, or recovered.

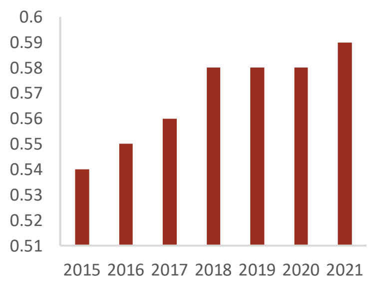
- Make use of easy to dismount elements and products.
- Prescribe in procurement contracts that waste should be separated on site to facilitate recycling.
- Use simple and recyclable materials and objects.

Then these principles can be applied to various actors in the supply chain such as: building users, design teams, contractors and builders, manufacturers of construction products and so on.

New Technologies

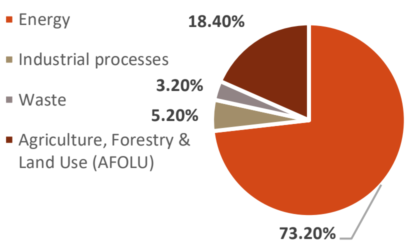
It is long believed that construction is monolithic industry with old-fashioned style that is unable to adapt to new technologies, because after all, there is only so much you can change in construction – a house always needs a foundation and quality materials. However that is not the case. **The testament to that is that construction is the largest driver of growth for the drone technology sector**. This is because drones are used to survey sites and get an image of what is happening.

Figure 32 - Cement Manufacturing Emission (tCO2 per t cement)



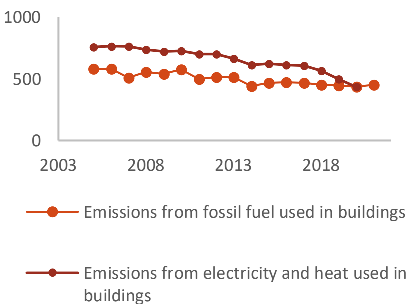
Source: World in Data

Figure 33 - Global GHG Emissions by Sector



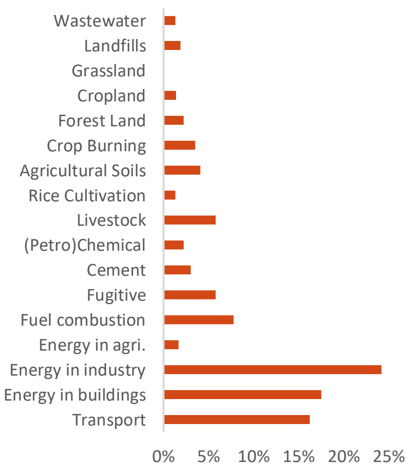
Source: World in Data

Figure 34 - Building Emissions (kT CO2)



Source: World in Data

Figure 35 - Sub Sector Global GHG



Source: World in Data

Digital Transformation

The construction industry is also changing not because technology is better and improves efficiency and output, but because there are various pressures on the industry to adapt to modern times:

- **Aging workforce**: major labor shortages because young workers aren't pursuing this trade; older workers are not as tech savvy.
- **Analog process**: construction still relies on outdated manual processes – project statuses, ordering materials, completing safety documentation and actual work.
- **Pricing pressures**: geopolitics, tariffs, inflation.
- **Supply chain issues**: schedule disruptions.
- **Green initiatives**: from before, emissions and so on; pressure to provide greener construction methods.
- **Decreased construction activity.**

Digital transformation of the industry can both help with the pressures mentioned above, but also provide benefits such as: **improved site safety, client collaboration through virtual and augmented reality, streamline inefficient processes, attract younger workers and reduce waste and costs**.

Digital transformation can be achieved through various new technologies. **Wearable technologies** will help monitor site conditions, physical stressors, and site capacity. **Virtual reality** can help site supervisors tour construction sites from remote locations. **Drones and unmanned aerial vehicles** can survey land, provide aerial photography and map tough-to-reach topography. **3D printing** can be leveraged to construct major building components. And **cloud computing and big data** allow construction companies to shift away from traditional methods of gathering and sharing data across construction sites.

New Materials

As technology advances so will the technology of materials as well. As of now, the emissions of cement production are still on the rise due to calcium being involved in the process, and it is one of the most polluting parts of the construction process. This is why the industry has been rapidly developing new material technologies such as:

- **Carbon-fibre reinforced concrete** – concrete strengthened with carbon-fibre yarn, meaning less concrete needed for a structure of the same strength
- **Biochar cladding** – bioplastic produced from forest and farm waste that sequesters carbon and can be used to make objects including cladding
- **Carbon-sequestering concrete** – instead of calcium-based cement, using waste slag from the steel industry plus carbon captured from industrial plants.

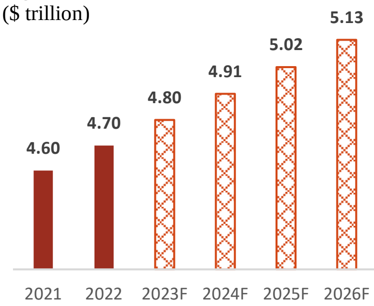
As of now, these technologies are expensive, but as time moves on, economies of scale will take effect and these new materials will be widely available and at the same price as current materials.

Social Responsibility

Important concept about construction, and even more so for infrastructure, **the optics and the perception** of companies is one of the biggest factors in determining whether the company will get the bid or not. Although now clients are looking for other elements when looking at bids, but reputation and ethics of a company are items that simply cannot be neglected.

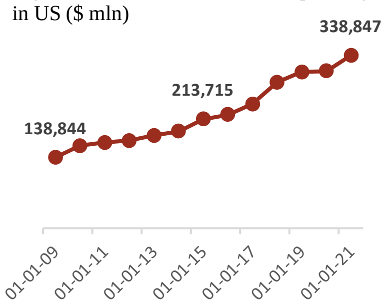
Ethics relates to blacklisting, bribery, and corruption. Blacklisting involves purposefully ignoring a client or employee due to some previous behavior which does not warrant blacklisting. Bribery and corruption are part of economic crimes, which have been on the downturn in recent years, with **46% of respondents saying they experienced some sort of economic crime in the past 24 months**, according to a survey done by PwC in 2022.

Figure 36 - Infrastructure Market Size ($ trillion)



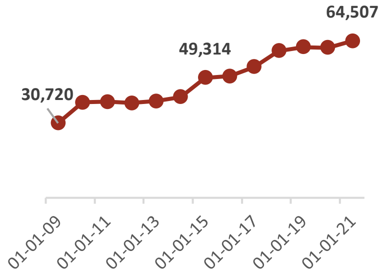
Source: Global Data

Figure 37 - Total Infrastructure Spending in US ($ mln)



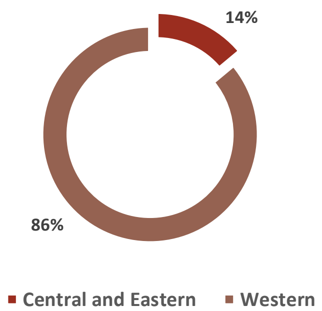
Source: Bloomberg & Author Analysis

Figure 38 - Total Infrastructure Spending in EU ($ mln)



Source: Bloomberg & Author Analysis

Figure 39 - Division of Infrastructure Spending in Europe



Source: Bloomberg & Author Analysis

To control the three factors mentioned above, it involves internal controls to prevent such occurrences. What is equally important is the reputation of the company within the industry. **Contractors are only good as their last mistake.** Most people remember the faults and not so much the good things and clients talk to each other, so word of poor performance quickly spreads.

Infrastructure Industry Overview

The infrastructure industry is unique in the way that it covers such a vast array of different products. **From building simple roads and sidewalks to complex multi-faceted projects such as universities, airport terminals, submarine factories**, and much more. Companies within the industry are omnilateral in the way that they operate because in order to receive the project first they must be able to build it, and sometimes it is something they have not built before.

Moreover, the structure of **the industry is an oligopoly with a few dominant firms receiving all the major projects** and smaller firms adapting to the needs of the industry. Because the industry requires companies to be the jacks of all trades, the merger and acquisition activity in the industry is very high with **companies having hundreds of subsidiaries** due to various technologies that they can provide This causes the companies to be vertically integrated from the quarry to the consumer.

Firms in the industry depend on projects that are available to them**. In the past years there has been a rise in the projects constructed as public-private partnerships** where both governments and private sector are included in the project. The problem for the companies in the industry is that mostly these projects come from developed countries, and there are only so many infrastructure projects a country can undertake especially because those **projects are extremely vulnerable to macroeconomic changes**, but for the foreseeable future there are no signs of slowing down. The characteristic of relying on projects is that it is not something that can be traded globally so therefore there is strong competition on every project and, recently, the competition has not been on just price but on other factors such as environmental that the clients are taking into consideration.

Another hallmark of the infrastructure industry is the **high fixed costs and capital expenditures** that the companies must have in order to stay competitive and to be able to do their jobs. This is an advantage for incumbents but a downside for new entrants.

The industry is also mature with a lower concentration degree than in other markets. Given that it is a mature industry, there is a possibility of a slowdown on the rate of orders, but it is not endangering the industry because of exogenous aspects such as governmental incentives – Biden’s Law, European Green Deal, and the Belt and Road Initiative for example.

Competitive Positioning

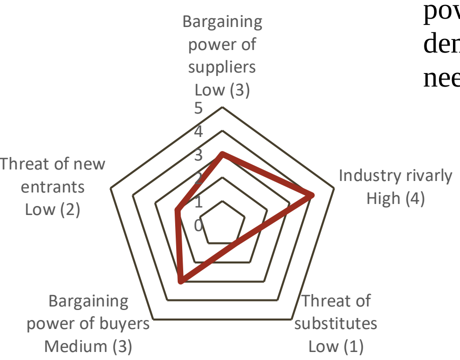
In an industry which is highly competitive and undergoing major transformation both through innovation and legislation, **STRABAG’s positioned itself as a monolith in the Central and Eastern Europe**, as well as slowly making a name for itself globally.

It is very difficult to find direct peers due to vastly different capital structures based on where the companies are operating and what is available to them. Although the common connection between the biggest companies is the lack of debt because of the public-private partnerships which are structured as special purpose vehicles and thus they take on the debt.

To identify the peers of STRABAG, for the competitive positioning analysis as well as further analysis for the purposes of this paper, were taken from Refinitiv. **To narrow the choice between the vast choice of companies, additional procedure was performed, more specifically the SARD approach** or the “sum of absolute rank differences”.

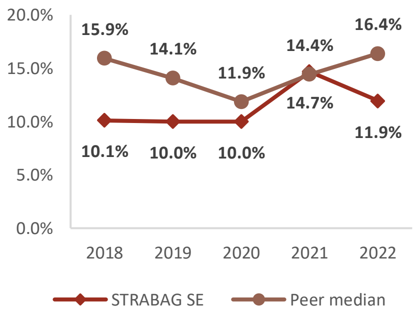
Porter's 5 Forces

Figure 40 - Porter 5 Forces



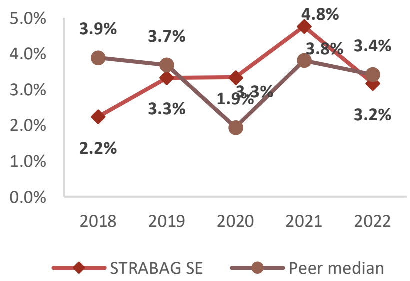
Source: Author Analysis

Figure 41 - Return on Equity



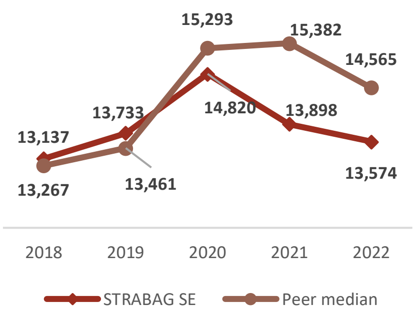
Source: Refinitiv & Author Analysis

Figure 42 - EBIT Margin



Source: Refinitiv & Author Analysis

Figure 43 - Total Assets (€ mln)



Source: Refinitiv & Author Analysis

Bargaining power of suppliers | Medium (3)

Given that **most large companies in the industry are vertically integrated**, the bargaining power of suppliers is low for them but for other companies it is quite high, especially if demand is high and the vertically integrated companies cannot supply enough for their own needs. Additional factors:

- **Dependency on fuel sources** causes massive costs for the companies; almost all the large machinery needed to operate uses diesel or red diesel.
- **Costs of transportation** of raw materials if the company does not have direct access to raw materials; **large trucks are expensive and limited in their capacity** (25t per load).
- **Production in own factories is not always an option** – especially for smaller companies; the issue with owning a raw material facility is that they have other customers as well.

Industry rivalry | High (4)

The industry is concentrated with the largest companies known worldwide, however even though they might operate worldwide they are mostly operating in their home markets because of their reputation. Moreover, there is only a limited number of projects that can be done, and they all last for years at a time. Additionally:

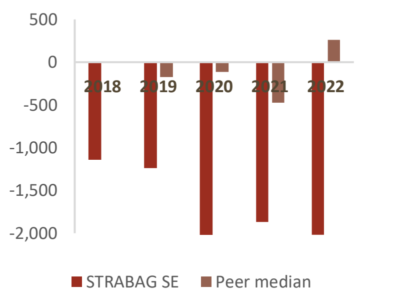
- **Oligopolistic competition** – high competition for bids.
- Companies focus on one market but are still present worldwide.
- **Limited number of projects worldwide** so companies from all over the world competing for the same bid.
- **Fierce price competition and more recently in other areas as well such as ESG factors.**
- Although projects can differ vastly between one another, **there is still standardization that is present** in all of them – certain standards of building and safety regulations.
- **Exit barriers are extremely high** due to investment needed to run the business – machinery, skilled workers etc.

Threat of new entrants | Low (2)

Because of the structure of the industry and the resources needed to start a business – from machinery to expertise – **the threat of new entrants is relatively low**. Moreover, the following factors must also be considered:

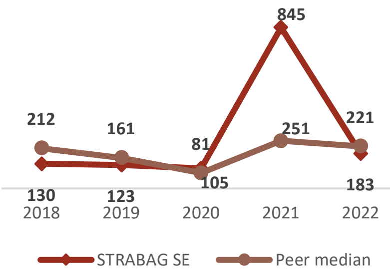
- **Industry is capital intensive**, in all three aspects: land, labor and capital.
- Some **machinery is extremely specialized** for the purposes of the project and cannot be transferred to other projects, both in terms of use and physically moving the machinery to a different location.
- All the **machinery is difficult to sell** because there is not demand for it and the companies that might potentially need it – already have it.
- **Regulation also makes it difficult to stay profitable**, even for incumbents, meaning that new entrants simply might not be able to afford adhering to the regulations.\
- **High economies of scale are require**d to just break even, and if periods of wild, rising raw materials prices, this factor is even more impactful.
- Reputation is a major factor in winning bids for projects, and **new entrants simply do not have time in the industry** to prove themselves enough to be competitive.
- If a new entrant is innovative and disruptive, **there is a large chance that it will be bought out** by one of the incumbents in order to gain competitive advantage against other competitors.

Figure 44 - Net Debt (€ mln)



Source: Refinitiv & Author Analysis

Figure 45 - Cash Dividends Paid (€ mln)



Source: Refinitiv & Author Analysis

Threat of substitutes | Low (1)

It is difficult to find substitutes in the infrastructure industry because, for example, what is the substitute to a road? You can have gravel or sand or something other, but **there are no real substitutes**, especially in the developed world.

- As mentioned above – **no substitutes or at least hard to find.**
- **Substitutes mostly come from new, innovative technologies** which have not been seen before. This is amplified if the new technology is cost-reducing and can be applied to underdeveloped and developing countries.

Bargaining power of buyers | Medium (3)

The relationship between buyers and companies is quite complicated, **considering the fact that buyers are mostly governments**, although lately they have been public-private partnerships where both the private and the public decided on a project.

- **Since governments are buyers there are many external factors that are affecting the projects**. Everything from price and timeline to regulation adherence. And because governments are involved there is the **inevitable issue of politics** and the **political optics** that might help the government be re-elected.
- An important factor is the **reputation of the companies** which can force companies that have made mistakes to make compromises in the future, potentially costing them profits or even entire projects they would have otherwise been awarded.
- Since projects face heavy competition, **companies tend to be less selective** and decrease margins to face fixed costs.
- On the other side, there are few suppliers and thus **buyers do not have that many choices** to choose from.
- **Buyers are very price sensitive and quality sensitive**. Failure of an infrastructure project is disaster for the buyers (governments).

SWOT Analysis

Strengths

- **Wide geographical presence;**
- **Branches in 9 countries all over the world;**
- **Vertically integrated business;**
- **Majority of revenue comes from low risk countries;**
- **Expertise and human capital;**
- **Strong margins;**
- **Low debt, negative net debt;**
- **Consistent performance.**

Opportunities

- **Can use leverage to speed up growth;**
- **Expertise on energy infrastructure building;**
- **Mergers and synergies;**
- **Emerging markets such as Chile and Colombia;**
- **New technological advancements.**

Weaknesses

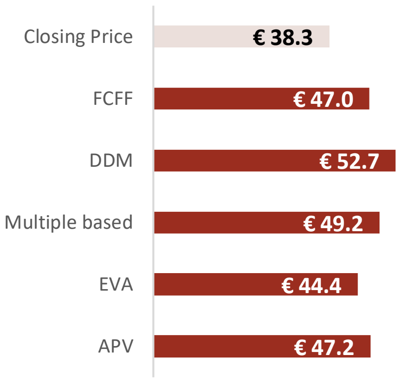
- **Fixed costs;**
- **High capital expenditure needed both to invest and maintain;**
- **Dependent on infrastructure investment in Central Europe;**
- **Dependent on regulation;**
- **High dependency on German and Austrian market**.

Threats

- **Energy and fuel prices;**
- **Raw material price inflation;**
- **More competitive bidders both in terms of price and in terms of technology;**
- **Disruptive innovation.**

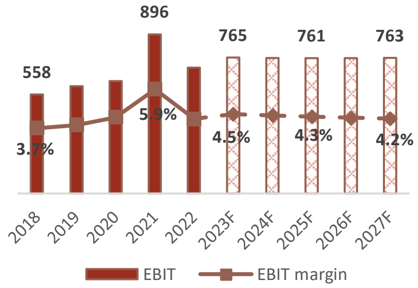
5. Investment Summary

Figure 46 - Valuation Price Targets



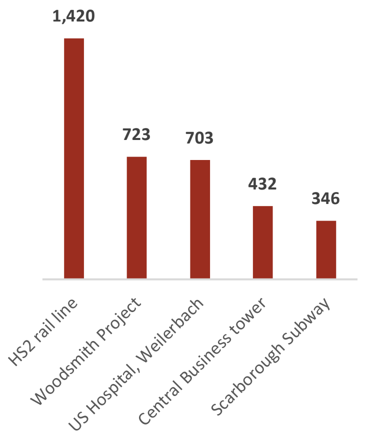
Source: Author Analysis

Figure 47 - EBIT (€ mln) and EBIT Margin (%)



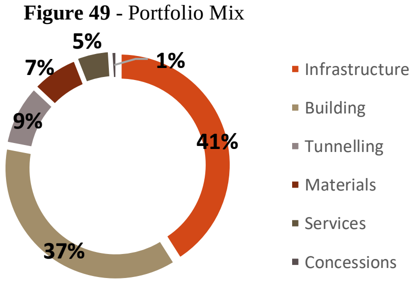
Source: STRABAG & Author Analysis

Figure 48 - Largest Projects in Progress (€ mln)



Source: STRABAG

Figure 49 - Portfolio Mix



Source: STRABAG

The **base case** recommendation for STRABAG SE is **STRONG BUY** with a **2023YE** target price of **€47.0**, representing a **22.9% upside** in 7 months as of 30th May 2023 or an annualized return of 42.4%.

STRABAG as a company is trading at a heavy discount compared to its peers, mainly due to very low daily stock trading activity. In the past 5 years**, the stock only turned over 4.07% of its volume per year** on average. This is due to **4 institutional owners holding 85.55% of shares outstanding**. Because of this, no real price discovery can be made – the institutional owners are getting the dividend, the price is stable and there is no reason to engage in speculation on their side. Moreover, 3 out of 4 shareholders have a **syndicate agreement** in place that regulates the following: right to nominate supervisory board members, coordination of voting, restrictions on the transfer of shares.

The positive prospects for STRABAG in the future are multifold

Sustainable profit growth and a reliable dividend, with **EBIT margin staying strong at 4.2%** for 2022, which is in line with the target of 4%. Resulting in a 12% CAGR for period from 2013 until 2022. The **dividend payout ratio for 2022 was at 43%,** the highest in the industry, again in line with the dividend policy of 30-50% of net income after minorities.

The Company strives for climate neutrality along the value chain by 2040 with **ambitious sub-goals** such as: climate neutral administration by 2025, climate neutral construction projects by 2030, climate neutral building materials and infrastructure by 2040. Those are not just words to satisfy ESG investors, **the Company has a clear strategy in place to achieve targets**. From CO2 emissions, life-cycle assessments of buildings, eco-labelling, developing and using recyclable products, supplier audits and many other processes and strategies.

A leader in technology, innovation, and digitalization. The Company realizes that the future is in technology and innovation, that is why it assembled a team called **STRABAG Innovation and Digitalization (SID)**, specifically mandated to promote new ideas relating to technological improvement in the construction industry. For example, using BIM 5D technology to map out the construction sites, GIS data and even robots on sites. Major contributor to creating the team is the current CEO, Klemens Haselsteiner. He focused on technological innovation and implementation, and we can expect more of the same in the future from STRABAG.

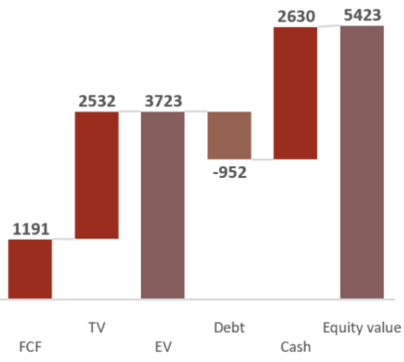
Flexible business model that proved its worth in volatile times, with a **diversified portfolio** which balances the cyclical nature of construction. **Top market positions in stable core markets**, and plenty of new projects in the pipeline such as modernization of the railway line Zagreb-Rijeka worth **€228mln** or new tunneling in Chile worth **€283mln**. Moreover, there is no specific project that could potentially deal a massive blow to the company if it fails as the **largest project currently only accounts for 6% of total backlog**.

A **high degree of vertical integration** with services along the entire construction value chain allows the Company to weather any storm better than most of its peers. Additionally, **strong risk management** was a key factor for increased profitability in recent years. However, the Company is not stopping there with **ongoing efficiency enhancements** such as digitalization, standardization and automation are key drivers for the future.

Financial strength as a competitive advantage for the firm. **A stable net cash position**, which has substantially increased since 2013 and high advance payments positions a firm with more flexibility compared to its peers. Moreover, **the equity ratio is above sector average**, again enabling significant headroom which provides flexibility. With an investment grade rating from S&P at BBB, outlook stable, the Company's outlook has never been better.

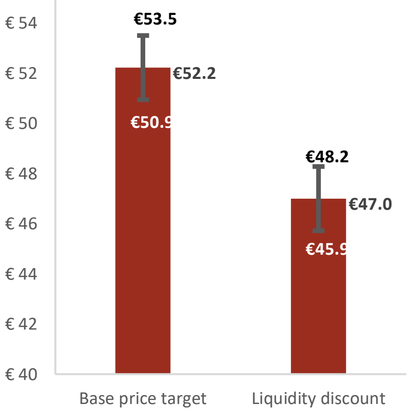
6. Valuation

Figure 50 - FCFF and TV (€mln)



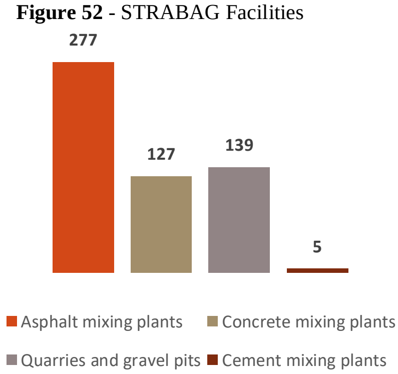
Source: Author Analysis

Figure 51 - FCFF Price Targets with 99% CI



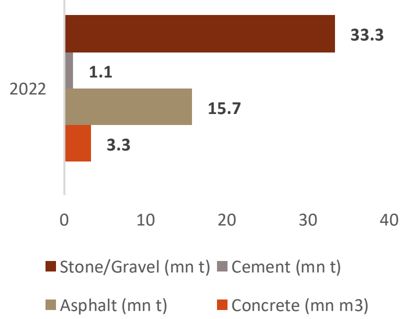
Source: Author Analysis

Figure 52 - STRABAG Facilities



Source: STRABAG

Figure 53 - Facilities Production



Source: STRABAG

To value the company multiple approaches have been used – discounted cash flow (DCF) via a free cash flow to the firm (FCFF) approach, the dividend discount model (DDM), multiples valuation model, economic value added (EVA) and adjusted present value (APV) approach. For details about the assumptions and their rationale, please refer to the table in the appendix.

Free Cash Flow to The Firm – WACC approach

FCFF was used as the main model for the valuation of STRABAG stock and achieving a price target. The reason this was chosen over the sum of parts, even though the firm breaks down its business into segments is because of the lack of data that the company provides for each segment. Thus, the cash flows would be susceptible to too many assumptions, more likely making them incorrect.

The model assumed two growth rates: the first one was the **forecasted increase in construction activity in Europe** by EuroConstruct and then the market share from 2020 for STRABAG was assumed to be the same to capture the increase in construction output to get the order backlog growth. Because of the complexity of the business model of STRABAG, this was the closest available approximation and the most likely one without making the model too convoluted and difficult to justify. The second one was the terminal growth rate which was calculated as the **geographical weighted average of the forecasted real GDP for 2027** and assumed in perpetuity.

Important note is that because of the previously mentioned low turnover of the Company's stock, **a liquidity discount has been applied to the target price of 10%** and this has been true for all valuation methods. Although even without the liquidity discount, the price would not be out of line with market expectations.

This method yielded **a €47.0 per share price target** which corresponds to **a 22.9% return for the 2023YE.** The main drivers of the model are i) **output volume growth**, ii) **stable cost of construction,** iii) **stable dividends**, iv) **WACC rate** assumptions and v) **growth rate**.

Infrastructure Outlook for the Future

2023 and beyond bring new challenges and with it come difficult and uncertain economic times. As companies start to get used to operating in a non-zero interest rate environment, many will be unable to continue maintaining their previous levels of growth, and even be unable to reach the same numbers as before.

However, even in times of recession, infrastructure spending is necessary with some economists claiming that it is mandatory to increase infrastructure spending to stimulate the economy. Therefore, the Author expects the infrastructure spending to increase at a stable rate in the future, with **STRABAG capturing more and more market share** as the Company increases its capabilities of construction and because the Company has no outstanding bonds, allowing maximum flexibility.

STRABAG is mainly a transportation infrastructure and building construction company, which includes everything from regular highways to airport runways and from hospitals to office buildings.. However, lately they have been expanding heavily in **turnkey projects** such as arts centers, veterinary clinics etc., specifically in the **Middle East and Latin America**, gaining experience and networking in the area.

Cost of Construction

With the rising raw material costs, it is expected that construction companies will face immense supply pressures. While this is true for STRABAG, the impact is much lower than of its competitors as **STRABAG is vertically integrated along the supply chain** and has plethora companies in its portfolio that supply raw materials to it and sell the excess in the open market for a profit which is then paid back to STRABAG through dividends.

Moreover, **the Company has more than 400 companies in its portfolio**, both affiliates and subsidiaries, of which around 100 are raw material suppliers. This caused the Company to be able **to supply 86% of its own asphalt needs** through their own construction network. This extends to 39% for cement, 19% for concrete and 15% for stone and gravel.
Having their own dense construction material network **secures availability**, especially in times of constrained supply chains and it is a **hedge against price fluctuations**. Having such capabilities of supplying your own construction materials is an especially strong **competitive advantage** as permits for new plants and quarries are limited to non-existent, acting as an **effective entry barrier**.

Increase in Dividends

STRABAG is a mature company, with its roots dating back to 1800s. It has managed this through smart growth and expansion, as well as good strategy. The Company has been focusing on paying out higher and higher dividends in the past few years as a result of a shift in strategy. As mentioned previously the company expects to pay 30-50 percent of net income after minorities as dividends every year. **This can be expected to be around €2.00 every year**.

What is an additional factor is the high institutional ownership and the stability they prefer in dividends over unstable gains of price appreciation.

WACC Rate Assumptions

The FCFF were discounted using the WACC method, where the **long-term capital structure is around 25% debt and 75% equity** as extrapolated from previous data and under the guidance of management. Thus, we can expect a stable capital structure.

To calculate the cost of equity, a segment weighted CAPM approach was used. To first get the beta, two approaches were used. First one was the regression between the Austrian Index (ATX) and the company stock, and the second one was the unlevered beta approach. Both yielded similar betas. The market risk premium was taken from Damodaran website and then calculated as a weighted average of all the segments as seen in table 7. Lastly, the risk-free rate used was the yield on a 10-year German Bund on 30.05.2023.

The cost of debt was calculated using a country risk plus premium approach. To get the Austria default spread and company default spread, again Damodaran was used, plus the same risk-free rate as for the cost of equity – the yield on the 10-year German Bund.

However, the company has low amounts of long-term debt and thus it always has that credit open if it is dire needs but given that the mechanism of the construction industry is to get paid upfront, the Author does not expect any major debt issuing in the foreseeable future.

Long-term Growth Rate and the Terminal Growth Rate

The long-term growth rate was based on the predicted growth rate of construction in the EU and the terminal growth rate was calculated based on the weights of the segments of the business and the real GDP forecast for the country. The reason for this is that it is extremely difficult to forecast the demand for infrastructure and civil engineering projects, which make up almost 80% of the output volume of the Company. The proxy for this was real GDP under the rationale that as countries develop and keep increasing their GDP there will be more need for newer infrastructure.

The last year used in the forecast was 2027 and thus the real GDP for that year has been used, multiplied by the weights of the segments to arrive at a **terminal rate of 1.99%.** This is a conservative approach and because the industry is not susceptible to any **<u>predictable</u>** explosion in demand and output volume, the Author considers this a relevant and appropriate number.

Table 7 - WACC Calculation

WACC Calculation	
CAPM	
Beta (Blume adjusted)	0.75
RFR	2.3%
Ke	**6.8%**
Default spread approach	
Austria Default Spread	0.5%
Company Default Spread	2.0%
RFR	2.3%
Kd	**4.80%**
Target Weights and Tax	
We	74.5%
Wd	25.5%
Marginal Tax Rate	32.5%
WACC	**5.86%**

Source: Author analysis

Table 8 - Cost of Equity Calculation

Cost of equity -STRABAG SE		
Segment	Weight	Weighted Ke
North + West	49.07%	3.34%
South + East	29.79%	2.30%
Int + Spec. Div.	21.15%	1.11%
Cost of equity		**6.75%**

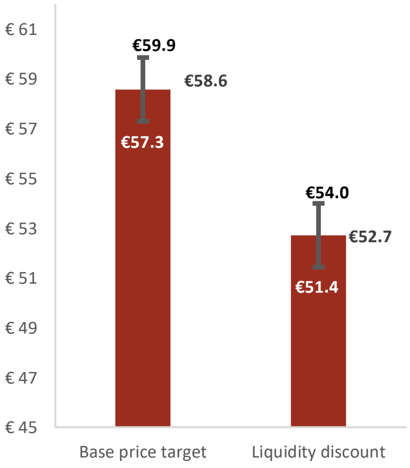
Source: Author analysis

Table 9 - Long-term growth rate

Terminal G -STRABAG SE		
Segment	Weights	Real GDP g
North + West	49.1%	1.7%
South + East	29.8%	2.2%
Intern. + Spec. Div	21.1%	2.3%
Forecast Growth		**2.0%**

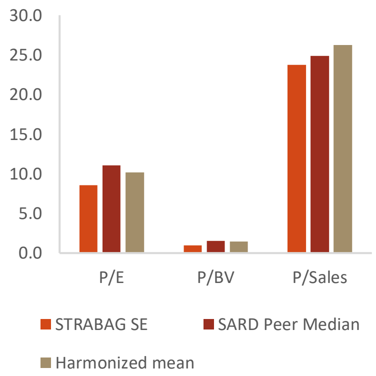
Source: Author analysis

Figure 54 - DDM price targets with 99% CI



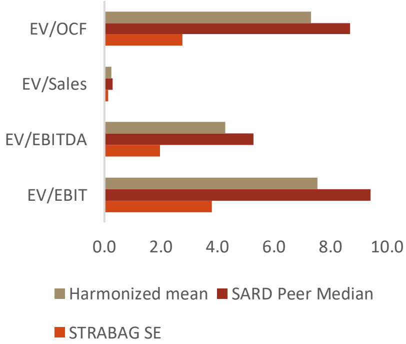
Source: Author analysis

Figure 55 - Price multiples



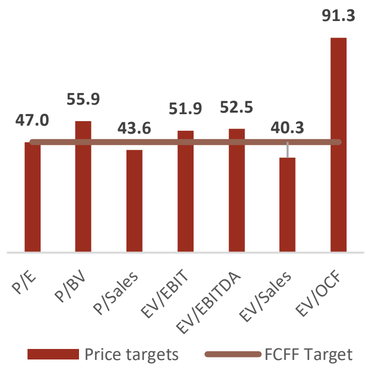
Source: Refinitiv & Author analysis

Figure 56 - Enterprise value multiples



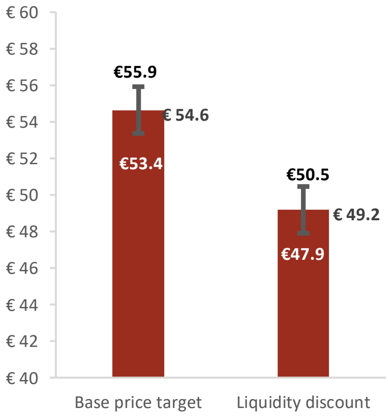
Source: Refinitiv & Author analysis

Figure 57 - Multiples price targets



Source: Author analysis

Figure 58 - Multiple based valuation price targets with 99% CI



Source: Author analysis

Dividend Discount Model (DDM)

STRABAG is a mature company with a strong reputation which makes it a cash cow in the industry. Alongside this, due to the **restructuring in the ownership of the company**, the Author expects an increase in the dividends due to the demands of the shareholders. Therefore, the Author assumes a **constant dividend model with perpetual growth.** This model gave a **price target of €52.7** for the same period, which is an outlier in the valuations because of the high sensitivity to growth rate which was different than the growth rate used for other models. The rationale for this is that dividends depend on the reinvestment in the company, or in other words, the payout to the shareholders. This is why the growth rate was calculated as the average growth for the forecasted period using the formula: **Equity Reinvestment Rate x ROE**.

However, even if the price is not in line with other valuation methods, if we just consider the dividends, **STRABAG has a strong proposition** with the target payout ratio and the inherent stability of the Company.

Multiple Based Valuation

Relative valuation was done using the trailing twelve months (TTM) data sourced from Refinitiv, where also the range of global possible competitors was taken as well. This method yielded a **price target of €49.2** for the same period. Although relative valuation can sometimes be unreliable, in this case it produced a price target close to the price targets of other valuation methods. What can be said in general is that STRABAG is undervalued compared to its peers as it has better EV multiples but the price multiples are lagging.

SARD Analysis

The original sample downloaded consisted of 114 possible competitors. To narrow the choice, the following variables were chosen for the SARD analysis:

- ROE
- Net debt to EBIT
- EPS Growth
- Market Cap
- EBIT Margin

The reason for these variables is that it most closely represents the capital structure of the firms. Because infrastructure is capital intensive, there are a lot of options to finance the projects and even more to determine the capital structure. **After this analysis, the chosen number of close competitors was seven** as can be seen in the figure 60 on the next page.

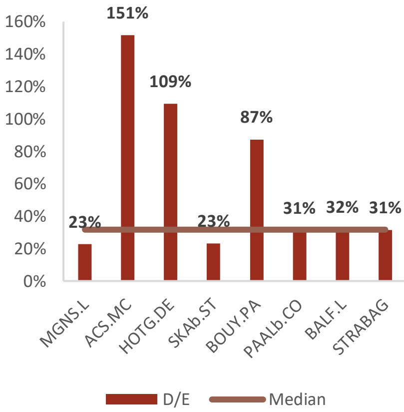
Multiples Valuation

The multiples were divided into two: price multiples and enterprise value multiples. Price multiples used were: P/E, P/BV, and P/Sales and for enterprise value it was: EV/EBIT, EV/EBITDA, EV/Sales, and EV/Operating Cash Flow. All values were as of 30.05.2023 and taken from Refinitiv.

Based on the median values for the competitors, STRABAG was well under the median, which would indicate that it is undervalued compared to its competitors. However, even in this selected group of peers, there are still vast differences between them. This is why a **harmonized mean of multiples was used for a more accurate valuation**.

One significant difference between STRABAG and its peers is the valuation by EV/Operating Cash Flow. **This is because STRABAG has a much stronger cash position** compared to its peers, and if we looked exclusively at this multiple, the value for the Company would be €91.3.

Figure 59 - D/E ratio of competitors and STRABAG



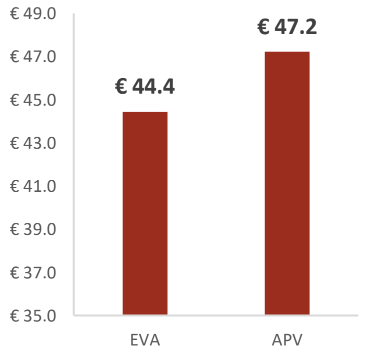
Source: Refinitiv & Author analysis

Figure 60 - SARD Peers

Rank	Peer	SARD Result
1	Morgan Sindall Group PLC	48
2	ACS SA	49
3	Hochtief AG	50
4	Skanska AB	52
5	Bouygues SA	53
6	Per Aarsleff Holding A/S	56
7	Balfour Beatty PLC	62

Source: Refinitiv & Author analysis

Figure 61 - EVA and APV price targets



Source: Author analysis

It is significant to note that **using the price to earnings multiple yields the same valuation as the free cash flow to firm method** with the liquidity discount of €47, indicating that the price target is consistent with the value of the company.

Economic Value Added (EVA)

Economic Value Added was chosen because it is used as an indicator of the profitability of the projects taken. Given that **STRABAG operates on a project basis**, this seemed like a logical valuation method to use.

One of the limiting factors in this valuation method is the forecasting of invested capital as forecasting debt is extremely difficult for STRABAG. **The Company itself does not have outstanding bonds but instead has €8.5 billion in credit lines** from various banks. Because of the way they finance their projects, as they are structured as SPVs, the projects themselves take on the debt and the risk.

The results of this valuation are that the company will be investing more capital into projects, and this is because of various new regulations and requirements as well as the factor of inflation, while maintaining a stable EBIT. **The price target with this method for 2023YE is €44.5**.

Adjusted Present Value (APV)

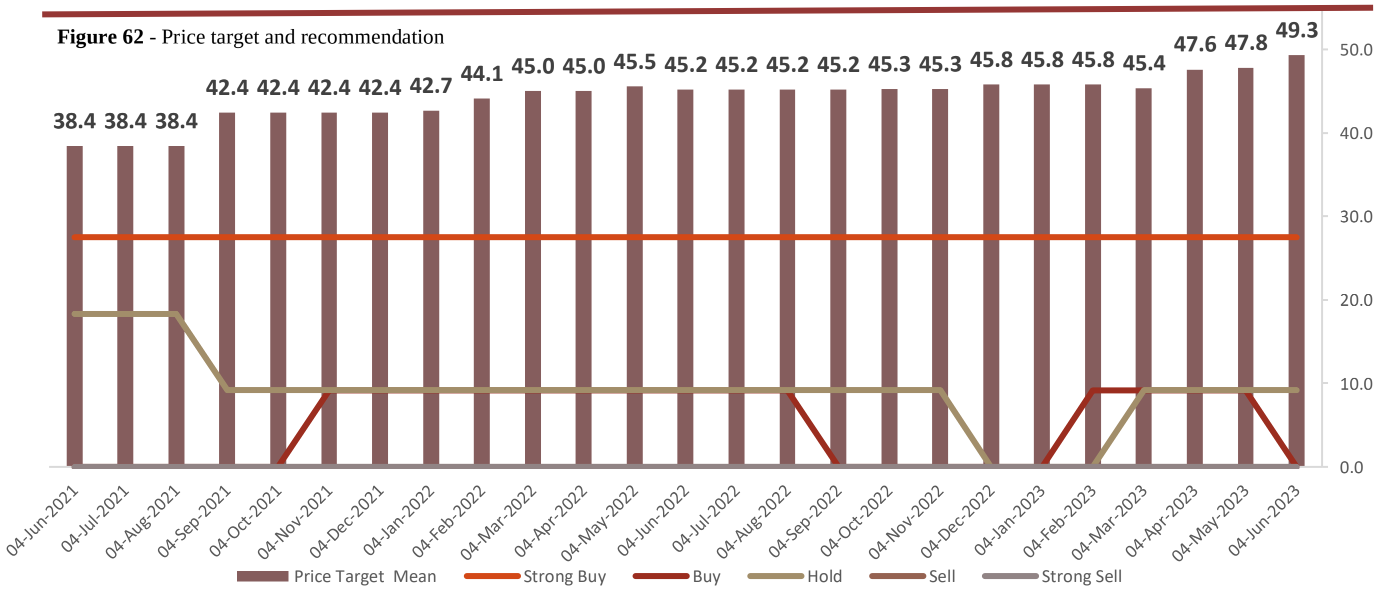
The adjusted present value model values the company as if it was purely equity financed. Given that STRABAG's capital structure is predominantly equity, the valuation is supposed to give out similar results to the FCF – which it did. **The price target with this method is €47.2 for 2023YE**, just a €0.2 difference to the FCFF.

For this, **an unlevered beta cost of equity** was calculated and used for discounting. This is to remove the effect of financing and to get the equity-only value of the company.

Author and the Analyst Recommendations

The Company regularly updates its coverage with analysts on their website. This includes price targets and recommendations as well as the contacts of the analysts as well. The Authors price target is within the range of the targets of the analysts already covering STRABAG STOCK. Moreover, the Authors recommendation is in line with Refinitiv recommendation of a **STRONG BUY with a target price of €49.3,** as can be seen from the chart below. As well as the high price target, the Company has had a consistent number of analysts advocating for a STRONG BUY recommendation over the past 2 years.

Figure 62 - Price target and recommendation



Source: Refinitiv & Author analysis

7. Financial Analysis

Financial strength and stability, even in uncertain times.

The story of STRABAG is that of a stable company with low levels of debt and a strong cash position. The cash is held up mainly in bank deposits and is readily available for any near necessity either a liability or a potential opportunity for a new project.

Liquidity of the company has been, and continues to be, strong with **current and quick ratio being well over 100%.** Moreover, with a debt coverage ratio of over 1, the company is in low risk of insolvency and inability to pay off its debt. This is in line with Bloomberg estimate of less than 0.05% probability of default.

Cash ratio has been the Company's strong suit for the past few years, and it is stronger than the median of the industry. This is because the company is both efficient at generating cash and does not have interest payments like some other peers do that can lower the cash available. The cash position is expected to stay the same and then start expanding in the future as the high interest rate environment calms down and the Company is able to enter into new projects at better NPV.

Less Liabilities, More Maneuverability

Low leverage leads to a strong financial position. Solvency of the company is strong as well, mainly due to low debt usage. **Total debt to EBITDA is below 1, and debt ratio hovers around 10%**. And almost 40% of the issued debt is short term debt. This opens the door for the Company to issue debt if a new project arises that would need additional capital expenditure. For now, STRABAG only uses debt in the form of credit lines from banks for any financing needs. As of May 2023, the Company has no outstanding bonds.

Net debt as percentage of enterprise value is the best of all its peers and has been consistent for the previous 5 years. Although, there is something to be said about the Company using debt in the future to increase the value of the firm. This depends on the projects available to the Company and what are the conditions for infrastructure projects, not only in the region but globally as well.

Equity ratio, which is calculated as group equity divided by total assets, **has been consistently above the median of the industry**, with the Company's target equity ratio of at least 25% easily achieved and beaten.

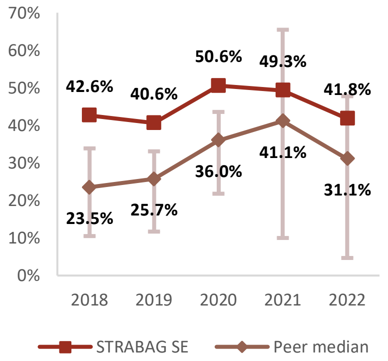
Profitability In Line with the Industry

Profitability has been very stable and continues to be strong in the post-pandemic environment with **gross margin reaching almost 40%**. This is due to the fact that the company is vertically integrated and able to source solutions for various problems in-house, rather than having to outsource them and be exposed to varying amounts of price risk.

The rest of the margins have been stable and consistent throughout the years, with **profit margin consistently being around 3%**. All the margins, EBITDA, EBIT, and net profit are either in line with the industry or better. The Company is able to achieve consistent results in an industry which is otherwise cyclical and has very limited prospects in terms of availability of projects. This means that even if the projects become available after a cycle of low projects, there are still hurdles to win the bid for the project.

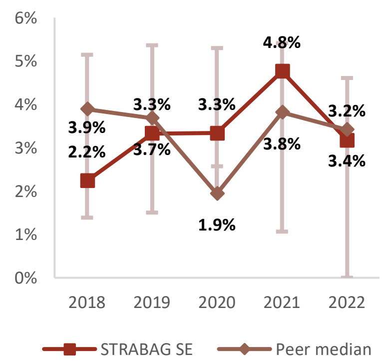
The Company was able to weather the Covid-19 pandemic with stronger than average ratios after the pandemic, even after 2021 which was also an outlier year, one could say even more so than 2020 because of the lagging effect of all the stimulus. Even with that, the Company has proven itself as a financially stable and sound company which is able to adapt and be flexible to the environment it finds itself in.

Figure 63 - Cash ratio vs peers (%)



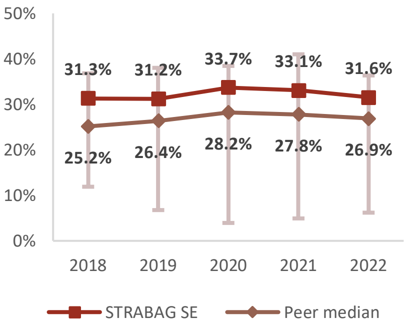
Source: Refinitiv & Author Analysis

Figure 64 - EBIT margin vs peers (%)



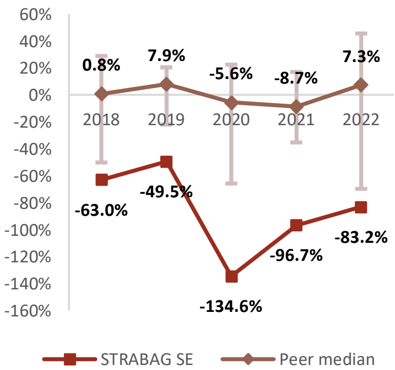
Source: Refinitiv & Author Analysis

Figure 66 - Equity ratio vs peers (%)



Source: Author Analysis

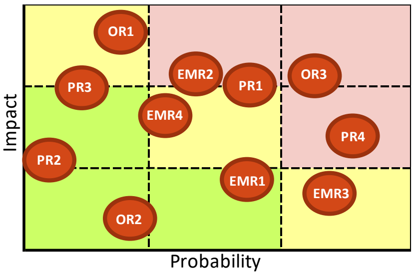
Figure 65 - Net Debt Percentage of Enterprise Value



Source: Refinitiv & Author Analysis

8. Investment Risks

Figure 67 - Risk Matrix

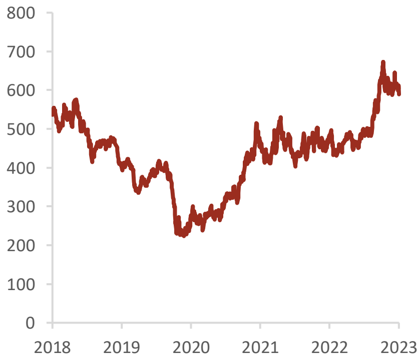


Source: Author Analysis

Figure 68 - Base Metals Index ($ USD)

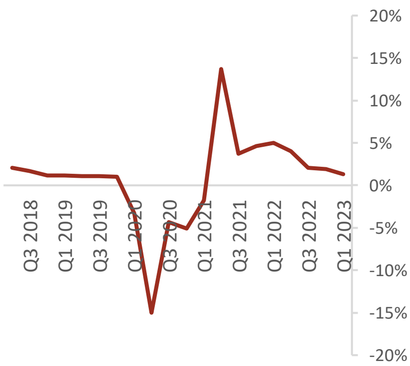
Source: Refinitiv

Figure 69 - Iron and Steel Index (JPY)



Source: Refinitiv

Figure 70 - Eurozone GDP Growth



Source: Refinitiv

Economic and Market Risks

Interest Rate Risk (EMR1)

Due to mechanisms of the construction industry**, debt on the Company's books is not incurred on a project-to-project basis** but rather for capital expenditures. And although not a big part, it is still a part of STRABAG's balance sheet and having the option of incurring more debt is always better than not. However, increases in interest rates lead to poorer terms and conditions of those debt issuances and might be detrimental to the Company. Although nothing lasts forever and interest rates will eventually come down, there is possibility that the Company does not issue new debt until that happens.

For now, STRABAG responded to interest rate risk by **further diversifying its business model** – by segment and by geography, by having a **strong footprint in less cyclical segments** such as infrastructure and civil engineering, and lastly by having a **flexible business model** where more than 60% of customers are public customers and more than 50% of work done in building construction is subcontracted.

Infrastructure Spending (EMR2)

Although it is not volatile, infrastructure spending of countries is very different from country to country, and it is **the most important risk** that the Company has. This directly affects the company in a major way, but to mitigate this they have a large backlog that even if infrastructure spending gets cut, the company is safe with its backlog that is contractually obligated to fill out.

Commodity Price (EMR3)

Given that **construction relies on metal commodities** such as aluminum, copper, tin, steel and so on, the price risk exists within these commodities and is a threat to companies operating in this sector. STRABAG is protected to a degree from these price movements through its network of facilities which **produce the building materials in-house**.

Economic Slowdown (EMR4)

Economic slowdown is a risk that threatens all companies across all sectors, some are affected more, and some are affected less. STRABAG is positioned well to handle such an occurrence where it **is able to generate revenues even in uncertain times** due to their **diversification** and **flexibility**. That does not mean that the company will experience abnormal gains in those times, it is just positioned well to handle and not experience a drawback as large as some companies might.

Operational Risks

Project Risk (OR1)

The Company might have the best intentions in mind, but there can always be **bad actors that act independently** and pursue personal gain which damages the project and the reputation of the Company. This is why the Company has three-step project risk management in place that is there to make sure the likelihood of that happening is minimal, but unfortunately it is never zero and not everything can be controlled by the Company.

Operational Difficulties (OR2)

With almost 75,000 employees, it is bound that some will be better than others and that some will work more than others. However, it is important to foster a culture that promotes good work ethic and that employees are compensated fairly for their work and thus preventing this risk.

Fierce Competition (OR3)

Arguably the biggest risk to the Company is the competition it faces. Even though the Company is flexible and diversified, as well as being a technological leader in the industry, it is still susceptible to fierce competition and **possibly losing out on bids**. However, this is a risk all peers face in the industry and it is important to realize that not every bid can be won, but what counts is to be consistent and tenacious.

Political Risks

Emissions Regulations (PR1)

Regulating the emissions of companies is a highly impactful event for the Company. This means that it needs to adapt its construction process and its technologies. **This would impact the profitability of the company in the short-term** but can be leveraged into better conditions for the long-term.

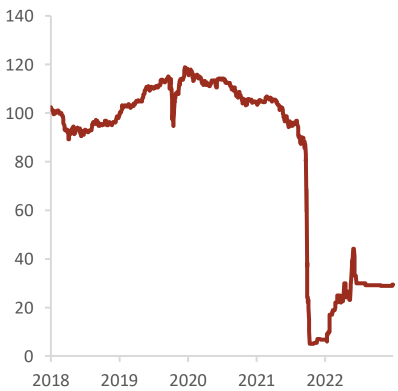
Project Bidding (PR2)

Some lucrative projects that would be great for the firm simply might not be available to it for various reasons, and thus there are risk of getting outbid on any certain project which could lose the company not only that project but ones in the future as well.

Expropriation and Nationalism (PR3)

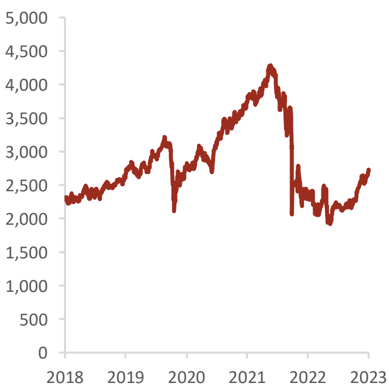
With the current political climate around the world where **countries and its citizens are becoming increasingly inward oriented**, it is not out of the realm of possibilities to conceive a situation where countries do not want to cooperate with other countries and lower its global exposure. This is mainly a risk in developing countries, and STRABAG operates in those, such as Chile and Colombia. The solution to this is good risk management and preventive measures that can be taken to minimize the loss in case such an occurrence happens.

Figure 71 - Russian 10y government bond price (RUB)



Source: Refinitiv

Figure 72 - Russian stock index (RUB)



Source: Refinitiv

Changes in Industry Regulation (PR4)

As mentioned before, construction is one of the most polluting industries in the world, and with that there are plenty of regulation changes that are being and will be implemented to combat that. **STRABAG is already ahead of the curve** by trying to be the most sustainable construction company in Europe. With its ambitious goal of **zero net carbon emissions by 2040** along the entirety of its construction value chain and with a strategy in place to do it.

War in Ukraine

Even though the impact is minimal, it is still important to mention the impact of the war on STRABAG's business. The company did not have many activities in Russia but either way it is winding-up all activities in Russi which accounts for only 0.3% of the Company's output volume. There was no exposure in terms of construction in Ukraine.

Overall, even though many companies were affected by the war, either directly through doing business there, or indirectly through supply chains and sanctions on Russia, STRABAG did not have such issues due to a **high degree of vertical integration** and **decentralized supply chains**.

Oleg Deripaska and MKAO Rasperia Trading Limited

Oleg Deripaska is a Russian Oligarch which is the majority owner of the firm MKAO Rasperia Trading Limited which holds a 27.8% ownership in STRABAG. Until 31 December 2022, there was a syndicate agreement between his firm, Haselsteiner Group, Raiffeisen Group and UNIQUA Group as the four largest shareholders in STRABAG SE. Now the syndicate has been renegotiated to not include MKAO Rasperia Trading Limited.

However, as Mr. Deripaska was placed on the EU sanctions list on 8 April 2022 as well as MKAO Rasperia having its assets frozen, there was legal contention over whether there should be any voting rights assigned to him. The latest development is that there are still nov voting rights attached but the MKAO Rasperia is still holding the shares.

Sensitivity Analysis

The main measurable value drivers of STRABAG are its **WACC and terminal growth rate**. This is why those two variables were analyzed in the sensitivity analysis of the Company.

Table 10 - Sensitivity analysis

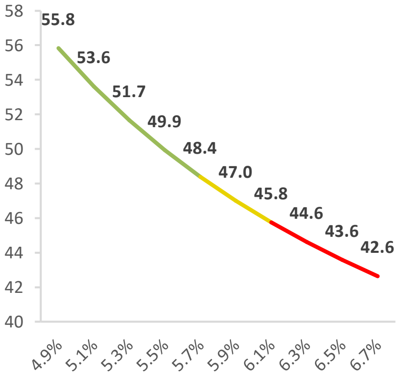
Sensitivity Analysis										
	4.9%	5.1%	5.3%	5.5%	5.7%	5.9%	6.1%	6.3%	6.5%	6.7%
1.5%	51.2	49.6	48.1	46.7	45.5	44.4	43.4	42.5	41.7	40.9
1.6%	52.0	50.3	48.7	47.3	46.0	44.9	43.8	42.9	42.0	41.2
1.7%	52.9	51.0	49.4	47.9	46.6	45.4	44.3	43.3	42.4	41.5
1.8%	53.8	51.8	50.1	48.5	47.2	45.9	44.8	43.7	42.8	41.9
1.9%	54.8	52.7	50.9	49.2	47.8	46.4	45.2	44.2	43.2	42.3
2.0%	55.8	53.6	51.7	49.9	48.4	47.0	45.8	44.6	43.6	42.6
2.1%	57.0	54.6	52.5	50.7	49.1	47.6	46.3	45.1	44.0	43.0
2.2%	58.2	55.6	53.4	51.5	49.8	48.2	46.8	45.6	44.5	43.4
2.3%	59.5	56.8	54.4	52.3	50.5	48.9	47.4	46.1	45.0	43.9
2.4%	60.9	58.0	55.4	53.2	51.3	49.6	48.1	46.7	45.5	44.3
2.5%	62.4	59.3	56.5	54.2	52.1	50.3	48.7	47.3	46.0	44.8

Source: Author analysis

As can be seen from the table, majority of the impact comes from the **WACC of the Company**. This is in line with the valuation so far because of the **financial stability** of the company and their capital structure. Additionally, this is because of the ability of the Company to issue additional debt as it is currently not levered as much as some of its more valued peers.

On the other hand, terminal growth does not have that much of an impact as it is quite stable, and the estimate produced for the purposes of this valuation is quite conservative. This is not to downplay the effect of it but it is significantly less than WACC.

Figure 73 - Price sensitivity to WACC (€/share)



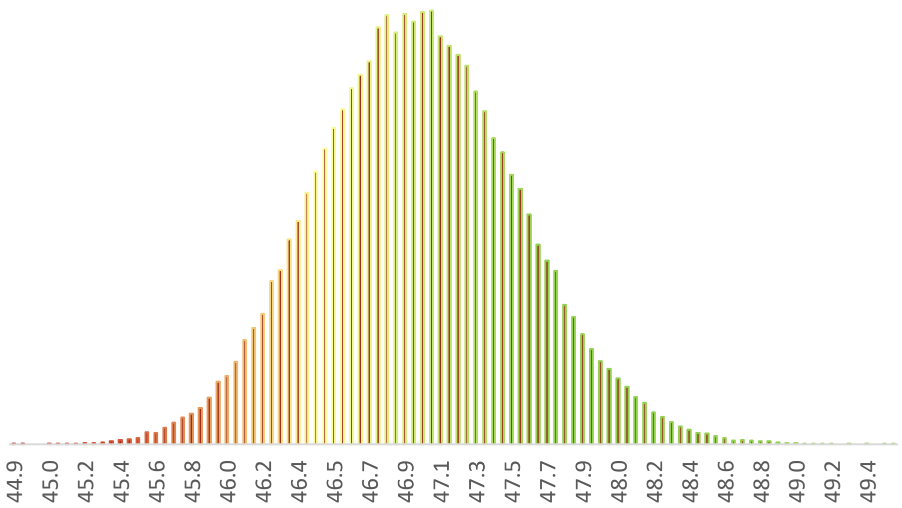
Source: Author analysis

Monte Carlo Simulation

Monte Carlo simulation was done with Crystal Ball and run at 100,000 trials to achieve a **mean price of €46.99 with a standard deviation of 0.54**. The range was only 4.69 meaning that the distribution was quite tight. This is due to the assumptions of the distribution of the factors. Two factors were used for the simulation: i) beta of the stock and ii) terminal growth.

The beta of the stock has been constant for the past five years, with little changes, thus it did **not affect the WACC as much** as it might some other cyclical firms. On the other hand, the **terminal growth also has a narrow spread** due to the nature of forecasts for real GDP being consistent at around 2% for developed countries, which are the core of STRABAG's business.

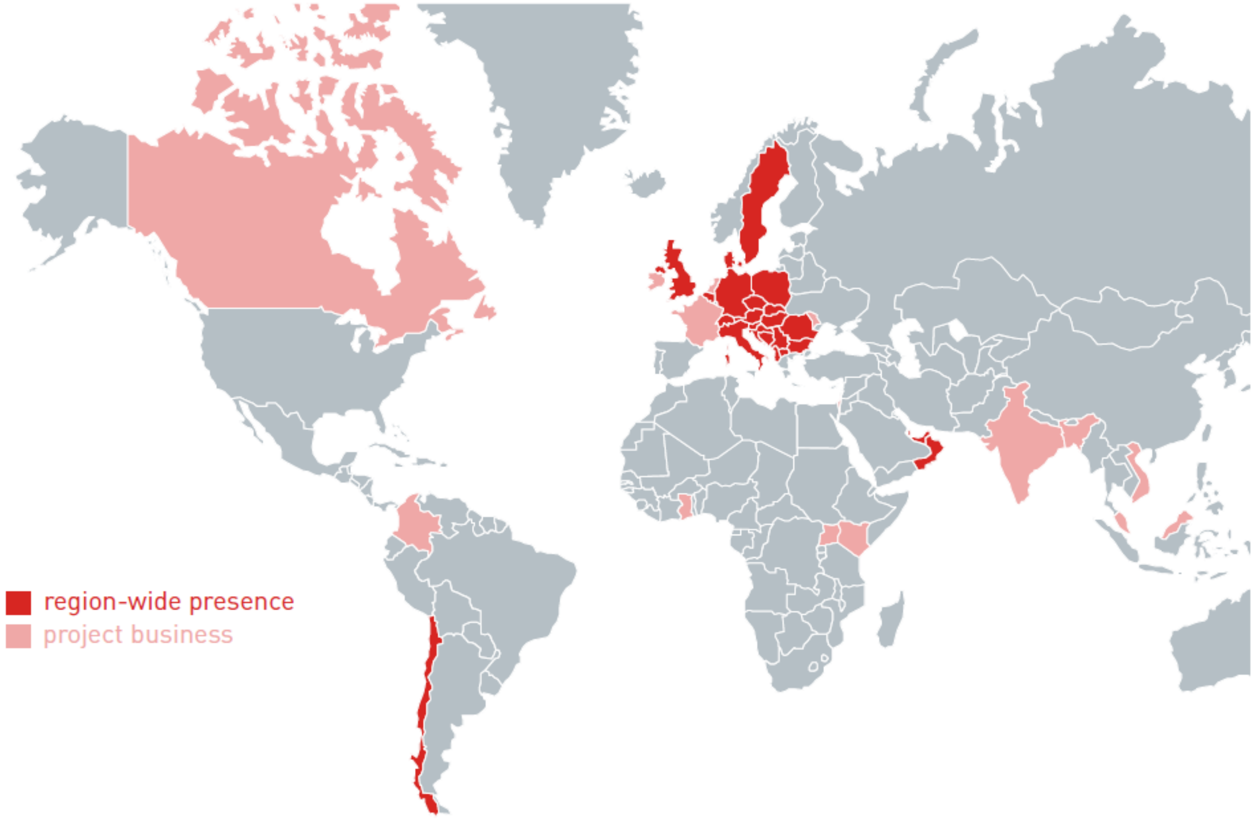
Figure 74 - Monte Carlo Probability Distribution



Source: Crystal Ball & Author analysis

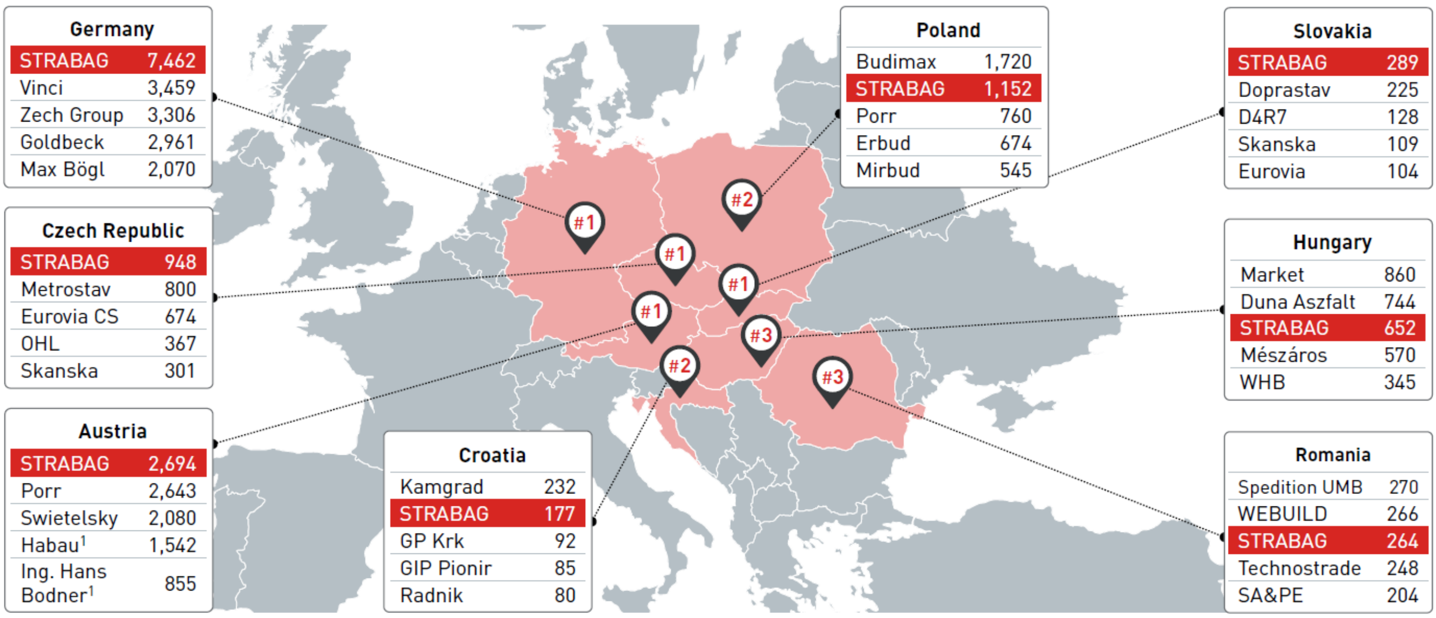
9. Appendix

Appendix 1: Business Operations of STRABAG



Source: STRABAG

Appendix 2: Core Markets



Source: STRABAG

Appendix 3: North + West Employee Breakdown

NORTH + WEST (Millions €)	2017	2018	2019	2020	2021	2022
Output volume	**6,843.36**	**7,827.48**	**8,106.93**	**7,862.65**	**7,902.46**	**8,690.69**
Order backlog	**8,138.06**	**8,804.15**	**8,807.66**	**9,158.18**	**11,628.13**	**11,841.89**
Revenue	**6,377.91**	**7,242.42**	**7,555.75**	**7,461.87**	**7,317.95**	**8,032.71**
EBIT	**199.25**	**161.40**	**310.20**	**406.43**	**443.03**	**492.89**
EBIT margin %	3.1%	2.2%	4.1%	5.4%	6.1%	6.1%
% of group output volume	47%	48%	49%	51%	49%	49%
% of group order backlog	49%	52%	51%	50%	52%	50%
% of total employees	32%	32%	33%	35%	35%	35%
Employees						
Germany	17,731	18,283	19,078	19,446	19,463	19,998
Austria	100	104	102	89	94	134
Poland	3,659	4,126	4,648	4,878	4,780	4,613
Czech Republic	56	57	57	58	2	6
Hungary	11	7	4	0	9	7
Russia	0	0	0	0	1	0
Slovakia	0	0	0	0	0	0
Romania	69	87	100	121	136	154
Croatia	0	2	1	0	0	0
Slovenia	0	0	0	0	0	0
Serbia	0	0	0	0	0	0
Bulgaria	0	1	0	0	0	0
Switzerland	78	76	68	58	4	2
Benelux	516	506	495	448	299	255
Sweden	365	360	345	291	265	249
Italy	3	4	4	4	4	2
Denmark	348	274	278	260	171	96
UK1			7	15	62	53
Other European countries	236	215	172	127	136	121
Middle East	87	71	12	2	1	1
Americas	46	24	6	1	0	0
Africa	61	25	9	3	2	2
Asia	0	0	0	0	1	0
Employees total	**23,366**	**24,222**	**25,386**	**25,801**	**25,430**	**25,693**
Employees by region						
Germany	17,731	18,283	19,078	19,446	19,463	19,998
Austria	100	104	102	89	94	134
CEE	3,795	4,280	4,810	5,057	4,928	4,780
Rest of Europe	1,546	1,435	1,369	1,203	941	778
Rest of World	194	120	27	6	4	3

Source: STRABAG

Appendix 4: South + East Employee Breakdown

SOUTH + EAST (million €)	2017	2018	2019	2020	2021	2022
Output volume	**4,241.60**	**4,639.26**	**4,915.79**	**4,632.60**	**4,930.38**	**5,461.54**
Order backlog	**4,504.75**	**4,311.00**	**4,489.37**	**4,441.14**	**5,596.97**	**6,320.72**
Revenue	**4,073.31**	**4,521.81**	**4,879.50**	**4,602.83**	**4,924.60**	**5,495.54**
EBIT	**204.61**	**142.03**	**121.97**	**176.35**	**194.93**	**153.39**
EBT	**204.61**	**142.03**	**121.97**	**176.35**	**194.93**	**153.39**
EBIT margin %	5.02%	3.14%	2.50%	3.83%	3.96%	2.79%
% of group output volume	29.01%	28.42%	29.58%	29.99%	30.57%	30.79%
% of group order backlog	27.15%	25.51%	25.78%	24.18%	24.87%	26.63%
% of total employees	24.57%	24.82%	25.81%	27.59%	28.10%	27.97%
Employees						
Germany	444	472	538	537	510	546
Austria	6,871	7,233	7,708	7,832	7,980	8,124
Poland	6	4	4	6	8	7
Czech Republic	2,500	2,576	2,759	2,899	3,037	3,049
Hungary	1,649	1,871	1,993	1,985	2,040	2,097
Russia	648	585	531	517	440	396
Slovakia	1,319	1,324	1,255	1,183	1,109	1,043
Romania	899	919	1,033	1,210	1,179	1,177
Croatia	695	799	879	1,045	1,232	1,237
Slovenia	186	142	133	114	106	102
Serbia	869	1,019	1,189	1,228	1,119	1,116
Bulgaria	263	280	312	392	479	378
Switzerland	822	765	703	661	653	597
Benelux	13	12	8	4	1	0
Sweden	0	0	0	0	0	0
Italy	35	37	14	13	16	22
Denmark	0	0	0	0	0	0
UK1			1	0	0	0
Other European countries	676	657	757	865	755	701
Middle East	7	8	11	10	8	6
Americas	0	4	3	1	1	0
Africa	2	1	1	7	9	25
Asia	12	21	18	3	3	2
Employees total	**17,916.00**	**18,729.00**	**19,850.00**	**20,512.00**	**20,685.00**	**20,625.00**
Employees by region						
Germany	444	472	538	537	510	546
Austria	6,871	7,233	7,708	7,832	7,980	8,124
CEE	9,034	9,519	10,088	10,579	10,749	10,602
Rest of Europe	1,546	1,471	1,483	1,543	1,425	1,320
Rest of World	21	34	33	21	21	33

Source: STRABAG

Appendix 5: International + Special Divisions Employee Breakdown

INTERNATIONAL + SPECIAL DIVISIONS (Millions €)	2017	2018	2019	2020	2021	2022
Output volume	**3,403.53**	**3,740.30**	**3,450.57**	**2,811.86**	**3,161.46**	**3,445.12**
Order backlog	**3,943.73**	**3,782.41**	**4,110.77**	**4,763.26**	**5,268.22**	**5,556.81**
Revenue	**3,029.34**	**3,437.82**	**3,216.67**	**2,670.21**	**3,039.14**	**3,479.97**
EBIT	**62.40**	**198.69**	**183.97**	**54.04**	**272.07**	**91.95**
EBT	**62.40**	**198.69**	**183.97**	**54.04**	**272.07**	**91.95**
EBIT margin %	2.1%	5.8%	5.7%	2.0%	9.0%	2.6%
% of group output volume	23%	23%	21%	18%	20%	19%
% of group order backlog	24%	22%	24%	26%	23%	23%
% of total employees	35%	35%	33%	29%	28%	28%
Employees						
Germany	9,060	8,279	6,900	5,436	5,316	5,385
Austria	2,432	2,578	2,472	2,321	2,108	1,956
Poland	467	502	821	799	828	851
Czech Republic	730	727	701	727	718	672
Hungary	799	856	532	529	503	491
Russia	127	38	30	33	31	31
Slovakia	378	364	360	352	350	353
Romania	218	209	207	211	232	241
Croatia	52	58	61	73	72	68
Slovenia	13	12	8	15	16	17
Serbia	36	35	40	40	42	41
Bulgaria	22	25	27	35	45	46
Switzerland	40	10	4	5	4	4
Benelux	49	42	43	34	33	31
Sweden	16	39	62	65	46	36
Italy	135	84	130	173	135	53
Denmark	6	1	0	0	12	2
UK1			346	585	852	1,064
Other European countries	329	388	221	113	77	81
Middle East	3,766	3,723	2,681	1,538	1,605	1,695
Americas	5,150	6,500	7,603	6,492	5,782	5,592
Africa	1,059	1,046	1,053	806	1,011	791
Asia	734	763	917	957	792	904
Employees total	**25,618.00**	**26,279.00**	**25,219.00**	**21,339.00**	**20,610.00**	**20,405.00**
Employees by region						
Germany	9,060	8,279	6,900	5,436	5,316	5,385
Austria	2,432	2,578	2,472	2,321	2,108	1,956
CEE	2,842	2,826	2,787	2,814	2,837	2,811
Rest of Europe	575	564	806	975	1,159	1,271
Rest of World	10,709	12,032	12,254	9,793	9,190	8,982

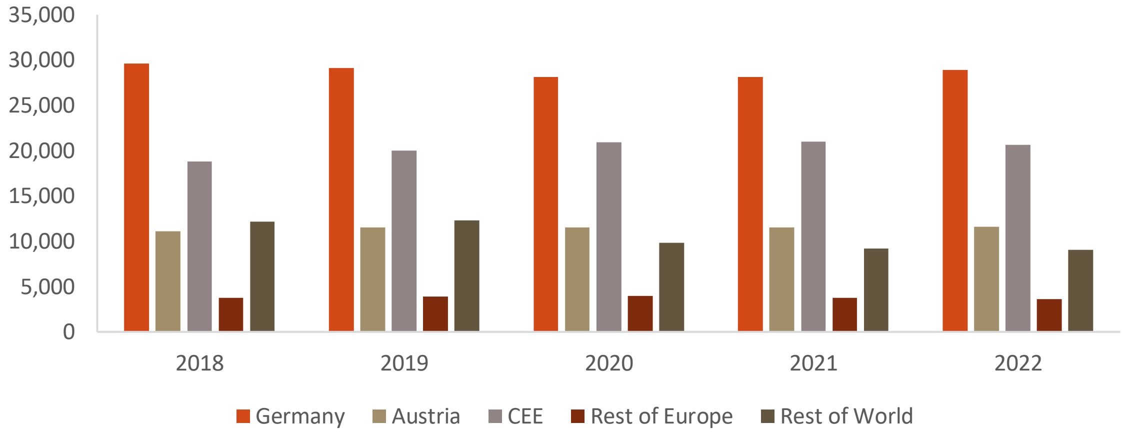
Source: STRABAG

Appendix 6: Other Employee Breakdown

OTHER (Millions €)	2017	2018	2019	2020	2021	2022
Output volume	**132.40**	**115.84**	**144.68**	**139.50**	**134.62**	**138.12**
Order backlog	**5.33**	**2.15**	**3.68**	**6.44**	**7.53**	**19.42**
Revenue	**28.16**	**19.78**	**16.65**	**14.83**	**16.85**	**17.64**
EBIT*	**0.67**	**0.86**	**0.87**	**0.90**	**0.69**	**1.00**
EBT	**-26.47**	**-26.57**	**-24.47**	**-19.70**	**-11.88**	**11.67**
EBIT margin %	2.4%	4.3%	5.2%	6.1%	4.1%	5.7%
% of group output volume	1%	1%	1%	1%	1%	1%
% of group order backlog	0%	0%	0%	0%	0%	0%
% of total employees	8%	8%	8%	9%	9%	10%
Employees						
Germany	2,482	2,561	2,616	2,731	2,842	2,958
Austria	1,171	1,215	1,242	1,272	1,333	1,392
Poland	619	642	713	745	724	664
Czech Republic	373	384	399	413	430	428
Hungary	285	310	361	366	369	383
Russia	109	106	99	94	97	102
Slovakia	217	217	216	210	212	206
Romania	175	186	184	197	196	196
Croatia	111	120	137	157	173	179
Slovenia	14	15	18	19	20	19
Serbia	131	153	163	184	185	186
Bulgaria	61	60	62	64	72	74
Switzerland	127	116	105	98	88	87
Benelux	56	56	56	52	48	44
Sweden	27	34	29	14	8	7
Italy	19	18	23	22	21	21
Denmark	0	10	16	16	16	10
UK1			2	10	18	31
Other European countries	25	26	22	18	19	20
Middle East	0	0	0	3	7	7
Americas	2	1	1	3	3	3
Africa	0	0	0	0	0	0
Asia	0	0	0	0	0	0
Employees total	**6,004.00**	**6,230.00**	**6,464.00**	**6,688.00**	**6,881.00**	**7,017.00**
Employees by region						
Germany	2,482	2,561	2,616	2,731	2,842	2,958
Austria	1,171	1,215	1,242	1,272	1,333	1,392
CEE	2,095	2,193	2,352	2,449	2,478	2,437
Rest of Europe	254	260	253	230	218	220
Rest of World	2	1	1	6	10	10

Source: STRABAG

Appendix 7: Employees



Source: STRABAG

Appendix 8: North + West Output Volume Breakdown

NORTH + WEST (Millions €)	2017	2018	2019	2020	2021	2022
Output volume						
Germany	5,314.79	6,220.62	6,401.95	6,227.39	6,359.59	7,206.20
Austria	19.90	24.74	28.03	19.78	24.02	49.37
Poland	786.93	894.84	999.03	1,097.67	1,036.29	1,016.73
Czech Republic	0.10	0.63	0.58	0.44	0.00	0.67
Hungary	10.31	1.04	0.11	0.25	8.59	5.04
Russia	0.00	0.03	0.00	0.00	0.00	0.00
Slovakia	0.00	0.00	0.00	0.00	0.00	0.00
Romania	9.06	13.33	16.21	19.26	21.11	25.77
Croatia	0.00	0.00	0.00	0.00	0.02	0.00
Slovenia	0.00	0.00	0.00	0.00	0.00	0.00
Serbia	0.00	0.00	0.00	0.00	0.00	0.00
Bulgaria	0.00	0.22	0.00	0.00	0.00	0.00
Switzerland	31.95	27.85	22.26	21.57	1.16	0.19
Benelux	272.91	305.45	285.26	246.80	218.30	142.97
Sweden	155.97	168.83	180.27	135.19	101.46	120.55
Italy	0.00	0.00	0.21	0.00	0.01	0.00
Denmark	151.87	87.13	96.31	71.15	90.11	56.44
UK1			1.09	2.80	25.87	47.82
Other European countries	66.89	58.74	47.07	17.55	15.14	18.25
Middle East	10.33	7.47	4.58	0.04	0.41	0.76
Americas	8.73	8.91	20.29	2.03	0.11	0.04
Africa	3.49	7.48	3.49	0.72	0.27	-0.11
Asia	0.13	0.17	0.19	0.01	0.00	0.00
Output volume total	**6,843.36**	**7,827.48**	**8,106.93**	**7,862.65**	**7,902.46**	**8,690.69**

Source: STRABAG

Appendix 9: South + East Output Volume

SOUTH + EAST (million €)	2017	2018	2019	2020	2021	2022
Output volume						
Germany	122.08	145.27	150.62	163.90	152.45	183.68
Austria	1,774.64	1,978.62	2,175.72	1,988.58	2,205.87	2,474.20
Poland	0.05	0.18	3.11	0.09	2.51	5.47
Czech Republic	505.76	557.33	635.72	686.35	781.74	894.70
Hungary	404.02	544.82	677.29	533.27	503.20	530.91
Russia	80.32	70.18	67.66	49.72	42.74	70.51
Slovakia	466.56	460.14	318.43	254.21	243.27	298.26
Romania	147.74	155.91	178.57	194.38	201.83	231.43
Croatia	107.28	147.81	131.21	159.31	161.97	219.80
Slovenia	45.33	60.55	42.15	46.77	94.26	65.39
Serbia	111.54	108.95	146.13	155.81	150.09	142.68
Bulgaria	40.71	36.54	35.90	58.14	68.11	43.33
Switzerland	266.65	235.20	205.11	189.32	186.32	193.47
Benelux	6.49	8.06	2.50	1.74	0.56	0.09
Sweden	0.00	0.00	0.00	0.00	0.00	0.00
Italy	8.24	10.82	4.69	4.45	5.97	9.48
Denmark	0.00	0.04	0.09	0.09	0.18	0.01
UK1			0.27	0.44	0.01	0.01
Other European countries	144.96	99.17	120.78	136.08	110.67	84.06
Middle East	0.82	0.01	1.56	6.46	4.15	0.58
Americas	0.05	4.50	1.22	0.19	0.01	0.02
Africa	1.53	0.06	0.15	1.47	6.85	9.61
Asia	6.83	15.10	16.91	1.83	7.62	3.85
Output volume total	**4,241.60**	**4,639.26**	**4,915.79**	**4,632.60**	**4,930.38**	**5,461.54**

Source: STRABAG

Appendix 10: North + West Backlog

NORTH + WEST (Millions €)	2017	2018	2019	2020	2021	2022
Order backlog						
Germany	5,739.64	6,010.18	6,603.70	7,224.80	9,438.78	9,815.25
Austria	15.37	19.84	5.46	7.11	56.53	72.43
Poland	1,393.11	1,614.51	1,455.15	1,227.95	1,587.07	1,598.51
Czech Republic	0.00	0.00	0.00	0.01	0.00	0.00
Hungary	0.03	0.03	0.00	12.63	4.87	0.10
Russia	0.03	0.00	0.00	0.00	0.00	0.00
Slovakia	0.00	0.00	0.00	0.00	0.00	0.00
Romania	2.61	3.63	13.62	7.58	4.42	6.74
Croatia	0.00	0.00	0.00	0.00	0.00	0.00
Slovenia	0.00	0.00	0.00	0.00	0.00	0.00
Serbia	0.00	0.00	0.00	0.00	0.00	0.00
Bulgaria	0.00	0.00	0.00	0.00	0.00	0.00
Switzerland	7.52	8.33	7.97	6.03	0.02	0.01
Benelux	553.17	557.34	422.26	353.00	211.14	209.08
Sweden	324.73	335.31	135.20	95.04	100.49	93.32
Italy	0.00	0.13	0.00	0.00	0.00	0.00
Denmark	56.28	208.50	150.20	208.82	155.79	15.97
UK1			0.40	1.82	46.66	17.96
Other European countries	34.80	29.94	13.36	12.49	21.08	11.47
Middle East	5.23	1.16	0.00	0.00	0.68	1.02
Americas	2.20	14.29	0.30	0.77	0.44	0.00
Africa	3.34	0.74	0.02	0.13	0.16	0.03
Asia	0.00	0.22	0.02	0.00	0.00	0.00
Order backlog total	**8,138.06**	**8,804.15**	**8,807.66**	**9,158.18**	**11,628.13**	**11,841.89**

Source: STRABAG

Appendix 11: International + Special Divisions Output Volume

INTERNATIONAL +SPECIAL DIVISIONS (Millions €)	2017	2018	2019	2020	2021	2022
Output volume						
Germany	1,459.06	1,463.62	1,207.05	884.59	905.49	924.13
Austria	502.56	506.19	447.96	425.89	435.09	386.35
Poland	57.35	73.82	118.67	79.49	107.00	90.37
Czech Republic	117.09	144.12	140.70	131.64	159.40	184.67
Hungary	134.64	162.85	157.71	125.55	119.70	127.40
Russia	59.80	6.11	3.07	1.30	2.15	-14.29
Slovakia	59.72	52.12	46.77	40.98	41.81	51.60
Romania	24.41	27.27	29.34	35.65	39.90	56.27
Croatia	11.87	14.11	18.66	11.48	13.18	17.91
Slovenia	7.50	7.53	6.07	9.20	9.94	15.11
Serbia	0.79	0.96	1.02	0.85	3.03	2.35
Bulgaria	3.45	4.34	4.86	6.27	5.80	9.49
Switzerland	13.70	3.42	2.26	1.85	2.26	1.65
Benelux	14.30	35.25	29.32	12.75	12.88	32.84
Sweden	4.36	8.48	22.63	23.96	17.54	29.38
Italy	58.03	63.09	-11.17	46.89	52.14	10.96
Denmark	7.32	4.17	2.76	4.09	17.92	5.00
UK1			124.84	222.27	364.15	530.55
Other European countries	65.22	116.99	54.08	5.88	9.32	7.68
Middle East	291.17	197.89	141.69	112.50	198.12	250.16
Americas	376.64	651.77	678.03	470.23	479.16	556.16
Africa	42.49	49.59	62.36	43.60	28.24	37.54
Asia	92.06	146.61	161.89	114.95	137.24	131.84
Output volume total	**3,403.53**	**3,740.30**	**3,450.57**	**2,811.86**	**3,161.46**	**3,445.12**

Source: STRABAG

Appendix 12: South + East Backlog

SOUTH + EAST (million €)	2017	2018	2019	2020	2021	2022
Order backlog						211.26
Germany	140.36	134.83	159.26	134.21	215.87	2,535.14
Austria	1,342.86	1,637.34	1,579.83	1,555.28	2,266.16	2.06
Poland	0.00	0.01	0.00	8.61	6.03	973.34
Czech Republic	363.25	437.59	744.65	832.23	908.94	706.80
Hungary	1,188.21	932.28	617.74	411.36	696.20	85.26
Russia	171.17	83.54	102.26	114.47	121.99	301.94
Slovakia	455.02	248.70	214.55	308.98	279.09	549.02
Romania	126.61	178.50	261.47	217.50	240.69	408.13
Croatia	151.11	87.24	185.18	172.87	241.93	95.33
Slovenia	56.22	49.89	38.60	93.93	51.83	67.18
Serbia	73.68	107.68	194.01	124.19	93.38	30.64
Bulgaria	95.06	105.46	91.81	141.28	122.65	98.10
Switzerland	184.98	171.15	141.31	143.30	101.32	0.00
Benelux	12.41	5.17	2.38	0.89	0.02	0.00
Sweden	0.00	0.00	0.00	0.00	0.00	9.24
Italy	11.89	8.53	7.71	9.16	9.09	0.00
Denmark	0.00	0.00	0.01	0.04	0.00	0.00
UK1			0.14	0.00	0.00	169.57
Other European countries	121.71	107.10	139.12	154.59	148.87	12.91
Middle East	0.00	0.32	4.62	4.19	12.63	0.00
Americas	0.00	1.01	0.15	0.02	0.02	55.16
Africa	0.00	0.00	0.00	10.03	69.05	9.64
Asia	10.21	14.66	4.57	4.01	11.21	0.00
Order backlog total	**4,504.75**	**4,311.00**	**4,489.37**	**4,441.14**	**5,596.97**	**6,320.72**

Source: STRABAG

Appendix 13: “International + Special Divisions Order Backlog

INTERNATIONAL +SPECIAL DIVISIONS (Millions €)	2017	2018	2019	2020	2021	2022
Order backlog						
Germany	1,046.54	1,031.81	851.34	852.72	1,063.45	1,115.90
Austria	627.40	398.38	299.25	246.67	339.88	383.72
Poland	21.18	17.29	42.97	59.72	34.77	33.06
Czech Republic	12.42	16.06	16.05	13.30	20.29	14.02
Hungary	36.45	34.41	31.26	10.83	10.22	11.32
Russia	15.42	0.00	0.52	0.40	0.40	0.60
Slovakia	20.83	12.78	8.83	11.67	10.36	17.51
Romania	8.50	4.61	6.68	4.79	2.90	11.30
Croatia	1.53	5.33	2.68	1.56	0.17	0.25
Slovenia	0.34	0.05	0.05	11.92	3.68	0.00
Serbia	0.00	0.00	0.00	0.00	0.00	0.00
Bulgaria	0.14	0.00	0.00	56.41	55.70	0.67
Switzerland	4.59	1.31	1.60	0.62	0.58	2.94
Benelux	7.07	4.66	14.07	13.78	20.65	11.12
Sweden	57.99	54.51	36.37	19.65	18.32	4.92
Italy	261.23	106.84	108.77	64.17	51.81	364.97
Denmark	6.59	2.82	0.30	20.49	1.70	0.00
UK1			879.68	2,051.20	2,162.04	2,197.48
Other European countries	61.73	294.16	3.88	4.15	2.93	2.23
Middle East	322.31	171.28	275.99	378.76	354.99	241.83
Americas	783.82	1,118.89	1,055.85	597.75	814.23	883.14
Africa	145.18	124.28	69.31	65.69	38.17	16.68
Asia	502.47	382.94	405.32	277.01	260.98	243.15
Order backlog total	**3,943.73**	**3,782.41**	**4,110.77**	**4,763.26**	**5,268.22**	**5,556.81**

Source: STRABAG

Appendix 14: “Other” Output Volume

OTHER (Millions €)	2017	2018	2019	2020	2021	2022
Output volume						
Germany	63.70	47.14	58.97	47.51	44.20	32.73
Austria	36.22	31.95	26.95	25.59	29.33	25.27
Poland	3.93	6.51	8.41	6.11	6.33	13.82
Czech Republic	5.80	4.36	5.78	7.23	6.88	12.57
Hungary	2.12	5.18	12.71	11.90	20.06	24.55
Russia	2.99	1.14	0.69	0.58	1.44	2.63
Slovakia	1.57	2.23	3.84	1.79	4.06	1.51
Romania	1.60	0.86	1.38	0.89	1.34	1.99
Croatia	0.89	0.89	2.61	0.98	2.21	0.55
Slovenia	0.27	0.26	0.49	2.85	0.10	0.16
Serbia	0.52	1.12	0.96	1.01	1.48	1.33
Bulgaria	1.01	1.00	1.10	1.21	7.51	15.02
Switzerland	8.02	6.74	2.32	6.95	1.97	1.51
Benelux	0.78	2.00	0.66	0.56	0.57	0.34
Sweden	1.64	1.03	2.37	0.95	2.26	1.79
Italy	0.29	0.33	0.49	0.42	0.23	0.15
Denmark	0.26	0.37	0.33	1.07	0.84	0.04
UK1			0.00	0.00	0.00	0.00
Other European countries	0.08	0.33	0.44	0.11	1.11	0.14
Middle East	0.31	0.31	0.13	0.03	0.18	0.28
Americas	0.04	1.84	13.97	21.71	2.47	1.71
Africa	0.13	0.00	0.01	0.00	0.00	0.00
Asia	0.23	0.25	0.07	0.05	0.05	0.03
Output volume total	**132.40**	**115.84**	**144.68**	**139.50**	**134.62**	**138.12**

Source: STRABAG

Appendix 15: “Other” Order Backlog

OTHER (Millions €)	2017	2018	2019	2020	2021	2022
Order backlog						
Germany	2.46	1.36	3.17	4.97	5.43	11.54
Austria	0.50	0.17	0.06	0.06	0.10	0.49
Poland	1.27	0.06	0.00	0.00	0.00	0.00
Czech Republic	0.66	0.26	0.31	0.41	0.79	6.04
Hungary	0.00	0.00	0.00	0.00	0.00	0.74
Russia	0.00	0.00	0.00	0.00	0.00	0.00
Slovakia	0.35	0.27	0.13	0.95	0.51	0.46
Romania	0.02	0.03	0.01	0.02	0.34	0.07
Croatia	0.00	0.00	0.00	0.00	0.00	0.01
Slovenia	0.00	0.00	0.00	0.00	0.00	0.00
Serbia	0.00	0.00	0.00	0.00	0.00	0.00
Bulgaria	0.00	0.00	0.00	0.00	0.00	0.00
Switzerland	0.00	0.00	0.00	0.00	0.31	0.00
Benelux	0.00	0.00	0.00	0.00	0.00	0.01
Sweden	0.05	0.00	0.00	0.00	0.02	0.00
Italy	0.00	0.00	0.00	0.00	0.00	0.00
Denmark	0.00	0.00	0.00	0.00	0.00	0.00
UK1			0.00	0.00	0.00	0.00
Other European countries	0.00	0.00	0.00	0.03	0.03	0.06
Middle East	0.00	0.00	0.00	0.00	0.00	0.00
Americas	0.02	0.00	0.00	0.00	0.00	0.00
Africa	0.00	0.00	0.00	0.00	0.00	0.00
Asia	0.00	0.00	0.00	0.00	0.00	0.00
Order backlog total	**5.33**	**2.15**	**3.68**	**6.44**	**7.53**	**19.42**

Source: STRABAG

Appendix 16: Largest Projects

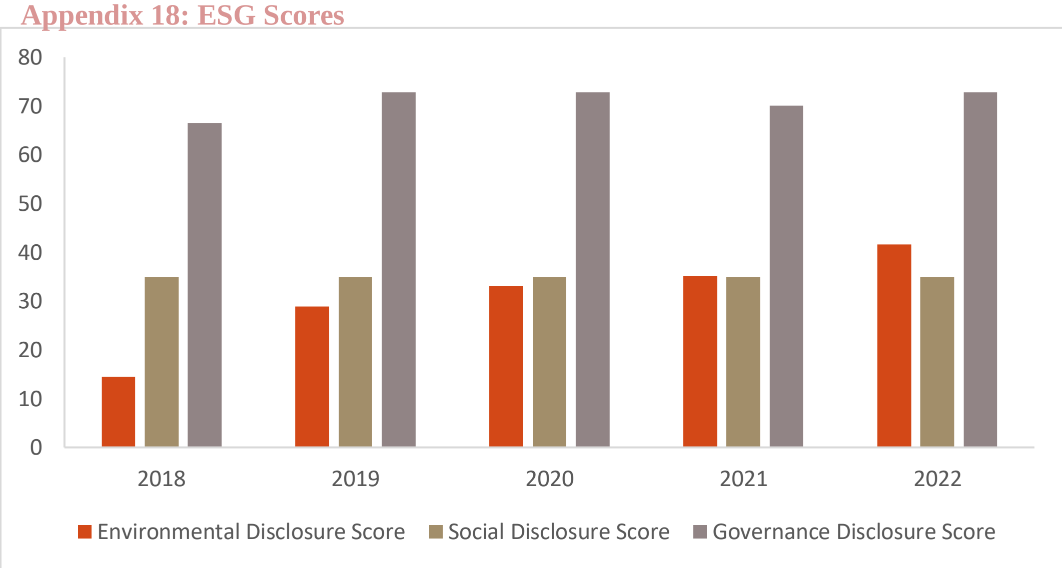
Country	Project	Order backlog (€ bn)	As % of total order backlog
United Kingdom	HS2 high-speed rail line	1,420	6.0%
United Kingdom	Woodsmith Project	723	3.1%
Germany	US Hospital,Weilerbach	703	3.0%
Germany	Central Business Tower	432	1.8%
Canada	Scarborough Subway Exten	346	1.5%
Germany	Stuttgart 21, underground r	337	1.4%
Croatia	Railway line Leskovac - Karl	254	1.1%
Germany	PPP A49 motorway	220	0.9%
Czech Republci	D1 Rikovice-Prerov	185	0.8%
Germany	A1 Lohne-Bramsche	160	0.7%

Source: STRABAG

Appendix 17: Governance Structure

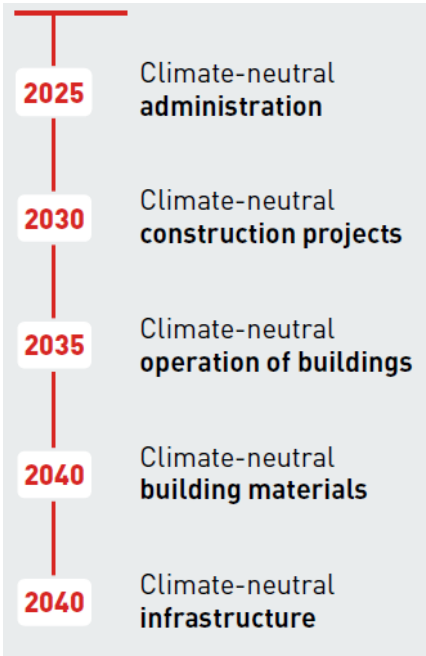
Source: STRABAG

Appendix 18: ESG Scores



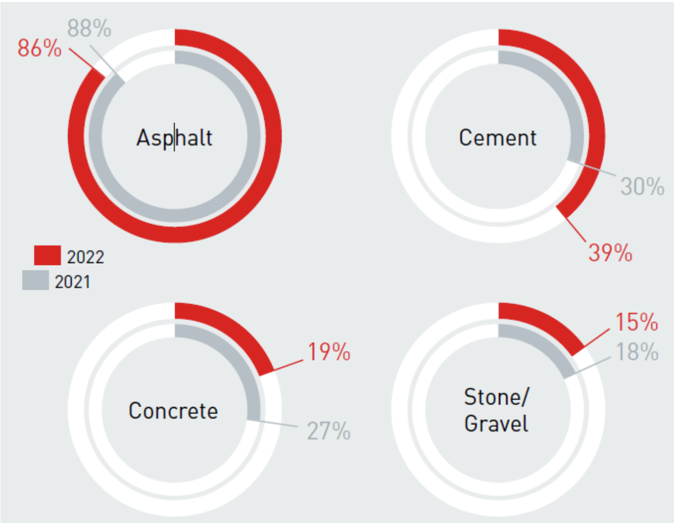
Source: Bloomberg

Appendix 19: Net zero emissions goals



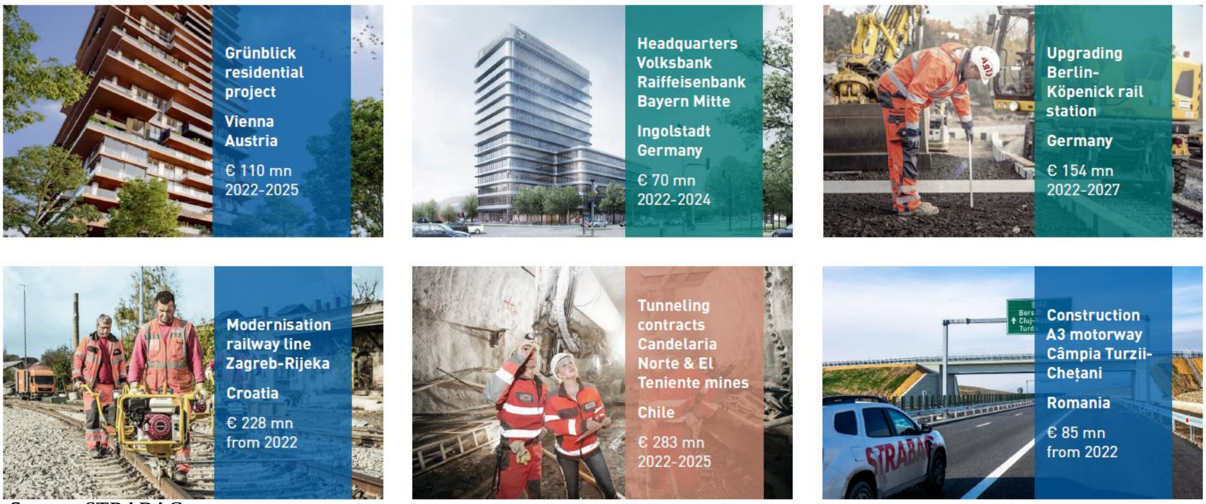
Source: STRABAG

Appendix 20: STRABAG Coverage of Material Needs



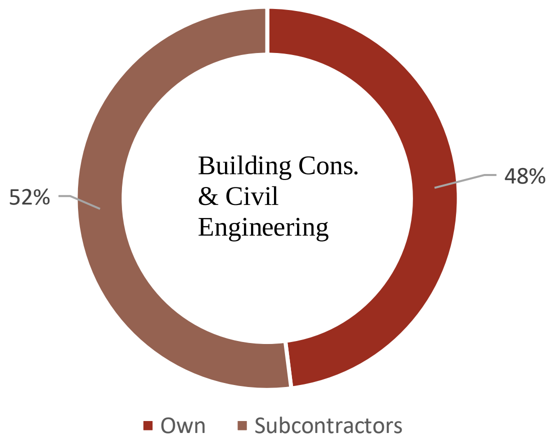
Source: STRABAG

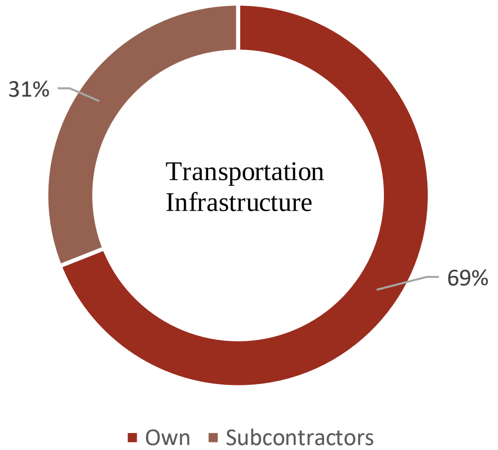
Appendix 21: New Projects in 2022



Source: STRABAG

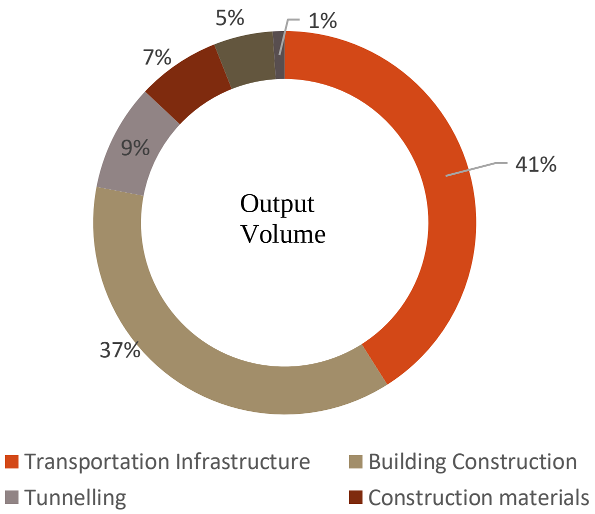
Appendix 22: Subcontracting Mix

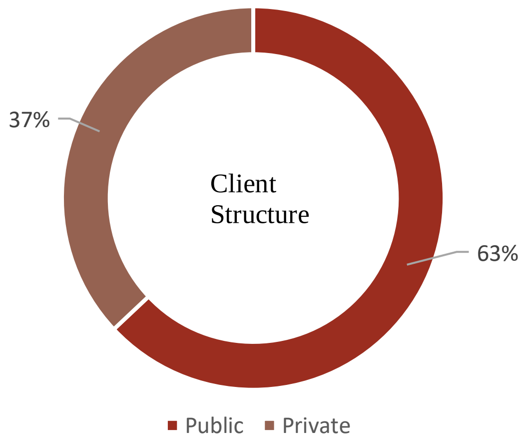




Source: STRABAG

Appendix 23: Portfolio Mix





Source: STRABAG

Appendix 24: Selected PPP projects

Country	Project	Total cost	% share	Concession until	Status
Poland	A2 Section II	1543	10%	2037	Operation
Hungary	M5 Motorway	1292	100%	2031	Operation
Hungary	M6 Motorway	966	50%	2037	Operation
Colombia	MAR1	957	37.50%	2045	Operation
Germany	A49 Motorway	700	50%	2050	In progress
Germany	A8 Motorway	576	100%	2041	Operation
Austria	Schools, Vienna	102	50%	2046	In progress
Austria	Schools, Vienna	93	45%	2046	In progress

Source: STRABAG

Appendix 25: Forecasted Income Statement

Income Statement - STRABAG SE (Millions €)											
Account	Historical						Forecasted				
	2017	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
Output volume	**14,620.89**	**16,322.88**	**16,617.97**	**15,446.61**	**16,128.92**	**17,735.47**	**18,213.62**	**18,468.62**	**18,727.18**	**18,989.36**	**19,255.21**
Order backlog	**16,591.87**	**16,899.71**	**17,411.48**	**18,369.02**	**22,500.85**	**23,738.84**	**24,284.83**	**24,624.82**	**24,969.57**	**25,319.14**	**25,673.61**
Revenue	**13,508.72**	**15,221.83**	**15,668.57**	**14,749.74**	**15,298.54**	**17,025.85**	**17,130.82**	**17,370.65**	**17,613.84**	**17,860.44**	**18,110.48**
Changes in inventories	(61.66)	(66.33)	24.94	17.70	(118.65)	(4.85)	(4.85)	(4.85)	(4.85)	(4.85)	(4.85)
Own work capitalized	13.57	33.27	6.42	5.76	8.84	15.86	15.86	15.86	15.86	15.86	15.86
Other operating income	282.99	222.98	233.14	205.81	211.26	236.76	236.76	236.76	236.76	236.76	236.76
Construction materials, consumables and services used	(8,839.87)	(10,125.77)	(10,111.85)	(9,304.35)	(9,415.08)	(10,988.65)	(10,837.11)	(10,988.83)	(11,142.67)	(11,298.67)	(11,456.85)
Employee benefits expenses	(3,367.17)	(3,618.94)	(3,745.15)	(3,713.07)	(3,843.58)	(4,133.73)	(4,303.92)	(4,364.17)	(4,425.27)	(4,487.23)	(4,550.05)
Other operating expenses	(842.79)	(854.89)	(1,024.01)	(910.52)	(823.82)	(1,013.28)	(1,026.09)	(1,040.45)	(1,055.02)	(1,069.79)	(1,084.77)
Share of profit or loss of associates	123.99	83.18	(21.48)	66.21	92.11	60.88	60.88	60.88	60.88	60.88	60.88
Net income from investments	16.80	57.28	82.72	57.17	36.10	58.37	58.37	58.37	58.37	58.37	58.37
EBITDA	**834.58**	**952.60**	**1,113.30**	**1,174.45**	**1,445.72**	**1,257.21**	**1,330.73**	**1,344.22**	**1,357.90**	**1,371.77**	**1,385.84**
Depreciation and amortisation expense	(386.22)	(394.39)	(510.72)	(543.80)	(549.61)	(550.81)	(566.03)	(582.10)	(596.77)	(610.34)	(623.06)
EBIT	**448.36**	**558.21**	**602.58**	**630.65**	**896.11**	**706.40**	**764.70**	**762.12**	**761.13**	**761.43**	**762.78**
Net interest income	(27.15)	(27.43)	(25.34)	(20.60)	(12.57)	10.67	(26.13)	(26.47)	(26.82)	(27.18)	(27.54)
Financial result	**(27.15)**	**(27.43)**	**(25.34)**	**(20.60)**	**(12.57)**	**10.67**	**(26.13)**	**(26.47)**	**(26.82)**	**(27.18)**	**(27.54)**
EBT	**421.21**	**530.78**	**577.24**	**610.05**	**883.54**	**717.07**	**738.58**	**735.65**	**734.31**	**734.25**	**735.24**
Tax expense	(128.85)	(168.00)	(198.68)	(210.99)	(287.14)	(236.94)	(241.88)	(240.92)	(240.48)	(240.46)	(240.78)
Earnings after tax / Net income	**292.36**	**362.78**	**378.56**	**399.06**	**596.40**	**480.13**	**496.70**	**494.73**	**493.83**	**493.79**	**494.46**
Attributable to: non-controlling interest	13.45	9.25	6.86	3.84	10.69	7.68	7.68	7.68	7.68	7.68	7.68
Net income after minorities	**278.91**	**353.53**	**371.70**	**395.22**	**585.71**	**472.45**	**489.02**	**487.05**	**486.15**	**486.11**	**486.78**
EBITDA	**834.58**	**952.60**	**1,113.30**	**1,174.45**	**1,445.72**	**1,257.21**	**1,330.73**	**1,344.22**	**1,357.90**	**1,371.77**	**1,385.84**
margin %	6.2%	6.3%	7.1%	8.0%	9.5%	7.4%	7.8%	7.7%	7.7%	7.7%	7.7%
EBIT	**448.36**	**558.21**	**602.58**	**630.65**	**896.11**	**706.40**	**764.70**	**762.12**	**761.13**	**761.43**	**762.78**
margin %	3.3%	3.7%	3.8%	4.3%	5.9%	4.2%	4.5%	4.4%	4.3%	4.3%	4.2%
EPS basic	**2.72**	**3.45**	**3.62**	**3.85**	**5.71**	**4.60**	**4.77**	**4.75**	**4.74**	**4.74**	**4.74**
Net income after minorities margin %	2.1%	2.3%	2.4%	2.7%	3.8%	2.8%	2.9%	2.8%	2.8%	2.7%	2.7%
Weighted average shares outstanding (basic)	102,600,000	102,600,000	102,600,000	102,600,000	102,600,000	102,600,000	102,600,000	102,600,000	102,600,000	102,600,000	102,600,000
Dividend per share	**1.30**	**1.30**	**0.90**	**6.90**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**
Dividend Payout Ratio	48%	38%	25%	179%	35%	43%	42%	42%	42%	42%	42%

Source: Author Analysis

Appendix 26: Forecasted Balance Sheet

Statement of Financial Position - STRABAG SE (€ millions)											
Account	Historical						Forecast				
	2017	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
Assets											
Non-current assets											
Intangible assets	498.83	493.41	490.85	482.63	476.08	467.25	467.25	467.25	467.25	467.25	467.25
Rights from concession arrangements	0.00	547.24	530.36	511.89	492.83	473.16	445.24	421.45	397.66	373.86	350.07
Property, plant and equipment	1,942.27	2,144.01	2,632.49	2,571.01	2,533.12	2,743.46	2,830.13	2,910.50	2,983.85	3,051.71	3,115.30
Equity-accounted investments	350.01	378.62	454.53	418.99	403.16	411.17	411.17	411.17	411.17	411.17	411.17
Other investments	182.70	185.30	175.06	187.64	195.39	198.00	198.00	198.00	198.00	198.00	198.00
Receivables from concessions	662.31	630.26	599.04	561.76	524.57	482.87	452.55	422.23	391.91	361.59	331.27
Other financial assets	270.65	250.14	229.90	234.07	259.97	405.65	248.95	248.95	248.95	248.95	248.95
Deferred taxes	188.97	146.94	137.62	185.36	104.44	110.54	110.54	110.54	110.54	110.54	110.54
Non-current assets	**4,095.74**	**4,775.92**	**5,249.85**	**5,153.35**	**4,989.56**	**5,292.10**	**5,163.83**	**5,190.09**	**5,209.33**	**5,223.07**	**5,232.55**
Current assets											
Inventories	1,137.80	890.16	983.55	1,069.91	969.10	1,068.71	1,152.66	1,168.79	1,185.16	1,201.75	1,218.57
Concession receivables	33.72	36.27	39.32	42.43	46.00	49.75	49.75	49.75	49.75	49.75	49.75
Contract assets	0.00	1,282.91	1,354.90	1,071.33	1,348.24	1,357.74	1,425.56	1,445.52	1,465.76	1,486.28	1,507.09
Trade receivables	2,532.92	1,735.93	1,700.73	1,511.85	1,447.37	1,680.99	1,797.43	1,822.59	1,848.11	1,873.98	1,900.22
Other receivables and other assets	463.49	460.59	461.65	428.62	462.25	532.62	532.62	532.62	532.62	532.62	532.62
Cash and cash equivalents	2,790.45	2,385.83	2,460.81	2,856.95	2,963.25	2,701.85	2,629.88	2,689.58	2,853.89	3,103.83	3,480.18
Current assets	**6,958.38**	**6,791.69**	**7,000.96**	**6,981.09**	**7,236.21**	**7,391.66**	**7,587.90**	**7,708.86**	**7,935.29**	**8,248.21**	**8,688.43**
Total assets	**11,054.12**	**11,567.61**	**12,250.81**	**12,134.44**	**12,225.77**	**12,683.76**	**12,751.73**	**12,898.95**	**13,144.62**	**13,471.28**	**13,920.98**
Equity											
Share capital	110.00	110.00	110.00	110.00	102.60	102.60	102.60	102.60	102.60	102.60	102.60
Capital reserves	2,315.38	2,315.38	2,315.38	2,315.38	2,085.81	2,085.81	2,085.81	2,085.81	2,085.81	2,085.81	2,085.81
Retained earnings and other reserves	945.09	1,195.30	1,396.82	1,660.77	1,859.10	1,814.44	2,001.68	2,188.17	2,374.32	2,560.45	2,746.83
STRABAG SE shareholder's equity	**3,370.47**	**3,620.68**	**3,822.20**	**4,086.15**	**4,047.51**	**4,002.85**	**4,190.09**	**4,376.58**	**4,562.73**	**4,748.86**	**4,935.24**
Non-controlling interests	27.25	33.09	33.70	22.07	24.31	22.39	22.39	22.39	22.39	22.39	22.39
Group equity	**3,397.72**	**3,653.77**	**3,855.90**	**4,108.22**	**4,071.82**	**4,025.24**	**4,212.48**	**4,398.97**	**4,585.12**	**4,771.25**	**4,957.63**
Liabilities											
Non-current liabilities											
Provisions	1,160.54	1,116.59	1,136.92	1,224.24	1,235.93	1,278.79	1,294.99	1,311.39	1,328.00	1,344.83	1,361.86
Financial liabilities	882.88	1,087.62	1,066.70	992.11	710.61	656.33	641.00	625.13	609.64	594.54	579.81
Other liabilities	77.71	78.76	92.21	105.21	95.79	83.82	103.60	105.05	106.52	108.01	109.52
Deferred taxes	24.23	43.22	48.70	61.29	104.06	174.82	174.82	174.82	174.82	174.82	174.82
Non-current liabilities	**2,145.36**	**2,326.19**	**2,344.53**	**2,382.85**	**2,146.39**	**2,193.76**	**2,214.41**	**2,216.38**	**2,218.98**	**2,222.19**	**2,226.01**
Current liabilities											
Provisions	747.32	734.48	893.31	1,008.38	1,097.70	1,129.11	1,031.64	1,046.08	1,060.73	1,075.58	1,090.64
Financial liabilities	411.10	275.71	355.51	163.90	483.01	300.87	310.68	315.03	319.44	323.92	328.45
Contract liabilities	0.00	974.57	957.24	1,023.80	1,117.35	1,144.68	1,261.77	1,279.44	1,297.35	1,315.51	1,333.93
Trade payables	3,402.37	2,615.26	2,826.64	2,462.83	2,421.43	2,569.04	2,711.44	2,749.40	2,787.89	2,826.92	2,866.50
Other liabilities	950.25	987.63	1,017.68	984.46	888.07	1,321.06	1,112.97	1,128.55	1,144.35	1,160.37	1,176.62
Current liabilities	**5,511.04**	**5,587.65**	**6,050.38**	**5,643.37**	**6,007.56**	**6,464.76**	**6,428.50**	**6,518.50**	**6,609.76**	**6,702.30**	**6,796.13**
Total liabilities	**7,656.40**	**7,913.84**	**8,394.91**	**8,026.22**	**8,153.95**	**8,658.52**	**8,642.91**	**8,734.89**	**8,828.74**	**8,924.49**	**9,022.14**
Total liabilities + equity	**11,054.12**	**11,567.61**	**12,250.81**	**12,134.44**	**12,225.77**	**12,683.76**	**12,855.40**	**13,133.86**	**13,413.86**	**13,695.74**	**13,979.78**

Source: Author Analysis

Appendix 27: Forecasted Cash Flow Statement

Cash Flow Statement - STRABAG SE (Millions €)										
Account	Historical						Forecasted			
	2017	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
Net income	292.36	362.78	378.56	399.06	596.40	472.45	489.02	487.05	486.15	486.11	486.78
Deferred taxes	58.76	52.35	32.90	-42.44	106.41	41.75	41.75	41.75	41.75	41.75	41.75
Other non-cash effective results	-52.90	-12.20	-14.44	-5.90	-9.68	-9.68	-9.68	-9.68	-9.68	-9.68	-9.68
Non-cash effective results from consolidation	3.72	-1.19	-18.99	-2.13	10.38	-1.64	-2.71	-3.02	0.17	0.64	-1.31
Non-cash effective results from equity-accounted investments	1.39	-58.83	-16.43	3.84	26.61	-8.68	-10.70	-1.07	2.00	1.63	-3.36
Depreciations / write ups	390.95	406.35	515.83	544.64	553.17	550.81	566.03	582.10	596.77	610.34	623.06
Changes in long term provisions	-25.22	-34.12	24.17	87.30	-3.98	9.63	16.60	26.74	27.26	15.25	19.10
Gains/losses on disposal of non-current assets	-35.25	-60.76	-50.55	-54.03	-62.96	-52.71	-56.20	-55.29	-56.24	-56.68	-55.42
Cash flow from earnings	**633.81**	**654.38**	**851.05**	**930.34**	**1,216.35**	**1,001.92**	**1,034.10**	**1,068.58**	**1,088.18**	**1,089.36**	**1,100.90**
Cash flow from operations											
Change in											
– Inventories	47.75	-103.42	-24.19	-102.57	105.80	-15.33	-15.33	-15.33	-15.33	-15.33	-15.33
– Trade receivables, construction contracts and consortia	-48.72	-57.73	-85.76	484.64	-159.12	26.66	26.66	26.66	26.66	26.66	26.66
– Receivables from subsidiaries and receivables from participation companies	24.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
– Other assets	94.47	15.33	9.42	15.18	-38.53	19.17	19.17	19.17	19.17	19.17	19.17
– Trade payables, construction contracts and consortia	572.17	194.97	197.23	-226.28	60.87	159.79	159.79	159.79	159.79	159.79	159.79
– Liabilities from subsidiaries and liabilities from participation companies	-4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
– Other liabilities	22.72	109.94	19.96	50.49	-91.41	22.34	22.34	22.34	22.34	22.34	22.34
– Current provisions	2.84	-24.49	108.23	127.86	126.60	68.21	68.21	68.21	68.21	68.21	68.21
Cash flow from operating activities	**1,345.19**	**788.98**	**1,075.94**	**1,279.66**	**1,220.56**	**1,282.77**	**1,314.95**	**1,349.43**	**1,369.03**	**1,370.21**	**1,383.75**
Cash flow from investing											
Purchase of financial assets	-48.37	-27.55	-31.38	-40.34	-19.29	-33.39	-33.39	-33.39	-33.39	-33.39	-33.39
Purchase of property, plant, equipment and intangible assets	-457.62	-644.99	-647.44	-450.96	-456.33	-709.42	-637.48	-646.40	-655.45	-664.63	-673.93
Inflows from asset disposals	120.75	116.05	105.47	131.21	123.07	119.31	119.31	119.31	119.31	119.31	119.31
Change in other cash clearing receivables	47.51	-13.98	-11.23	16.26	-17.82	4.15	4.15	4.15	4.15	4.15	4.15
Change in scope of consolidation	4.43	-70.26	-8.72	-5.77	-7.19	-17.50	-17.50	-17.50	-17.50	-17.50	-17.50
Cash flow from investing activities	**-333.30**	**-640.73**	**-593.30**	**-349.60**	**-377.56**	**-636.85**	**-564.91**	**-573.83**	**-582.88**	**-592.06**	**-601.36**
Cash flow from financing											
Issue & Repayment of bank borrowings	-5.06	-151.12	-118.60	-70.15	36.02	-234.14	-106.58	-152.40	-143.49	-150.25	-201.01
Change in bonds / bonded loans	-121.50	-175.00	-118.50	-200.00	0.00	-203.25	-153.75	-123.38	-130.44	-139.25	-120.09
Change in lease liabilities	-5.31	0.00	-56.43	-63.69	-61.05	-74.43	-66.01	-56.43	-51.91	-43.61	-43.93
Change in other financing liabilities	0.74	-20.07	-4.49	-57.44	-2.06	-16.66	-20.14	-20.16	-23.29	-16.46	-19.35
Change in non-controlling interest due to acquisitions	-2.69	-78.03	-3.59	1.20	-2.75	-17.17	-17.17	-17.17	-17.17	-17.17	-17.17
Distribution of dividends	-100.70	-109.95	-110.01	-105.81	-714.06	-188.98	-205.20	-205.20	-205.20	-205.20	-205.20
Cash flow from financing activities	**-234.52**	**-534.17**	**-411.62**	**-495.89**	**-743.90**	**-903.10**	**-808.52**	**-707.28**	**-610.57**	**-522.16**	**-397.33**
Net change in cash and cash equivalents	**777.37**	**-385.92**	**71.02**	**434.17**	**99.10**	**-257.18**	**-58.48**	**68.31**	**175.58**	**255.99**	**385.05**
Cash and cash equivalents at the beginning of the period	1,997.57	2,789.69	2,384.34	2,459.97	2,856.81	2,963.11	2,698.78	2,629.88	2,689.58	2,853.89	3,103.83
Change in cash and cash equivalents due to currency translation	9.82	-18.70	3.97	-38.03	7.20	-7.15	-10.54	-8.91	-11.49	-6.18	-8.85
Change in restricted cash and cash equivalents	4.93	-0.73	0.64	0.69	0.00	0.00	0.12	0.29	0.22	0.13	0.15
Cash and cash equivalents at the end of the period	2,789.69	2,384.34	2,459.97	2,856.81	2,963.11	2,698.78	2,629.88	2,689.58	2,853.89	3,103.83	3,480.18
Interest paid	45.25	45.59	36.55	31.40	18.50	35.46	33.50	31.08	29.99	29.71	31.95
Interest received	37.81	25.16	24.32	14.22	21.99	24.70	22.08	21.46	20.89	22.23	22.27
Taxes paid	24.50	90.36	122.74	154.81	359.78	150.44	175.62	192.68	206.67	217.04	188.49
Dividends received	97.58	70.52	88.14	106.68	91.20	90.82	89.47	93.26	94.29	91.81	91.93
Tax rate	**30.6%**	**31.7%**	**34.4%**	**34.6%**	**32.5%**	**32.5%**	**32.5%**	**32.5%**	**32.5%**	**32.5%**	**32.5%**
CAPEX gross	**501.56**	**742.80**	**687.54**	**497.07**	**482.81**	**760.31**	**688.37**	**697.29**	**706.34**	**715.52**	**724.82**

Source: Author Analysis

Appendix 27: FCFF Valuation

FCFF Group Valuation - STRABAG SE (€mln)				
Forecast year	FCFF	WACC	Discount factor	PV of FCFF
(+) Enterprise value				
2023F	212.23	5.86%	1.0000	212.23
2024F	419.18	5.86%	0.9447	395.98
2025F	319.92	5.86%	0.8924	285.49
2026F	239.30	5.86%	0.8430	201.73
2027F	117.63	5.86%	0.7963	93.67
Terminal Value	3099.41	5.86%	0.7963	2468.19
Enterprise Value				**3657.29**
(-) Net debt				
Non-current financial liabilities				641.00
Current financial liabilities				310.68
Cash and cash equivalents				2,629.88
Minority interest				22.39
Total net debt				**(1700.59)**
Equity value				**5357.88**
Outstanding shares (million)				102.60
Price (€/share)				**52.22**
Price target with liquidity discount (€/share)				**47.00**

Source: Author Analysis

Appendix 28: DDM Valuation

Dividend discount model (€ mln)				
Forecast year	Shareholders dividends	Cost of equity	Discount factor	PV of dividends
Present value of dividends				
2023F	2.00	6.75%	1	2.00
2024F	2.00	6.75%	0.9367312	1.87
2025F	2.00	6.75%	0.8774654	1.75
2026F	2.00	6.75%	0.8219492	1.64
2027F	2.00	6.75%	0.7699455	1.54
Terminal value	64.62	6.75%	0.7699455	49.75
Equity value - PV of dividends				**58.57**
Price target with liquidity discount (€/share)				**52.71**

Source: Author Analysis

Appendix 29: Multiples Valuation

Peer group multiples - TTM MBV							
Company Name	Price multiples			Enterprise value multiples			
	P/E	P/BV	P/Sales	EV/EBIT	EV/EBITDA	EV/Sales	EV/Operating Cash Flow
SARD-selected peers							
Morgan Sindall Group PLC	14.43	1.79	24.65	3.46	2.88	0.16	10.83
ACS Actividades de Construccion y Servicios SA	12.83	1.48	25.03	54.17	13.59	0.29	5.85
Hochtief AG	11.71	4.96	22.98	23.26	8.69	0.28	11.48
Skanska AB	7.71	1.13	35.61	9.43	6.93	0.32	100.16
Bouygues SA	11.95	0.94	23.68	11.70	4.88	0.51	7.46
Per Aarsleff Holding A/S	10.46	1.62	31.34	6.61	3.38	0.38	7.31
Balfour Beatty PLC	7.97	1.59	27.56	9.43	5.67	0.22	9.92
STRABAG SE multiples							
STRABAG SE	8.57	1.01	23.77	3.81	1.97	0.13	2.75
Multiples							
Maximum	14.43	4.96	35.61	54.17	13.59	0.51	100.16
75th percentile	12.17	1.66	28.50	14.59	7.37	0.34	10.99
Median	**11.09**	**1.54**	**24.84**	**9.43**	**5.28**	**0.29**	**8.69**
25th percentile	8.42	1.10	23.75	5.91	3.26	0.20	6.95
Minimum	7.71	0.94	22.98	3.46	1.97	0.13	2.75
Harmonized mean of multiples	10.21	1.42	26.26	7.54	4.29	0.24	7.31
Valuation - Price Target (€/share)							
Maximum	66.44	194.68	59.09	393.79	206.43	124.94	1292.15
75th percentile	56.05	65.28	47.30	121.23	130.16	95.59	177.33
Median	**51.05**	**60.23**	**41.22**	**85.72**	**104.53**	**87.53**	**148.51**
25th percentile	38.76	43.23	39.41	61.50	79.79	73.88	126.78
Minimum	35.50	36.89	38.13	44.62	63.99	61.70	74.31
Harmonized mean of multiples	**47.00**	**55.89**	**43.58**	**51.89**	**52.54**	**40.27**	**91.34**
Price without outliers							**54.64**
Price target with liquidity discount (€/share)							**49.18**

Source: Author Analysis

Appendix 30: EVA Valuation

EVA - STRABAG SE					
Item	2023F	2024F	2025F	2026F	2027F
EBIT	764.70	762.12	761.13	761.43	762.78
Tax rate	32.75%	32.75%	32.75%	32.75%	32.75%
NOPAT	514.27	512.53	511.87	512.07	512.98
Invested Capital	5,164.17	5,339.13	5,514.20	5,689.70	5,865.90
ROIC, before tax	14.81%	14.27%	13.80%	13.38%	13.00%
ROIC, after tax	9.96%	9.60%	9.28%	9.00%	8.75%
WACC	5.86%	5.86%	5.86%	5.86%	5.86%
EVA before tax	462.17	449.33	438.09	428.11	419.13
EVA after tax	211.73	199.75	188.83	178.75	169.33
Discounted	211.73	188.69	168.50	150.68	134.85
MVA discounted					**854.46**
Group equity 2023F					**4,212.48**
Price per share					**49.39**
Price target with liquidity discount (€/share)					**44.45**

Source: Author Analysis

Appendix 31: APV Valuation

APV Valuation - STRABAG SE (€ millions)	FCF	Discount rate	DF	PV FCF
APV Model				
2023F	212.23	6.22%	1.0000	212.23
2024F	419.18	6.22%	0.9414	394.64
2025F	319.92	6.22%	0.8863	283.55
2026F	239.30	6.22%	0.8344	199.68
2027F	117.63	6.22%	0.7855	92.40
Terminal Value			0.7855	**1676.27**
PV of Operations				**2858.76**
(+) Interest Tax Shield				
2023F	17.57	4.80%	1.0000	17.57
2024F	17.80	4.80%	0.9542	16.99
2025F	18.04	4.80%	0.9105	16.42
2026F	18.28	4.80%	0.8688	15.88
2027F	18.52	4.80%	0.8290	15.35
Terminal Value			0.8290	**374.34**
PV of Operations				**456.55**
(+) Non operating assets				
Equity accounted investments				411.17
Excess cash				2,629.88
Total Non operating assets				**3,041.05**
Enterprise value				**6,356.36**
(-) Debt and debt equivalents				
Current debt				310.68
Non-current debt				641.00
Current provisions				1,031.64
Non-current provisions				1,294.99
Total debt and debt equivalents				**951.69**
(-) Non controlling assets				
Non-controlling interests				**22.39**
Equity value				**5,382.29**
Shares outstanding (million)				102.6
Value per share (€/share)				**52.46**
Price target with liquidity discount (€/share)				**47.21**

Source: Author Analysis

Appendix 31: Unlevered Cost of Equity

Unlevered Cost of Equity	
Unlevered beta	0.59
Market risk premium	6.63%
RFR	2.31%
Unlevered kE	6.22%

Source: Damodaran & Author Analysis

Appendix 32: Weighted Average Cost of Equity

Weighted average Ke - STRABAG SE			
Segment	Weight	Segment Ke	Weighted Ke
North + West	49.07%	6.81%	3.34%
South + East	29.79%	7.73%	2.30%
Int + Spec. Div.	21.15%	5.24%	1.11%
Total Ke			**6.75%**

Source: Author Analysis

Appendix 33: Weighted Average Cost of Equity Calculation

Segment	Weight	Beta	MRP	Rf	Ke
North+West					
Germany	79.28%	0.75	5.94%	2.31%	5.34%
Austria	0.30%	0.75	6.63%	2.31%	0.02%
Poland	12.48%	0.75	6.97%	2.31%	0.94%
Czech Republic	0.00%	0.75	7.40%	2.31%	0.00%
Hungary	0.06%	0.75	9.23%	2.31%	0.01%
Russia	0.00%	0.75	18.88%	2.31%	0.00%
Slovakia	0.00%	0.75	7.40%	2.31%	0.00%
Romania	0.20%	0.75	9.73%	2.31%	0.02%
Croatia	0.00%	0.75	9.23%	2.31%	0.00%
Slovenia	0.00%	0.75	8.01%	2.31%	0.00%
Serbia	0.00%	0.75	11.13%	2.31%	0.00%
Bulgaria	0.00%	0.75	8.70%	2.31%	0.00%
Switzerland	0.28%	0.75	5.94%	2.31%	0.02%
Benelux	3.47%	0.75	6.22%	2.31%	0.24%
Sweden	1.94%	0.75	5.94%	2.31%	0.13%
Italy	0.00%	0.75	9.73%	2.31%	0.00%
Denmark	1.31%	0.75	5.94%	2.31%	0.09%
UK1	0.08%	0.75	6.97%	2.31%	0.01%
Other European countries	0.39%	0.75	-	2.31%	-
Middle East	0.06%	0.75	-	2.31%	-
Americas	0.10%	0.75	-	2.31%	-
Africa	0.04%	0.75	-	2.31%	-
Asia	0.00%	0.75	-	2.31%	-
Total Ke for North + West					**6.81%**
South + East					
Germany	3.14%	0.75	5.94%	2.31%	0.21%
Austria	43.28%	0.75	6.63%	2.31%	3.14%
Poland	0.02%	0.75	6.97%	2.31%	0.00%
Czech Republic	13.51%	0.75	7.40%	2.31%	1.06%
Hungary	11.35%	0.75	9.23%	2.31%	1.04%
Russia	1.34%	0.75	18.88%	2.31%	0.22%
Slovakia	7.56%	0.75	7.40%	2.31%	0.59%
Romania	3.75%	0.75	9.73%	2.31%	0.36%
Croatia	3.02%	0.75	9.23%	2.31%	0.28%
Slovenia	1.23%	0.75	8.01%	2.31%	0.10%
Serbia	2.87%	0.75	11.13%	2.31%	0.30%
Bulgaria	1.02%	0.75	8.70%	2.31%	0.09%
Switzerland	4.68%	0.75	5.94%	2.31%	0.32%
Benelux	0.09%	0.75	6.22%	2.31%	0.01%
Sweden	0.00%	0.75	5.94%	2.31%	0.00%
Italy	0.15%	0.75	9.73%	2.31%	0.01%
Denmark	0.00%	0.75	5.94%	2.31%	0.00%
UK1	0.00%	0.75	6.97%	2.31%	0.00%
Other European countries	2.64%	0.75	-	2.31%	-
Middle East	0.05%	0.75	-	2.31%	-
Americas	0.03%	0.75	-	2.31%	-
Africa	0.04%	0.75	-	2.31%	-
Asia	0.20%	0.75	-	2.31%	-
Total Ke for South + East					**7.73%**
Int. + Spec. Divisions					
Germany	35.42%	0.75	5.94%	2.31%	2.39%
Austria	14.04%	0.75	6.63%	2.31%	1.02%
Poland	2.66%	0.75	6.97%	2.31%	0.20%
Czech Republic	4.22%	0.75	7.40%	2.31%	0.33%
Hungary	4.23%	0.75	9.23%	2.31%	0.39%
Russia	0.42%	0.75	18.88%	2.31%	0.07%
Slovakia	1.46%	0.75	7.40%	2.31%	0.11%
Romania	0.97%	0.75	9.73%	2.31%	0.09%
Croatia	0.42%	0.75	9.23%	2.31%	0.04%
Slovenia	0.25%	0.75	8.01%	2.31%	0.02%
Serbia	0.04%	0.75	11.13%	2.31%	0.00%
Bulgaria	0.15%	0.75	8.70%	2.31%	0.01%
Switzerland	0.14%	0.75	5.94%	2.31%	0.01%
Benelux	0.61%	0.75	6.22%	2.31%	0.04%
Sweden	0.48%	0.75	5.94%	2.31%	0.03%
Italy	1.28%	0.75	9.73%	2.31%	0.12%
Denmark	0.22%	0.75	5.94%	2.31%	0.02%
UK1	4.61%	0.75	6.97%	2.31%	0.35%
Other European countries	1.42%	0.75	-	2.31%	-
Middle East	5.64%	0.75	-	2.31%	-
Americas	16.00%	0.75	-	2.31%	-
Africa	1.37%	0.75	-	2.31%	-
Asia	3.95%	0.75	-	2.31%	-
Total Ke for Int. + Spec. Div.					**5.24%**

Source: Damodaran & Author Analysis

Appendix 34: SARD Peers Determination Approach

SARD peers determination approach													
Entity details			SARD variables					Rankings					SARD result
Ticker	#	Company Name	ROE	Net Debt to EBIT	EPS Growth	Market Cap ($ mln)	EBIT Margin	ROE	Net Debt to EBIT	EPS Growth	Market Cap	EBIT Margin	
STRV.VI	-	STRABAG SE	14.7%	-2.55	4.69%	4374.59	4.8%	25	59	9	10	32	
Closest Peers													
MGNS.L	1	Morgan Sindall Group PLC	23.1%	-2.49	2.86%	947.01	3.8%	7	58	12	29	39	48
ACS.MC	2	ACS Actividades de Construccion y Servicios SA	13.7%	-4.07	2.32%	8549.92	1.1%	28	63	15	5	63	49
HOTG.DE	3	Hochtief AG	28.3%	0.15	7.41%	5122.11	2.9%	6	49	5	9	48	50
SKAb.ST	4	Skanska AB	16.3%	1.06	1.51%	7624.34	2.6%	21	42	18	6	50	52
BOUY.PA	5	Bouygues SA	10.5%	1.69	2.57%	12637.90	4.4%	39	34	14	3	34	53
PAALb.CO	6	Per Aarsleff Holding A/S	12.0%	1.58	4.78%	825.12	3.9%	31	36	8	30	38	56
BALF.L	7	Balfour Beatty PLC	14.4%	-3.91	0.49%	2621.11	1.5%	26	62	35	16	58	62

Source: Refinitiv & Author Analysis

Appendix 35: Real GDP Historical and Forecast

Real GDP growth (Annual percent change)	Historical										Forecasted					
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Germany	0.40%	0.40%	2.20%	1.50%	2.20%	2.70%	1.00%	1.10%	-3.70%	2.60%	1.50%	-0.30%	1.50%	2.20%	1.80%	1.30%
Austria	0.70%	0.00%	0.70%	1.00%	2.00%	2.30%	2.50%	1.50%	-6.70%	4.60%	4.70%	1.00%	1.90%	1.80%	1.70%	1.70%
Poland	1.30%	1.10%	3.40%	4.20%	3.10%	4.80%	5.40%	4.70%	-2.20%	5.90%	3.80%	0.50%	3.10%	3.40%	3.30%	3.10%
Czech Republic	-0.80%	0.00%	2.30%	5.40%	2.50%	5.20%	3.20%	3.00%	-5.50%	3.50%	1.90%	1.50%	3.90%	3.40%	2.80%	2.50%
Hungary	-1.40%	1.90%	4.20%	3.80%	2.30%	4.30%	5.40%	4.60%	-4.50%	7.10%	5.70%	1.80%	2.80%	3.00%	3.10%	3.20%
Russian Federation	4.00%	1.80%	0.70%	-2.00%	0.20%	1.80%	2.80%	2.20%	-2.70%	4.70%	-3.40%	-2.30%	1.50%	1.00%	0.80%	0.70%
Slovak Republic	1.40%	0.70%	2.70%	5.20%	1.90%	3.00%	3.80%	2.60%	-4.40%	3.00%	1.80%	1.50%	3.40%	3.20%	3.00%	2.80%
Romania	2.00%	3.80%	3.60%	3.00%	4.70%	7.30%	4.50%	4.20%	-3.70%	5.90%	4.80%	3.10%	3.80%	3.50%	3.50%	3.50%
Croatia	-2.30%	-0.40%	-0.30%	2.50%	3.50%	3.40%	2.90%	3.50%	-8.10%	10.20%	5.90%	3.50%	3.00%	2.90%	2.70%	2.50%
Slovenia	-2.60%	-1.00%	2.80%	2.20%	3.20%	4.80%	4.50%	3.50%	-4.30%	8.20%	5.70%	1.70%	3.00%	3.00%	3.00%	3.00%
Serbia	-0.70%	2.90%	-1.60%	1.80%	3.30%	2.10%	4.50%	4.30%	-0.90%	7.40%	3.50%	2.70%	3.50%	4.50%	4.00%	4.00%
Bulgaria	0.80%	-0.60%	1.00%	3.40%	3.00%	2.80%	2.70%	4.00%	-4.40%	4.20%	3.90%	3.00%	4.10%	2.80%	2.80%	2.80%
Switzerland	1.20%	1.80%	2.30%	1.60%	2.10%	1.40%	2.90%	1.20%	-2.50%	4.20%	2.20%	0.80%	1.80%	1.20%	1.80%	1.20%
Belgium	0.70%	0.50%	1.60%	2.00%	1.30%	1.60%	1.80%	2.10%	-5.70%	6.20%	2.40%	0.40%	1.40%	1.20%	1.20%	1.20%
Netherlands	-1.00%	-0.10%	1.40%	2.00%	2.20%	2.90%	2.40%	2.00%	-3.90%	4.90%	4.50%	0.80%	1.70%	1.60%	1.60%	1.50%
Luxembourg	1.60%	3.20%	2.60%	2.30%	5.00%	1.30%	2.00%	3.30%	-1.80%	6.90%	1.60%	1.10%	2.50%	2.50%	2.50%	2.50%
Sweden	-0.60%	1.20%	2.70%	4.50%	2.10%	2.60%	2.00%	2.00%	-2.20%	5.10%	2.60%	-0.10%	2.10%	2.30%	1.90%	2.00%
Italy	-3.00%	-1.80%	0.00%	0.80%	1.30%	1.70%	0.90%	0.50%	-9.00%	6.70%	3.20%	-0.20%	1.30%	1.10%	1.10%	0.70%
Denmark	0.20%	0.90%	1.60%	2.30%	3.20%	2.80%	2.00%	1.50%	-2.00%	4.90%	2.60%	0.60%	1.90%	1.80%	1.80%	1.80%
United Kingdom	1.50%	1.90%	3.00%	2.60%	2.30%	2.10%	1.70%	1.70%	-9.30%	7.40%	3.60%	0.30%	0.60%	2.30%	2.20%	1.50%
Other European	-0.40%	0.20%	1.70%	2.30%	1.90%	2.50%	1.80%	1.60%	-6.30%	5.60%	3.20%	0.50%	1.60%	2.00%	1.80%	1.50%
Middle East (Region)	3.70%	2.80%	3.60%	2.10%	4.90%	0.60%	1.40%	0.50%	-3.60%	4.00%	5.60%	3.20%	2.80%	2.80%	2.90%	3.00%
North America	2.40%	1.80%	2.40%	2.60%	1.70%	2.30%	2.80%	2.00%	-4.00%	5.50%	1.80%	1.00%	1.30%	1.80%	2.00%	1.90%
South America	2.70%	3.30%	0.50%	-1.10%	-2.40%	0.80%	0.50%	0.00%	-6.60%	7.30%	3.60%	1.60%	2.20%	2.30%	2.30%	2.30%
Africa (Region)	6.20%	3.70%	4.00%	3.70%	2.40%	4.00%	3.40%	2.90%	-1.80%	4.80%	3.70%	3.90%	4.20%	4.40%	4.40%	4.50%
Asia and Pacific	5.60%	5.80%	5.60%	5.60%	5.40%	5.70%	5.30%	4.10%	-0.90%	6.60%	4.00%	4.20%	4.50%	4.50%	4.40%	4.40%

Source: IMF

Appendix 36: Segment Weights

Weights through segments															
Segment	Historical										Forecasted				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
North + West															
Germany	70.90%	73.91%	73.26%	75.37%	77.66%	80.07%	78.97%	79.20%	80.48%	79.28%	79.28%	79.28%	79.28%	79.28%	79.28%
Austria	0.35%	0.32%	0.31%	0.44%	0.29%	0.32%	0.35%	0.25%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%
Poland	11.11%	11.02%	13.38%	11.51%	11.50%	11.52%	12.32%	13.96%	13.11%	12.48%	12.48%	12.48%	12.48%	12.48%	12.48%
Czech Republic	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hungary	0.05%	0.00%	0.01%	0.24%	0.15%	0.01%	0.00%	0.00%	0.11%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
Russia	2.34%	1.36%	0.61%	0.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Slovakia	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Romania	0.07%	0.09%	0.12%	0.09%	0.13%	0.17%	0.20%	0.24%	0.27%	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
Croatia	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Slovenia	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Serbia	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bulgaria	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Switzerland	0.58%	0.45%	0.44%	0.58%	0.47%	0.36%	0.27%	0.27%	0.01%	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%
Benelux	5.12%	4.08%	3.56%	3.89%	3.99%	3.93%	3.52%	3.14%	2.76%	3.47%	3.47%	3.47%	3.47%	3.47%	3.47%
Sweden	5.18%	3.90%	3.29%	2.58%	2.28%	2.17%	2.22%	1.72%	1.28%	1.94%	1.94%	1.94%	1.94%	1.94%	1.94%
Italy	0.12%	0.04%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Denmark	2.48%	3.04%	3.35%	3.63%	2.22%	1.12%	1.19%	0.90%	1.14%	1.31%	1.31%	1.31%	1.31%	1.31%	1.31%
UK1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.04%	0.33%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%
Other European countries	1.15%	1.09%	0.77%	0.46%	0.98%	0.00%	0.58%	0.22%	0.19%	0.39%	0.39%	0.39%	0.39%	0.39%	0.39%
Middle East	0.12%	0.22%	0.27%	0.29%	0.15%	0.10%	0.06%	0.00%	0.01%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
Americas	0.15%	0.33%	0.44%	0.13%	0.13%	0.11%	0.25%	0.03%	0.00%	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%
Africa	0.04%	0.13%	0.17%	0.41%	0.05%	0.10%	0.04%	0.01%	0.00%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
Asia	0.08%	0.03%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
North + West as % of total	**44.81%**	**46.84%**	**44.99%**	**46.32%**	**47.23%**	**48.11%**	**49.21%**	**51.37%**	**49.41%**	**49.07%**	**49.07%**	**49.07%**	**49.07%**	**49.07%**	**49.07%**
South + East															
Germany	7.32%	3.16%	2.84%	3.16%	2.88%	3.13%	3.06%	3.54%	3.09%	3.14%	3.14%	3.14%	3.14%	3.14%	3.14%
Austria	35.49%	40.30%	35.27%	41.42%	41.84%	42.65%	44.26%	42.93%	44.74%	43.28%	43.28%	43.28%	43.28%	43.28%	43.28%
Poland	1.10%	0.75%	0.39%	0.19%	0.00%	0.00%	0.06%	0.00%	0.05%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Czech Republic	11.88%	12.11%	14.18%	13.02%	11.92%	12.01%	12.93%	14.82%	15.86%	13.51%	13.51%	13.51%	13.51%	13.51%	13.51%
Hungary	8.76%	10.34%	10.28%	8.03%	9.53%	11.74%	13.78%	11.51%	10.21%	11.35%	11.35%	11.35%	11.35%	11.35%	11.35%
Russia	8.92%	4.55%	3.85%	2.06%	1.89%	1.51%	1.38%	1.07%	0.87%	1.34%	1.34%	1.34%	1.34%	1.34%	1.34%
Slovakia	6.55%	9.26%	14.69%	10.51%	11.00%	9.92%	6.48%	5.49%	4.93%	7.56%	7.56%	7.56%	7.56%	7.56%	7.56%
Romania	6.20%	3.52%	4.48%	5.53%	3.48%	3.36%	3.63%	4.20%	4.09%	3.75%	3.75%	3.75%	3.75%	3.75%	3.75%
Croatia	2.48%	2.46%	1.22%	1.67%	2.53%	3.19%	2.67%	3.44%	3.29%	3.02%	3.02%	3.02%	3.02%	3.02%	3.02%
Slovenia	1.02%	1.38%	1.96%	1.25%	1.07%	1.31%	0.86%	1.01%	1.91%	1.23%	1.23%	1.23%	1.23%	1.23%	1.23%
Serbia	0.64%	0.86%	0.95%	2.13%	2.63%	2.35%	2.97%	3.36%	3.04%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%
Bulgaria	0.38%	0.86%	0.70%	0.58%	0.96%	0.79%	0.73%	1.26%	1.38%	1.02%	1.02%	1.02%	1.02%	1.02%	1.02%
Switzerland	7.08%	7.04%	6.16%	7.57%	6.29%	5.07%	4.17%	4.09%	3.78%	4.68%	4.68%	4.68%	4.68%	4.68%	4.68%
Benelux	0.11%	0.12%	0.03%	0.04%	0.15%	0.17%	0.05%	0.04%	0.01%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%
Sweden	0.00%	0.00%	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Italy	0.13%	0.12%	0.14%	0.14%	0.19%	0.23%	0.10%	0.10%	0.12%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%
Denmark	0.05%	0.04%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
UK1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other European countries	1.02%	2.16%	2.22%	2.29%	3.42%	2.14%	2.46%	2.94%	2.24%	2.64%	2.64%	2.64%	2.64%	2.64%	2.64%
Middle East	0.33%	0.51%	0.28%	0.02%	0.02%	0.00%	0.03%	0.14%	0.08%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
Americas	0.11%	0.06%	0.03%	0.02%	0.00%	0.10%	0.02%	0.00%	0.00%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
Africa	0.26%	0.29%	0.26%	0.10%	0.04%	0.00%	0.00%	0.03%	0.14%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
Asia	0.17%	0.12%	0.07%	0.13%	0.16%	0.33%	0.34%	0.04%	0.15%	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
South + East as % of total	**34.18%**	**31.05%**	**32.04%**	**30.01%**	**29.28%**	**28.73%**	**29.84%**	**30.26%**	**30.83%**	**29.79%**	**29.79%**	**29.79%**	**29.79%**	**29.79%**	**29.79%**
Intern + Spec. Div															
Germany	39.94%	41.85%	43.37%	44.74%	42.87%	39.13%	34.98%	31.46%	28.64%	35.42%	35.42%	35.42%	35.42%	35.42%	35.42%
Austria	10.44%	10.79%	10.82%	12.02%	14.77%	13.53%	12.98%	15.15%	13.76%	14.04%	14.04%	14.04%	14.04%	14.04%	14.04%
Poland	1.85%	2.84%	1.93%	1.57%	1.69%	1.97%	3.44%	2.83%	3.38%	2.66%	2.66%	2.66%	2.66%	2.66%	2.66%
Czech Republic	3.30%	3.66%	3.47%	3.26%	3.44%	3.85%	4.08%	4.68%	5.04%	4.22%	4.22%	4.22%	4.22%	4.22%	4.22%
Hungary	3.04%	3.61%	3.64%	3.50%	3.96%	4.35%	4.57%	4.47%	3.79%	4.23%	4.23%	4.23%	4.23%	4.23%	4.23%
Russia	0.27%	0.71%	0.24%	0.98%	1.76%	0.16%	0.09%	0.05%	0.07%	0.42%	0.42%	0.42%	0.42%	0.42%	0.42%
Slovakia	1.33%	1.33%	1.52%	1.23%	1.75%	1.39%	1.36%	1.46%	1.32%	1.46%	1.46%	1.46%	1.46%	1.46%	1.46%
Romania	1.09%	0.88%	0.91%	0.82%	0.72%	0.73%	0.85%	1.27%	1.26%	0.97%	0.97%	0.97%	0.97%	0.97%	0.97%
Croatia	0.67%	0.58%	0.35%	0.33%	0.35%	0.38%	0.54%	0.41%	0.42%	0.42%	0.42%	0.42%	0.42%	0.42%	0.42%
Slovenia	0.36%	0.36%	0.30%	0.46%	0.22%	0.20%	0.18%	0.33%	0.31%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
Serbia	0.03%	0.05%	0.08%	0.11%	0.02%	0.03%	0.03%	0.03%	0.10%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
Bulgaria	0.05%	0.09%	0.08%	0.08%	0.10%	0.12%	0.14%	0.22%	0.18%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%
Switzerland	0.78%	1.09%	0.96%	0.72%	0.40%	0.09%	0.07%	0.07%	0.07%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%
Benelux	3.02%	2.05%	2.24%	2.10%	0.42%	0.94%	0.85%	0.45%	0.41%	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%
Sweden	0.06%	0.81%	0.88%	0.45%	0.13%	0.23%	0.66%	0.85%	0.55%	0.48%	0.48%	0.48%	0.48%	0.48%	0.48%
Italy	5.50%	5.77%	5.57%	2.37%	1.70%	1.69%	-0.32%	1.67%	1.65%	1.28%	1.28%	1.28%	1.28%	1.28%	1.28%
Denmark	0.00%	0.11%	0.16%	0.25%	0.22%	0.11%	0.08%	0.15%	0.57%	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%
UK1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.62%	7.90%	11.52%	4.61%	4.61%	4.61%	4.61%	4.61%	4.61%
Other European countries	0.32%	0.35%	0.55%	0.96%	1.92%	3.13%	1.57%	0.21%	0.29%	1.42%	1.42%	1.42%	1.42%	1.42%	1.42%
Middle East	10.66%	7.97%	8.73%	7.85%	8.55%	5.29%	4.11%	4.00%	6.27%	5.64%	5.64%	5.64%	5.64%	5.64%	5.64%
Americas	8.79%	7.78%	8.61%	10.76%	11.07%	17.43%	19.65%	16.72%	15.16%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%
Africa	5.33%	4.64%	2.87%	1.50%	1.25%	1.33%	1.81%	1.55%	0.89%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%
Asia	3.19%	2.69%	2.72%	3.93%	2.70%	3.92%	4.69%	4.09%	4.34%	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%
Intern + Spec. Div as % of total	**21.00%**	**22.11%**	**22.96%**	**23.67%**	**23.49%**	**23.16%**	**20.95%**	**18.37%**	**19.77%**	**21.15%**	**21.15%**	**21.15%**	**21.15%**	**21.15%**	**21.15%**

Source: Author Analysis

Weighted average revenue growth rates - STRABAG SE					
Segment	Forecasted				
	2023F	2024F	2025F	2026F	2027F
North + West					
Germany	-0.24%	1.19%	1.74%	1.43%	1.03%
Austria	0.00%	0.01%	0.01%	0.01%	0.01%
Poland	0.06%	0.39%	0.42%	0.41%	0.39%
Czech Republic	0.00%	0.00%	0.00%	0.00%	0.00%
Hungary	0.00%	0.00%	0.00%	0.00%	0.00%
Russia	0.00%	0.00%	0.00%	0.00%	0.00%
Slovakia	0.00%	0.00%	0.00%	0.00%	0.00%
Romania	0.01%	0.01%	0.01%	0.01%	0.01%
Croatia	0.00%	0.00%	0.00%	0.00%	0.00%
Slovenia	0.00%	0.00%	0.00%	0.00%	0.00%
Serbia	0.00%	0.00%	0.00%	0.00%	0.00%
Bulgaria	0.00%	0.00%	0.00%	0.00%	0.00%
Switzerland	0.00%	0.01%	0.00%	0.01%	0.00%
Benelux	0.08%	0.19%	0.18%	0.18%	0.18%
Sweden	0.00%	0.04%	0.04%	0.04%	0.04%
Italy	0.00%	0.00%	0.00%	0.00%	0.00%
Denmark	0.01%	0.02%	0.02%	0.02%	0.02%
UK1	0.00%	0.00%	0.00%	0.00%	0.00%
Other European countri	0.00%	0.01%	0.01%	0.01%	0.01%
Middle East	0.01%	0.01%	0.01%	0.01%	0.01%
Americas	0.00%	0.00%	0.00%	0.00%	0.00%
Africa	0.00%	0.00%	0.00%	0.00%	0.00%
Asia	0.00%	0.00%	0.00%	0.00%	0.00%
Total North + West	**-0.06%**	**1.88%**	**2.46%**	**2.13%**	**1.70%**
South + East					
Germany	-0.01%	0.05%	0.07%	0.06%	0.04%
Austria	0.43%	0.82%	0.78%	0.74%	0.74%
Poland	0.00%	0.00%	0.00%	0.00%	0.00%
Czech Republic	0.20%	0.53%	0.46%	0.38%	0.34%
Hungary	0.20%	0.32%	0.34%	0.35%	0.36%
Russia	-0.03%	0.02%	0.01%	0.01%	0.01%
Slovakia	0.11%	0.26%	0.24%	0.23%	0.21%
Romania	0.12%	0.14%	0.13%	0.13%	0.13%
Croatia	0.11%	0.09%	0.09%	0.08%	0.08%
Slovenia	0.02%	0.04%	0.04%	0.04%	0.04%
Serbia	0.08%	0.10%	0.13%	0.11%	0.11%
Bulgaria	0.03%	0.04%	0.03%	0.03%	0.03%
Switzerland	0.04%	0.08%	0.06%	0.08%	0.06%
Benelux	0.00%	0.00%	0.00%	0.00%	0.00%
Sweden	0.00%	0.00%	0.00%	0.00%	0.00%
Italy	0.00%	0.00%	0.00%	0.00%	0.00%
Denmark	0.00%	0.00%	0.00%	0.00%	0.00%
UK1	0.00%	0.00%	0.00%	0.00%	0.00%
Other European countri	0.01%	0.04%	0.05%	0.05%	0.04%
Middle East	0.00%	0.00%	0.00%	0.00%	0.00%
Americas	0.00%	0.00%	0.00%	0.00%	0.00%
Africa	0.00%	0.00%	0.00%	0.00%	0.00%
Asia	0.01%	0.01%	0.01%	0.01%	0.01%
Total South + East	**1.33%**	**2.55%**	**2.45%**	**2.31%**	**2.20%**
Intern + Spec. Div					
Germany	-0.11%	0.53%	0.78%	0.64%	0.46%
Austria	0.14%	0.27%	0.25%	0.24%	0.24%
Poland	0.01%	0.08%	0.09%	0.09%	0.08%
Czech Republic	0.06%	0.16%	0.14%	0.12%	0.11%
Hungary	0.08%	0.12%	0.13%	0.13%	0.14%
Russia	-0.01%	0.01%	0.00%	0.00%	0.00%
Slovakia	0.02%	0.05%	0.05%	0.04%	0.04%
Romania	0.03%	0.04%	0.03%	0.03%	0.03%
Croatia	0.01%	0.01%	0.01%	0.01%	0.01%
Slovenia	0.00%	0.01%	0.01%	0.01%	0.01%
Serbia	0.00%	0.00%	0.00%	0.00%	0.00%
Bulgaria	0.00%	0.01%	0.00%	0.00%	0.00%
Switzerland	0.00%	0.00%	0.00%	0.00%	0.00%
Benelux	0.01%	0.03%	0.03%	0.03%	0.03%
Sweden	0.00%	0.01%	0.01%	0.01%	0.01%
Italy	0.00%	0.02%	0.01%	0.01%	0.01%
Denmark	0.00%	0.00%	0.00%	0.00%	0.00%
UK1	0.01%	0.03%	0.11%	0.10%	0.07%
Other European countri	0.01%	0.02%	0.03%	0.03%	0.02%
Middle East	0.18%	0.16%	0.16%	0.16%	0.17%
Americas	0.42%	0.56%	0.66%	0.69%	0.67%
Africa	0.05%	0.06%	0.06%	0.06%	0.06%
Asia	0.17%	0.18%	0.18%	0.17%	0.17%
Total Intern + Spec Div.	**1.10%**	**2.36%**	**2.75%**	**2.59%**	**2.35%**
Total Forecast Growth	**0.60%**	**2.18%**	**2.52%**	**2.28%**	**1.99%**

Source: Author Analysis

Appendix 37: Terminal growth rate calculation

Appendix 38: Market Share Calculation

Market share data 2020 - STRABAG SE			
Country	Construction output (€ mln)	STRABAG output (€ mln)	Market share (%)
Germany	396,571	7,323	1.85%
Austria	45,811	2,460	5.37%
Poland	54,904	1,183	2.15%
Czech Republic	23,728	826	3.48%
Hungary	15,927	671	4.21%
Russia	121,042	52	0.04%
Slovakia	4,899	297	6.06%
Romania	23,440	250	1.07%
Croatia	4,621	172	3.72%
Slovenia	3,324	59	1.77%
Serbia	3,838	158	4.12%
Bulgaria	8,120	66	0.81%
Switzerland	65,329	220	0.34%
Benelux	134,982	262	0.19%
Sweden	51,070	160	0.31%
Italy	171,364	52	0.03%
Denmark	40,917	76	0.19%

Source: Euroconstruct & Author Analysis

Appendix 39: Backlog Forecast

Backlog forecast - STRABAG SE (€ Bln)							
Position	Forecasted						
	2021	2022F	2023F	2024F	2025F	2026F	2027F
Construction output (EU)	1856	1899	1942	1970	1997	2025	2053
Order backlog	22.50	23.19	23.72	24.05	24.39	24.73	25.08
Implied market share	1.21%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%
Implied Growth rate			2.30%	1.40%	1.40%	1.40%	1.40%

Appendix 40: Deals by Industry

Top Industries			
#	Industry	Rank Value (MM)	Number Of Deals
1	Basic Materials	239.7	2
2	Industrials	181.5	18
3	Financials	126.1	2
4	Real Estate	117.8	10
5	Healthcare	0	2
6	Consumer Cyclicals	0	2
7	Energy	0	1
8	Technology	0	2

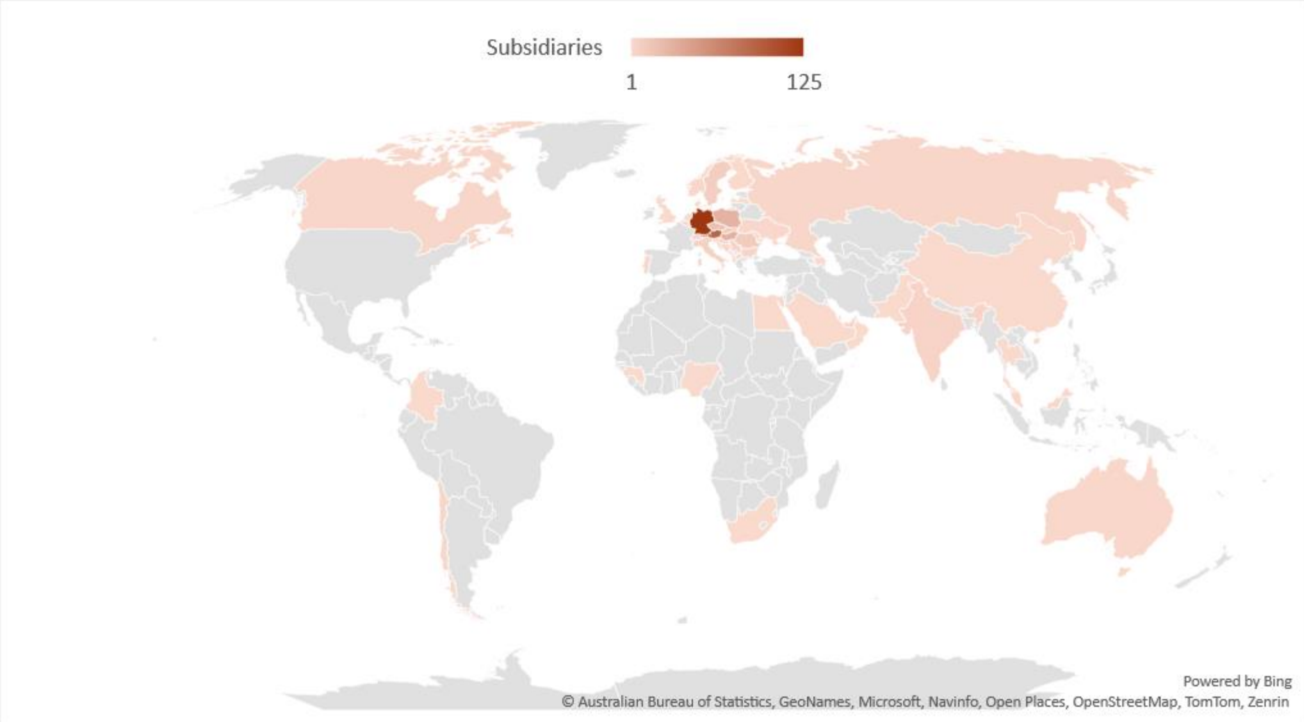
Source: Refinitiv

Appendix 41: Deals by Region

Top Countries/Regions			
#	Countries/Regions	Rank Value (MM)	Number Of Deals
1	Germany	433.5	18
2	Romania	126.1	2
3	Ireland	72.9	2
4	Hungary	28.0	2
5	Serbia	4.532	1
6	Czech Republic	0	1
7	Austria	0	9
8	Russia	0	1
9	Poland	0	2
10	Netherlands	0	1

Source: Refinitiv

Appendix 41: Global Subsidiaries



Source: Refinitiv & Author Analysis

Appendix 42: STRABAG Top Ownership

Top Investors (As of Latest Filing)						
Rank	**Investor Name**	**Latest Filing Date**	**% O/S**	**Position**	**Change**	**Turnover**
1	Family (Haselsteiner)	23-07-2022	28.34%	29.07M	0	LOW
2	MKAO Rasperia Trading Limited	23-07-2022	27.78%	28.50M	0	LOW
3	Uniqa Insurance Group AG	23-07-2022	15.29%	15.69M	0	LOW
4	Raiffeisen Kapitalanlage-Gesellschaft mbH	23-07-2022	14.15%	14.52M	0	LOW
5	Dimensional Fund Advisors, L.P.	30-09-2022	0.56%	0.57M	+0.00M	LOW
6	Erste Asset Management GmbH	31-08-2022	0.52%	0.54M	+0.02M	MOD
7	Norges Bank Investment Management (NBIM)	31-12-2021	0.41%	0.42M	-0.37M	LOW
8	The Vanguard Group, Inc.	30-09-2022	0.38%	0.39M	-0.00M	LOW
9	JPMorgan Asset Management U.K. Limited	30-09-2022	0.22%	0.23M	0	LOW
10	BlackRock Institutional Trust Company, N.A.	30-09-2022	0.16%	0.16M	-0.00M	LOW
11	Matejka & Partner Asset Management GmbH	31-03-2022	0.15%	0.15M	-0.01M	MOD
12	3 Banken-Generali Investment-Gesellschaft mbH	31-08-2022	0.15%	0.15M	-0.01M	MOD
13	Amundi Austria GmbH	31-08-2022	0.15%	0.15M	0	LOW
14	Fidelity Management & Research Company LLC	31-08-2022	0.13%	0.13M	+0.04M	LOW
15	Cartesio Inversiones, SGIIC, SA	31-07-2022	0.12%	0.12M	-0.03M	LOW
16	DJE Kapital AG	31-08-2022	0.11%	0.11M	0	MOD
17	Lupus alpha Asset Management AG	31-07-2022	0.08%	0.08M	0	LOW
18	Charles Schwab Investment Management, Inc.	30-09-2022	0.07%	0.07M	+0.02M	LOW
19	Sparkasse Oberösterreich Kapitalanlagegesellschaft mbH	30-04-2022	0.05%	0.05M	0	LOW
20	MainFirst Asset Management	30-06-2022	0.04%	0.04M	-0.00M	LOW

Source: Refinitiv & Author Analysis

Appendix 43: Financial Analysis

Financial Ratios											
Key Financial Ratios	Historical						Forecasted				
	2017	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
Industry Specific Ratios											
Working Capital Turnover (x)	9.3	12.6	16.5	11.0	12.5	18.4	14.8	14.6	13.3	11.6	9.6
Equity Turnover (x)	4.0	4.2	4.1	3.6	3.8	4.2	4.1	3.9	3.8	3.7	3.7
Liquidity Ratios											
Current Ratio	126.3%	121.5%	115.7%	123.7%	120.5%	114.3%	118.0%	118.3%	120.1%	123.1%	127.8%
Quick Ratio	105.6%	105.6%	99.5%	104.7%	104.3%	97.8%	100.1%	100.3%	102.1%	105.1%	109.9%
Cash Ratio	50.6%	42.7%	40.7%	50.6%	49.3%	41.8%	40.9%	41.3%	43.2%	46.3%	51.2%
Efficiency Ratios											
Asset Turnover (x)	1.22	1.32	1.28	1.22	1.25	1.34	1.34	1.35	1.34	1.33	1.30
Receivables Turnover	-	-	0.61	0.68	0.78	0.97	0.82	0.76	0.76	0.75	0.75
Payables Turnover	2.60	3.87	3.58	3.78	3.89	4.28	4.00	4.00	4.00	4.00	4.00
Inventory Turnover (x)	7.77	11.38	10.28	8.70	9.72	10.28	9.40	9.40	9.40	9.40	9.40
Profitability Ratios											
Gross Profit Margin	34.6%	33.5%	35.5%	36.9%	38.5%	35.5%	36.7%	36.7%	36.7%	36.7%	36.7%
EBITDA Margin	6.2%	6.3%	7.1%	8.0%	9.5%	7.4%	7.8%	7.7%	7.7%	7.7%	7.7%
EBIT Margin	3.3%	3.7%	3.8%	4.3%	5.9%	4.1%	4.5%	4.4%	4.3%	4.3%	4.2%
Net Profit Margin	2.1%	2.3%	2.4%	2.7%	3.8%	2.8%	2.9%	2.8%	2.8%	2.7%	2.7%
ROA	2.5%	3.1%	3.0%	3.3%	4.8%	3.7%	3.8%	3.8%	3.7%	3.6%	3.5%
ROIC	8.0%	9.9%	9.7%	9.4%	14.3%	11.5%	11.6%	11.3%	10.8%	10.1%	9.4%
ROCE	8.1%	9.3%	9.7%	9.7%	14.4%	11.4%	12.1%	11.9%	11.6%	11.2%	10.7%
ROE	8.2%	9.7%	9.6%	9.6%	14.4%	11.7%	11.6%	11.1%	10.6%	10.2%	9.8%
DuPont	8.2%	9.7%	9.6%	9.6%	14.4%	11.7%	11.6%	11.1%	10.6%	10.2%	9.8%
Net Profit Margin	2.1%	2.3%	2.4%	2.7%	3.8%	2.8%	2.9%	2.8%	2.8%	2.7%	2.7%
Asset Turnover	122.2%	131.6%	127.9%	121.6%	125.1%	134.2%	134.3%	134.7%	134.0%	132.6%	130.1%
Equity Multiplier	325.3%	316.6%	317.7%	295.4%	300.3%	315.1%	302.7%	293.2%	286.7%	282.3%	280.8%
EPS	2.72	3.45	3.62	3.85	5.71	4.60	4.77	4.75	4.74	4.74	4.74
DPS	1.30	1.30	0.90	6.90	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Payout Ratio	48%	38%	25%	179%	35%	43%	42%	42%	42%	42%	42%
Dividend Coverage Ratio (x)	2.09	2.65	4.03	0.56	2.85	2.30	2.38	2.37	2.37	2.37	2.37
Solvency Ratios											
Long Term Debt to Equity	26.0%	29.8%	27.7%	24.1%	17.5%	16.3%	15.2%	14.2%	13.3%	12.5%	11.7%
Total Debt to Equity	38.1%	37.3%	36.9%	28.1%	29.3%	23.8%	22.6%	21.4%	20.3%	19.2%	18.3%
Debt Ratio	11.7%	11.8%	11.6%	9.5%	9.8%	7.5%	7.5%	7.3%	7.1%	6.8%	6.5%
Financial Leverage (x)	3.25	3.17	3.18	2.95	3.00	3.15	3.03	2.93	2.87	2.82	2.81
Equity Multiplier	30.7%	31.6%	31.5%	33.9%	33.3%	31.7%	33.0%	34.1%	34.9%	35.4%	35.6%
Interest Coverage (x)	30.74	34.73	43.93	57.01	115.01	-117.83	50.94	50.78	50.62	50.47	50.32
Total Debt to EBITDA (x)	1.55	1.43	1.28	0.98	0.83	0.76	0.72	0.70	0.68	0.67	0.66
Short Term Debt Ratio	31.8%	20.2%	25.0%	14.2%	40.5%	31.4%	32.6%	33.5%	34.4%	35.3%	36.2%
Cash Flow Ratios											
Debt Coverage (x)	1.04	0.58	0.76	1.11	1.02	1.34	1.38	1.44	1.47	1.49	1.52
Dividend Coverage Ratio (x)	13.36	7.18	9.78	12.09	1.71	6.79	6.41	6.58	6.67	6.68	6.74
Operational Cash to Operating Income (x)	1.61	0.83	0.97	1.09	0.84	1.02	0.99	1.00	1.01	1.00	1.00
Cash Flow Margin	10.0%	5.2%	6.9%	8.7%	8.0%	7.5%	7.7%	7.8%	7.8%	7.7%	7.6%
Cash Flow to Net Income (x)	4.82	2.23	2.89	3.24	2.08	2.72	2.69	2.77	2.82	2.82	2.84

Source: Author Analysis

Appendix 43: Valuation Assumptions

Assumption data - STRABAG SE							
Position	Unit	Forecast year					
		2022F	2023F	2024F	2025F	2026F	2027F
Macroeconomic assumptions							
EU Inflation	%	8.31%	5.74%	2.74%	2.19%	1.91%	1.85%
EU Investment	% of GDP	23.22%	22.52%	22.31%	22.20%	22.15%	22.13%
EUR/CAD exchange rate	CAD	1.3706	1.4504	1.451	1.451	1.451	1.451
STRABAG Europe market share	%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%
European Construction Output growth	%	2.30%	2.30%	1.40%	1.40%	1.40%	1.40%
Income statement assumptions							
Output volume	% of order backlog	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%
Order backlog	%	0.00%	2.30%	1.40%	1.40%	1.40%	1.40%
Revenue	% of output volume	94.05%	94.05%	94.05%	94.05%	94.05%	94.05%
Changes in inventories	Δ	99.61	83.95	16.14	16.36	16.59	16.82
Own work capitalized	% of inventory	1.41%	1.41%	1.41%	1.41%	1.41%	1.41%
Other operating income	% of revenue	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%
Construction materials, consumables and services used	% of output volume	59.50%	59.50%	59.50%	59.50%	59.50%	59.50%
Employee benefits expenses	% of revenue	25.12%	25.12%	25.12%	25.12%	25.12%	25.12%
Other operating expenses	% of revenue	5.99%	5.99%	5.99%	5.99%	5.99%	5.99%
Share of profit or loss of associates	% of equity accounted investments	18.26%	18.26%	18.26%	18.26%	18.26%	18.26%
Net income from investments	% of other investments	27.26%	27.26%	27.26%	27.26%	27.26%	27.26%
Depreciation and amortisation expense	% of PP&E	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
Net interest income	% of provisions	-1.12%	-1.12%	-1.12%	-1.12%	-1.12%	-1.12%
Tax expense	eff. Tax rate	32.75%	32.75%	32.75%	32.75%	32.75%	32.75%
Dividend Payout Ratio	%	40.00%	41.96%	42.13%	42.21%	42.21%	42.15%
Balance sheet assumptions							
Assets							
Intangible assets	%	0%	0%	0%	0%	0%	0%
Rights from concession arrangements	RCA	469.04	445.24	421.45	397.66	373.86	350.07
Property, plant and equipment	PPE	2692.93	2830.13	2910.50	2983.85	3051.71	3115.30
Equity-accounted investments (goodwill)	%	0%	0%	0%	0%	0%	0%
Other investments	%	0%	0%	0%	0%	0%	0%
Receivables from concessions	RC	-5.63%	-6.28%	-6.70%	-7.18%	-7.74%	-8.39%
Other financial assets	OFA	248.95	248.95	248.95	248.95	248.95	248.95
Deferred taxes	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inventories	DSI	38.82	38.82	38.82	38.82	38.82	38.82
Concession receivables	%	8.59%	8.79%	9.00%	9.20%	9.41%	9.61%
Contract assets	DS Output Volume	28.57	28.57	28.57	28.57	28.57	28.57
Trade receivables	DSO	38.30	38.30	38.30	38.30	38.30	38.30
Other receivables and other assets	%	0%	0%	0%	0%	0%	0%
Cash and cash equivalents	%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Equity							
Share capital	%	0%	0%	0%	0%	0%	0%
Capital reserves (treasury shares)	%	0%	0%	0%	0%	0%	0%
Retained earnings and other reserves	% of net income	38%	38%	38%	38%	38%	38%
Non-controlling interests	%	0%	0%	0%	0%	0%	0%
Liabilities							
Non-current provisions	%	1.27%	1.27%	1.27%	1.27%	1.27%	1.27%
Non-current financial liabilities	%	16.72%	-2.34%	-2.48%	-2.48%	-2.48%	-2.48%
Other non-current liabilities	%	0.57%	0.57%	0.57%	0.57%	0.57%	0.57%
Deferred taxes	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Current provisions	% of output volume	5.66%	5.66%	5.66%	5.66%	5.66%	5.66%
Current financial liabilities	% of output volume	1.71%	1.71%	1.71%	1.71%	1.71%	1.71%
Contract liabilities	DSOV	25.29	25.29	25.29	25.29	25.29	25.29
Trade payables	DSP	57.77	57.77	57.77	57.77	57.77	57.77
Other current liabilities	% of output volume	6.11%	6.11%	6.11%	6.11%	6.11%	6.11%
Cash flow statement assumptions							
Capex	% of output volume	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%

Source: Author Analysis

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