# MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

„REIT's value change driven by portfolio transformation from entirely brown to fully green"


verfasst von / submitted by

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angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of

Master of Science (MSc)

Wien, 2023 / Vienna 2023

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|---|---|
| Studienkennzahl lt. Studienblatt / degree programme code as it appears on the student record sheet: | UA 066 974 |
| Studienrichtung lt. Studienblatt / degree programme as it appears on the student record sheet: | Masterstudium Banking and Finance |
| Betreut von / Supervisor: | Univ.-Prof. Dr. Gyöngyi Lóránth |

# Abstract

Becoming greener is essential for strategic differentiation and value creation for real estate companies. However, the reverse is also true, as the real estate industry is central to efforts to mitigate climate change, driving roughly 39 percent of total global emissions. One of the widespread environmental strategies among real estate players has become the green building certification. This thesis investigates how much value a REIT can obtain if it turns its brown portfolio into a fully green one and how certification benefits drive the REIT's value. The literature points towards several value drivers, among which higher occupancy, impact on operating expense, cost of equity and debt, and cost premium are used in the thesis' case study. The case study performs a valuation on Inovalis REIT based on its current state, which includes an entirely brown office portfolio. This brown DCF valuation is then compared to a green DCF valuation where Inovalis' portfolio is hypothetically renovated to fully green to see if the green building certifications drive its value. The green valuation uses the value drivers as assumptions to quantify the benefits of green certification. This means that occupancy is higher and operating expense and WACC are lower in the green valuation. However, the capital expenditure also increases as it reflects the cost of green renovation. Additionally, expert interviews are conducted to improve the green valuation realisticness. The results show that, the portfolio transformation from entirely brown to fully green does not always bring value to a REIT, and the required CAPEX outweighs the investment at least in the medium run. However, due to future pressures on the REITs from regulators, banks, and investors, the green transformation might bring higher value and be more profitable than the valuation models depict.

# Abstrakt

Umweltfreundlicher zu werden ist für die strategische Differenzierung und Wertschöpfung von Immobilienunternehmen von entscheidender Bedeutung. Umgekehrt gilt dies jedoch auch, denn die Immobilienbranche spielt eine zentrale Rolle bei den Bemühungen zur Eindämmung des Klimawandels, da sie rund 39 Prozent der weltweiten Gesamtemissionen verursacht. Eine der am weitesten verbreiteten Umweltstrategien in der Immobilienbranche ist die Green-Building-Zertifizierung. In dieser Arbeit wird untersucht, wie viel Wert ein REIT erzielen kann, wenn er sein braunes Portfolio in ein vollständig grünes umwandelt, und wie die Vorteile der Zertifizierung den Wert des REIT steigern. Die Literatur weist auf mehrere Werttreiber hin, darunter eine höhere Auslastung, Auswirkungen auf die Betriebskosten, die Kosten für Eigen- und Fremdkapital und die Kostenprämie, die in der Fallstudie der Arbeit verwendet werden. In der Fallstudie wird eine Bewertung des Inovalis REIT auf der Grundlage seines derzeitigen Zustands durchgeführt, der ein vollständig braunes Büroportfolio umfasst. Diese braune DCF-Bewertung wird dann mit einer grünen DCF-Bewertung verglichen, bei der das Inovalis-Portfolio hypothetisch vollständig grün renoviert wird, um festzustellen, ob die grünen Gebäudezertifizierungen den Wert des Unternehmens steigern. Bei der grünen Bewertung werden die Werttreiber als Annahmen verwendet, um die Vorteile der grünen Zertifizierung zu quantifizieren. Dies bedeutet, dass die Auslastung höher ist und die Betriebskosten und WACC in der grünen Bewertung niedriger sind. Allerdings steigen auch die Investitionsausgaben, da sie die Kosten für die grüne Renovierung widerspiegeln. Zusätzlich werden Experteninterviews durchgeführt, um die Realitätsnähe der grünen Bewertung zu verbessern. Die Ergebnisse zeigen, dass die Umstellung des Portfolios von vollständig braunen auf vollständig grüne Immobilien nicht immer einen Mehrwert für einen REIT darstellt und dass die erforderlichen Investitionskosten zumindest mittelfristig die Investitionen übersteigen. Aufgrund des zukünftigen Drucks auf REITs durch Regulierungsbehörden, Banken und Investoren könnte die grüne Transformation jedoch einen höheren Wert bringen und profitabler sein, als es die Bewertungsmodelle abbilden.

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## Terms table

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| Real estate company | A company owning, acquiring, developing, selling, leasing or operating real estate property |
| Real Estate Invesment Trust (REIT) | A corporation, trust, or association that invests directly in income-producing real estate and is traded like a stock. A REIT is required to pay most of its profit as dividends each year. |
| Green building | A building certified by a green certificate (LEED, BREEAM or other) |
| Brown building | A building not certified by a green certificate (LEED, Energy Star, BREEAM or other) |
| Green portfolio | Entire portfolio where all buildings are certified by green certificates (LEED, Energy Star, BREEAM or other) |
| Brown portfolio | Entire portfolio where no buildings are certified by green certificates (LEED, Energy Star, BREEAM or other) |
| Environmental, Social and Governance (ESG) | Non-financial factors on environment, workers and company's governance |
| Value driver | Green benefits that influence value of a company. In this thesis the value drivers are higher occupancy, impact on operating expense, lower cost of capital, higher required capital expenditure and others |
| Green benefit | Benefits provided by green building certification |
| Renovating/retrofitting/refurbishing | Is used interchangeably and it means upgrading the building so it will fulfill the requirements to obtain a green building certificate. |
| Green transformation | Renovating a building so it will obtain a green certification |
| Green hypothetical valuation | Conducting a valuation assuming the company will renovate its entire building portfolio |
| OPEX | Operating expense |
| Cost premium | Additional cost of a construction or renovation of a green building compared to a identical brown building |
| Image benefits | Betterment of company's brand name and image |
| Rental premium | Higher rent for a building that is green certified |
| Cost of equity (CoE) | The compensation that the market demands in exchange for owning the assets and bearing the risk of ownership |
| Cost of debt (CoD) | Average interest the company pays on its debt |
| Cost of capital | Cost of debt and equity combined weighted by WACC |
| Weighted average cost of capital (WACC) | Average rate that a company expects to pay to finance its assets |
| Internal rate of return | A metric used in financial analysis to estimate the profitability of potential investments |

# 1. Motivation and introduction

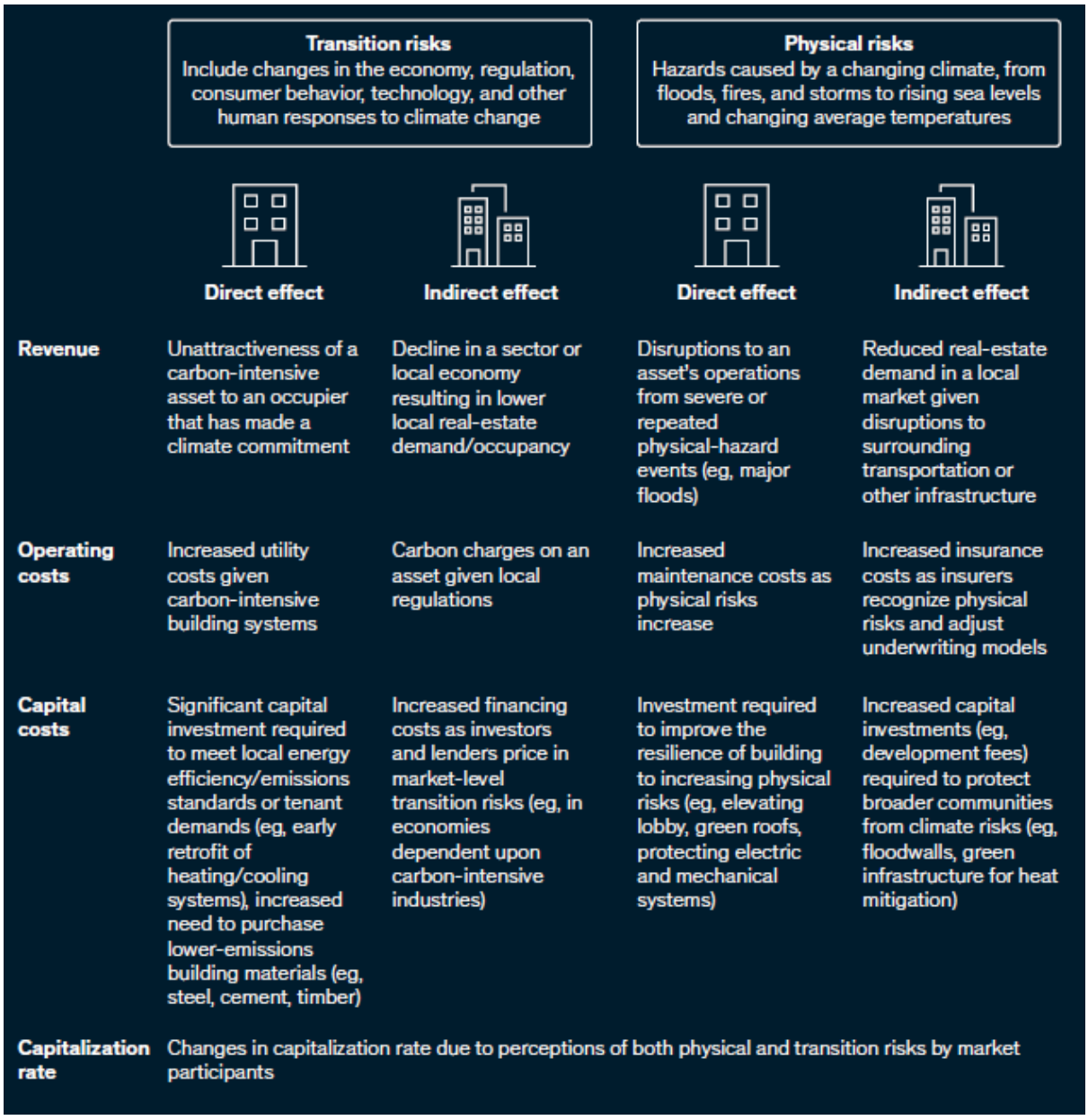
## 1.1 Climate change data/climate change risk on real estate

The global climate change crisis has become the top agenda for real estate players in recent years. There are several reasons for this: investors' zero-net commitments, the development of net-zero commitments by regulators, the passing of governmental laws targeting emissions, and tenants demanding more sustainable buildings. In addition, the physical consequences of a changing climate are becoming more conspicuous as people in various parts of the globe face extreme heat, storms, floods, fires, and other risks (Boland, Levy, Palter and Stephens, 2022).

Becoming greener is essential for strategic differentiation and value creation for real estate companies. However, the reverse is also true, as the real estate industry is also central to efforts to mitigate climate change. The real estate industry drives roughly 39 percent of total global emissions, out of which 11 percent are generated by manufacturing materials used in buildings, for example, steel and cement, while the rest is emitted by the buildings themselves and by energy generation, which powers these buildings (Global Alliance for Buildings and Construction, 2019).

McKinsey identified two main risks of climate change to real estate buildings in their Report *"Climate Risk and the Opportunity for Real Estate, 2022."* The first one is the physical risk, which are hazards caused by altering the climate, including acute events, like floods, fires, storms, extreme heat, and chronic conditions, like steadily rising sea levels and the change of the average temperatures at various places around the globe. The second risk is transition risk, which includes changes in the economy, technology, consumer behavior, regulation, and other human responses to climate change. Transition and physical risks can affect buildings directly as well as indirectly. Directly is, for example, when a carbon-intensive building faces tenancy, investor, regulatory and other risks. Indirectly, for example, when this building exists in a carbon-intensive ecosystem, meaning that a building supplied by a carbon-intensive grid or transportation system is exposed to the risks of these systems too. More specific direct and indirect effects of transition and physical risk are depicted in figure 1, made by McKinsey. These risks add up to a vast negative valuation impact on the buildings, which is unsurprisingly an increasingly pressuring concern for the real estate companies (Boland, Levy, Palter and Stephens, 2022).

Figure 1 – Implications of transition and physical risks, by direct and indirect effects




Source: (Boland, Levy, Palter and Stephens, 2022)

When solving the climate change crisis globally, McKinsey estimates that approximately Dollar 9.2 trillion in annual investment will be required globally to support the net-zero transition. McKinsey suggests that, ultimately, the only way to reduce the risks of climate change is to decarbonize. Shifting back to the real estate perspective, the players in this industry have a wide range of options for decarbonizing. These options include low-carbon building construction and development, building renovation aiming at improving energy efficiency, and upgrades to heating and cooling. In addition, lighting technology as significant reductions in emissions associated with real estate buildings can be obtained with positive economics with existing technologies. However, as McKinsey states in its 2022 report "*Climate Risk and the Opportunity for Real Estate*": *"Decarbonization is not solely a technical challenge. To develop the most appropriate path, real-estate players need to understand the range of decarbonization options and their financial and strategic costs and benefits."* (Boland, Levy, Palter and Stephens, 2022).

One of the currently most used solutions for real estate players is to construct green-certified buildings or retrofit brown non-certified buildings into green-certified buildings. Such a strategy decarbonizes the property portfolio of a real estate company that undergoes such a plan of action and brings several benefits that drive the value of the buildings as well as the real estate company or a REIT. These green certifications and their benefits are further discussed in the following subchapters (Boland, Levy, Palter and Stephens, 2022).

## 1.2 Certifications

Below, green building certification is described in more detail, focusing on the history, geography, grading, certification levels and its benefits. The main types of certifications are also summarized, all with the help of Vierra (2022) and her very detailed summary of the green building certifications using links of all the involved certification institutions and players, as well as several publications on this topic.

Buildings have various direct and indirect impacts on the environment. These impacts occur during buildings' construction, occupancy, renovation, and demolition as energy, water, raw materials usage, waste, and emission emitting happen during these processes. In order to mitigate these adverse effects on the environment, green building standards, certification, and rating systems have been created. This thesis focus lays on green certifications of buildings. A building with such green certification can be referred to as a green building; a term used extensively in this thesis. There are different types of certifications, and each type of certification has various levels based on how many of the categories of the certification are fulfilled. More categories fulfilled guarantee a higher level of certification (Vierra, 2022).

When looking into history, the Building Research Establishment's Environmental Assessment Method (BREEAM) was launched in 1990 and was the world's first green building rating system. Later, in 2000, the U.S. Green Building Council (USGBC) introduced developed criteria for improving the environmental performance of buildings through its Leadership in Energy and Environmental Design (LEED). These two remain the most used ones, especially in the U.S. and Europe (Vierra, 2022).

Green building certifications are intended to confirm that a particular building meets the pre-specified standards and offers an environmental benefit. Many green building certifications are based on life-cycle parameters, making them multi-attribute programs. This means that the certification confirms standards of multiple parameters, including energy use, efficient use of water, reduced greenhouse gas emissions, and innovation. Other green building certification focuses on a single attribute, such as energy efficiency (Vierra, 2022).

Green building certification is considered most respected when awarded by an independent third party. However, many certifications are also recognized within green building rating systems like LEED or BREEAM. These systems rate the relative extent of compliance with specific pre-defined environmental goals and requirements. In most cases, one can use a rating system and certification interchangeably (Vierra, 2022).

The research literature shows the two most common green building certifications, Energy Star and LEED. Energy Star is a single-attribute government certification relying on manufacturer-provided data and third-party testing. The attribute of focus is energy efficiency, and the certification is mainly used in the US. Energy star compares building energy and water performance with a peer group of comparison from the Commercial Building Energy Consumption Survey (CBECS). Suppose the building performs better than 75 percent of all similar buildings nationwide. In that case, it becomes

Energy Star certified, meaning it has better energy efficiency than 75 percent of comparable buildings with similar operating characteristics. The second highly used certificate in the literature is LEED, a multi-attribute green building certification system with independent third-party verification. LEED focuses on new construction, existing buildings, commercial interiors, core and shell, schools, retail healthcare, residential, cities, and communities. It is managed by the USGBC and checks attribute performance in the US and globally in sustainable sites, water efficiency, integrative process, location and transportation, energy and atmosphere, materials and resources, indoor environmental quality, innovation, and regional priority. LEED certification allocates 110 points across the attributes mentioned above categories with mandatory prerequisites like minimum energy and water-use reduction, recycling collection, and tobacco smoke control. In addition, each attribute category gives points if specific strategies for sustainability are met, like access to public transport, renewable energy, and daylighting. These specific strategies differ regarding various building types meaning that required strategies for construction sites are different than for an existing building. A building can also be awarded a green certification if it performs better in some categories and worse in others. There are four levels of LEED certification: Certified, Silver, Gold, and Platinum. The more points the building has in various categories, the higher the rating. There are also many other green building certifications like BREEAM, which is very similar to LEED but more common in Europe and with a different approach to the certification of buildings. Another example is WELL, which is also a certificate monitoring buildings with a focus on the built environment that impacts human health and well-being (Vierra, 2022).

The primary purpose of certified buildings is that they bring benefits to the environment and the owners or operators of the buildings. There is a wide range of economic and environmental benefits achieved by sustainable certified buildings. Some benefits include operational efficiency causing energy, water, and waste to be reduced and thus providing savings for the building owners or operators and the environmental impact of reducing the building's carbon usage. Other benefits of certified buildings are better environmental quality, increased natural daylight, and healthier materials and products that improve tenants' productivity and health. All these benefits then translate into higher rents, sales prices, and occupancy of the certified green (Vierra, 2022).

According to one of CBRE's reports, there are four benefits associated with certified sustainable buildings with a focus on offices. As described further in this thesis paper, the focus is on office buildings as they are the most researched asset class in real estate concerning green building certification in academic literature papers. It is due to investors' and tenants' high demand and higher applicability of the mentioned benefits. Other real estate asset classes are yet to significantly incorporate green building certifications (Expert 1, 2022). The first benefit is the positive environmental impact through reducing waste and greenhouse gas emissions during the entire building lifecycle. The second is the cost savings obtained through reduced water and energy consumption and lower operation and maintenance costs. The third benefit is the increased comfort, health, and productivity from improved environmental quality. The last one is the enhanced corporate reputation related to market stakeholders' understanding of corporate commitment to comply with the corporate social responsibility (CSR) requirements. Similarly, as is the case with all asset classes, also the mentioned benefits of green certifications of office buildings materialize into higher occupancy, rental levels, sale price, and marketability (CBRE, 2021).

These mentioned benefits and their impact on the buildings as well as on the owners or operators of the buildings are discussed in more detail further in the literature review and interviews parts referred to as value drivers. They are referred to as value drivers because they enhance the value of green-certified buildings compared to brown non-certified buildings.

## 1.3 Research questions

The introduction of the thesis mentions that green building certificates are one of the possible ways to solve the climate change problem in the real estate industry and that they also bring benefits to the building owners. There are many studies investigating certain specific implications (value drivers) of a green portfolio for a big sample of various buildings or real estate companies; however, a study analyzing a set of combined value drivers for a specific case is a relatively unexplored territory. Therefore, this thesis applies a case study design that focuses not only on one value driver but rather a set of value drivers, considering interdependencies between them, in a depth analysis of one real case, which includes a REIT named Inovalis. The question investigated in this thesis is whether the benefits of green real estate certification investment outweigh the necessary capital expenditure (CAPEX) investment and potential risks attached to it for real estate companies. This thesis pursues to answer this by focusing on three research questions mentioned below:

1) Do the benefits of green certification drive value and outweigh the costs and risks in a REIT which transitions its portfolio from 100 percent brown to 100 percent green?

2) What are the value drivers of a green building portfolio? What impact do they have on the value of a REIT?

3) What is the internal rate of return on such green investment?

The approach of the thesis is the following: A case study method is used in the empirical part to answer the research questions on a single example of Inovalis REIT. This REIT is valued using a brown valuation method and a hypothetical green valuation method, which are compared later in the thesis. The brown valuation method uses a DCF in the current state, "*AS IS,"* as of Q3 2021 financial results. Afterward, a green hypothetical valuation assumes that the company renovates its entire portfolio from brown to green and obtains green certificates for its entire portfolio. In this green hypothetical valuation, assumptions arising from the literature for green-certified buildings are used. These assumptions are, for example, the literature finds a 6 percent higher occupancy for green buildings compared to similar brown buildings; therefore, the green hypothetical valuation would increase the company's rental revenue by 6 percent compared to the brown DCF model. However, this will come at a cost as CAPEX will also be increased accordingly to reflect the needed investment into the green renovation. After both brown and green valuations are finalized, their values are compared to show whether green portfolio transformation brings value to the company.

The thesis structure has the following order: Firstly, the value drivers of green buildings are investigated in the literature review. Secondly, three interviews with industry experts are conducted in order to complement the literature. Later, the empirical part is conducted using a case study with an approach described in the paragraph above. Finally, the results are concluded, and limitations are pointed out.

# 2. Literature review

## 2.1 Methodology

The literature review was performed mainly to identify findings that can inform and substantiate the assumptions for the green valuation in the empirical part. The following paragraph outlines the approach and findings of the literature review.

The methodology approach for literature review follows Arlene Fink's (2019) blueprint for building a throughout literature review. The literature is gathered using the university's search engine u:search, which offers academic papers from various services like Google Scholar, JSTOR, EZB, and

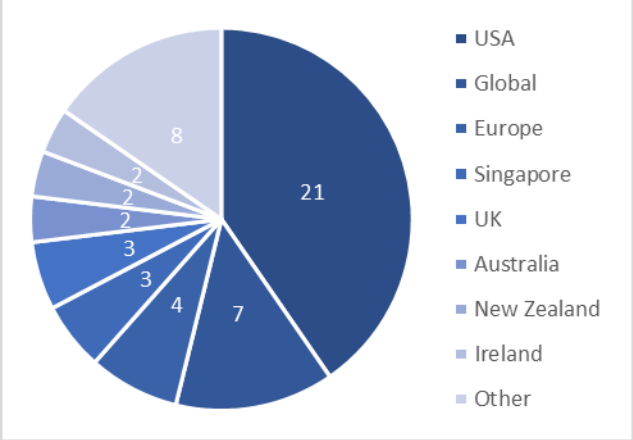
others. Many papers were reviewed in the literature review; however, the quality of the papers is accounted for as the papers with higher quality are prioritized in the literature review and the empirical part of the thesis. The quality of the papers is rated based on the number of citations on Google Scholar and by checking the journal rank on VHB (VHB, 2022). The main topic of the articles researched is the value drivers of green buildings compared to brown buildings. The principal value drivers found in the literature are higher rental revenue, higher occupancy, impact on operating expense, lower cost of capital, higher property values, and cost premium when comparing green buildings with similar brown counterparts. Other, less quantifiable value drivers, like positive brand reputational impact, are also discussed in the literature review. The most common method of the papers is a regression analysis with the particular value driver being the dependent variable and the greenness of the building being the independent alongside a large set of controlled variables like size, age, and location. Other standard methods include case studies, descriptive statistics, comparative analyses, and summaries of papers.

## 2.2 Categorization of summarized papers

Over fifty academic papers are summarized for this thesis to get the broadest picture of the value drivers of green buildings possible. These papers are of various locations, use different certificates to prove the greenness of the buildings, and include a few different asset classes in their data sets.

In figure 2 location of the buildings in the data sample is depicted. It is clear that the leading country in the search for value drivers of green buildings is the US. Almost 39 percent of the researched papers came from this region, indicating that the results are likely US-biased. Seven of the fifty-four papers researched are global, meaning that their sample is used in countries worldwide. Europe, which is the location of the assets of Inovalis, the company used in the case study, has a relatively small participation.

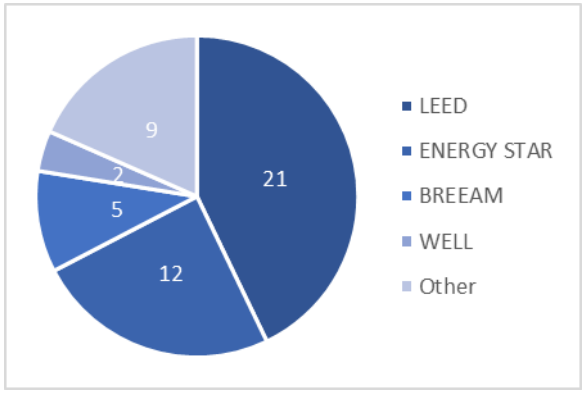
Figure 2 – Location of the literature summarized




Source: Based on literature research conducted

Figure 3 shows the certifications of the green buildings of the data sample used in the researched papers. Due to the U.S. focus, the most used certificates are LEED and Energy Star, followed by the European-based certificate BREEAM. The difference between LEED and Energy Star, as discussed above in the *"1.2 Certifications"* subchapter, is that Energy Star only uses energy performance as a measure of sustainability, and LEED considers six different aspects of sustainability. Both programs are complementary to each other. LEED and BREEAM are very similar; however, BREEAM has a European focus.

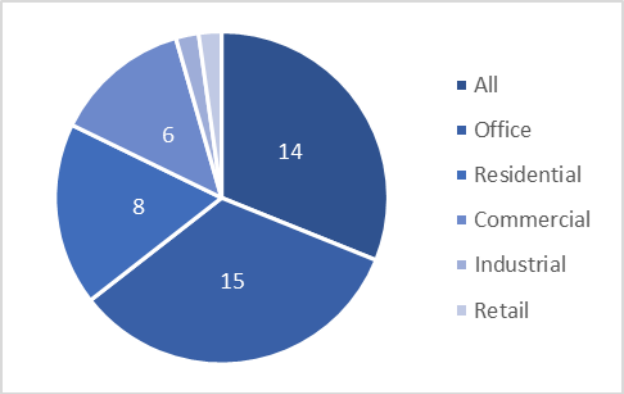
Figure 3 – Types of certifications of the literature summarized




Source: Based on literature research conducted

In figure 4 asset classes of the buildings in the data sample are portrayed. Most of the sample includes offices and commercial real estate (in which office is also included). The reason for the office real estate majority in the sample is that for years tenants demanded certified offices due to higher productivity, health, brand reputation, and lower utility cost. However, recently, also industrial and retail tenants have demanded green amenities. (Levy, 2021) There are also papers researching value drivers in the residential asset class. However, in this real estate sector, affordability plays a significant role as most tenants are unwilling to pay a premium for greenness (Marina et al., 2021). Throughout the thesis, and especially in the empirical part, the focus is thus made on office asset class as most literature covers the topic since green certification is mostly covered in this asset class.

Figure 4 – Asset classes of the literature summarized




Source: Based on literature research conducted

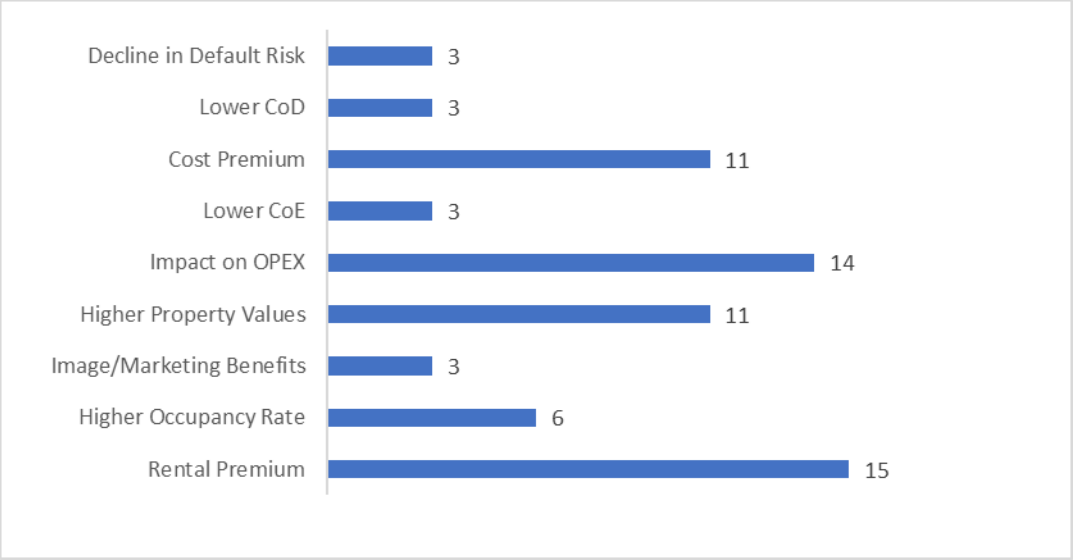
## 2.3 Most frequent value drivers

### 2.3.1 Intro

As previously mentioned in the methodology, several value drivers are chosen from the literature. The most common ones are illustrated in figure 5 below. One can see that rental premium, impact on OPEX, and cost premium are value drivers with the highest number of mentions. So, when comparing a green-certified building with a brown-uncertified building, in most cases, the rent for green is higher, the operating expense is lower, and the cost of building a green building is higher

than for a green building. However, it is important to stress that the literature search is focused on quantifiable value drivers applicable to the valuation in the empirical part. Thus, value drivers like image/marketing benefits, which are also very common but somewhat hard to quantify, are not prioritized in this paper and thus showed a lower number of occurrences in the literature researched. In addition, there are several interdependencies between the value drivers, as one value driver can subsequently influence another, or the green effect can simultaneously affect more value drivers. The sections below explain the most common value drivers in more detail.

Figure 5 – Summary of the value drivers mentioned in the summarized literature




Source: Based on literature research conducted

### 2.3.2 Rental premium

Figure 6 – Literature on rental premium

| Paper | Rank, Citations | Location | Asset Class | Certification | Method | Data | Findings |
|---|---|---|---|---|---|---|---|
| **Eichholtz et al., 2010** | A+, 1336 | USA | Office | LEED and Energy Star | Regression | 10K commercial buildings (13.6% green) | Rental rates are 3% higher per sf |
| **Eichholtz et al., 2013** | n.a., 536 | USA | Office | LEED | Regression | 21k rental and 6k sold green and control buildings | Rent increment for LEED of 7.9%. Range: 2.1-20.1% |
| **Pivo and Fisher, 2009** | B, 168 | USA | Office | Energy Star | Regression | All office properties (1199) in NCREIF database | Higher rents by 5.2% |
| **Falkenbach et al., 2010** | No rating, 11 | USA | All | LEED and Energy Star | Summary of papers | 4 working papers and 1 journal | Rental premium varying from 2 to 17 % |
| **Leskinen et al., 2020** | C, 32 | Global | Commercial | LEED and Energy Star | Summary of papers | 25-peer reviews papers | Rental Income increased by 0-23% (mean: 6.3%) |
| **Reichardt, 2013** | No rating, 62 | US | Office | LEED and Energy Star | Regression | 4217 buildings from of which 485 are Energy Star labelled and 142 are LEED certified | Rent premium 8.6% (net lease) and no rental premium (gross lease) |

Source: Based on literature research conducted

One of the pioneers in researching the benefits of green buildings is Piet Eichholtz, who investigated this topic already in 2008. His 2010 updated version of the article *"Doing Well by Doing Good? Green Office Buildings",* published in an A+ rated journal and cited over 1300 times according to Google Scholar, runs a regression with rent as a dependent variable and green certificate as an independent variable. The green certificate is one if the building is certified by LEED or Energy Star and zero if not certified. Other independent variables, including building size, fraction occupied, building class, age, and renovation, are used to control for other differences than the greenness of the building. This regression was run on data from around ten thousand office buildings in the US divided into about

900 clusters, each containing one certified building and nearby uncertified buildings. The results show that a green certification positively affects market rents. For example, otherwise identical commercial buildings with an Energy Star certification will rent for about 3 percent more per square foot. The difference is even more prominent regarding effective rent, rents adjusted for building occupancy levels, which is estimated to be about 7 percent. Adjusted R squared for rents is 69 percent and for effective rents is 42 percent. Interestingly, rent premiums were higher in smaller or lower-cost regions and less expensive parts of metropolitan areas (Eichholtz, Kok and Quigley, 2010).

In 2013 Eichholtz et al. updated their findings on rental premiums of office buildings in the US as they regressed a large cross-section of green buildings certified as of October 2009. This sample included approximately 21 thousand rental buildings. The analysis shows that attributes associated with greater thermal efficiency and sustainability contribute to increases in rents and asset values within the population of certified buildings. Increased energy efficiency is fully capitalized into rents and asset values. Unlike Eichholtz et al. 2010, this updated study has its results focused more on the LEED certification. The rent increment was calculated to be 7.9 percent for LEED certificates. If the LEED score is 40, which is one standard deviation below average, the rent increase is 2.1 percent. If the score is 60, one standard deviation above average, the rent goes up by 20.1 percent. Therefore, the range for the rental premium is 2.1-20.1 percent. (Eichholtz, Kok and Quigley, 2013).

Pivo and Fisher published another successful article on this topic in a B-rated journal with over 160 citations on Google Scholar in 2009. They used a similar approach as Eichholtz et al. and regressed a sample of all 1199 office properties in the National Council of Real Estate Investment Fiduciaries (NCREIF) database. The results show that Energy Star properties had higher rents by 5.2 percent compared to other non-certified properties (Pivo and Fisher, 2010).

To summarize the average rental revenue premiums and the ranges that various studies found, Falkenbach, Lindholm and Schleich (2010) put together five papers concerned with this topic (including above mentioned Eichholtz et al. and Pivo and Fisher). Four of these papers are working papers, and one is a journal article; all found higher rent based on a regression method. The range of this rental premium is 2-17 percent and concerns LEED and Energy Star certificates, as all of the articles have data from the US (Falkenbach, Lindholm and Schleich, 2010).

Leskinen, Vimpari, and Junnila (2020) is an updated and more thorough summary of papers concerning the value drivers of green buildings compared to Falkenbach et al. (2010). Leskinen et al. summarized 26 papers concerning rental premiums, with results ranging from 0 to 23 percent, with a mean of 6.3 percent and a median of 4.6 percent. According to the results, "*Tenants' willingness to pay higher rents in certified buildings is associated with improved productivity and other corporate-level benefits, as well as lower operating costs, if they are responsible for the operating expenses of leased premises."* The impact of leases on the rental premium is described in more detail by Reichardt (2014) in the following paragraph. However, some studies also had no statistically significant relationship between higher rents and certified assets (Gabe and Rehm, 2014; Fuerst and McAllister, 2011; and Veld and Vlasveld, 2014). The reasons for the insignificant relationship might be that the energy efficiency was irrelevant for the tenants or also due to the small sample sizes of the research conducted. Furthermore, according to Robinson and McAllister (2015), there were no rental premiums for certified high-value buildings, whereas low and middle-value buildings had rental premiums. They suggested that this difference could be the lower number of certificates in the low and middle-value segments compared to the high-value segment. Having a green certificate in the high-value segment has become a norm and thus no longer affects these buildings' rents. Costa, Fuerst, Robinson, and Mendes-Da-Silva (2017) found that green certificates lead to higher

rental premiums in developing countries than in established markets like the U.K. and the U.S. (Leskinen, Vimpari, and Junnila, 2020)

When discussing rental premiums in green-certified buildings, it is essential to consider the existing lease structure as it might affect tenants' willingness to pay for green features (Robinson and Sanderford, 2015; Liu and Liu, 2013; Szumilo and Fuerst, 2015; and Reichardt, 2013). In net lease structures, the tenant pays base rent and is responsible for all expenses associated with his/her occupied space. According to the mentioned Reichardt (2013), in such a structure, the tenant directly benefits from the savings in operating expenses due to the greenness of the leased building and thus pays higher rents compared to tenants in similar brown buildings that do not benefit from the lower operating expense. The amount of saved operating expenses is reflected in the tenant's rent increase. Reichardt's sample rent premium of green LEED-certified buildings under a net lease structure was around 8.6 percent. The other leasing structure where a tenant is only paying base rent and a landlord is responsible for the operating expense of the entire building is called gross lease structure. In such a structure, Reichardt (2013) found no green rental premium as the landlord directly benefits from the energy efficiency of his/hers building by lowering operating expense. Regardless of the structure, landlords will end up with the same savings if the difference between gross and net rent equals the difference in operating expense (Reichardt, 2013).

### 2.3.3 Higher occupancy

Figure 7 – Literature on higher occupancy

| Paper | Rank, Citations | Location | Asset Class | Certification | Method | Data | Findings |
|---|---|---|---|---|---|---|---|
| **Leskinen et al., 2020** | C, 32 | Global | Commercial | LEED and Energy Star | Summary of papers | 70-peer reviews papers | Occupancy increased by 0.9-17% |
| **Pivo and Fisher, 2009** | B, 168 | USA | Office | Energy Star | Regression | All office properties (1199) in NCREIF database | Lower vacancy rate of 1.3% |
| **Fuerst and McAllister, 2009** | No rating, 792 | USA | Office | LEED and Energy Star | Regression | 25k office buildings | Higher occupancy by 8% for LEED and 3% for Energy Star |
| **Miller et al., 2008** | No rating, 606 | USA | Office | Energy Star | Regression | 643 energy star and over 2k non energy star buildings | Higher occupancy by 2-4% |

Source: Based on literature research conducted

Some evidence indicates higher occupancy rates for certified properties compared to uncertified ones. Leskinen et al. (2020) put together all the available papers that investigated the difference in occupancy between green and brown buildings. Besides others, the papers include the highly cited work of Pivo and Fisher (2010), Fuerst and McAllister (2009), and Miller, Spivey, and Florance, 2008. A summary of these papers can be seen in figure 7. The results showed increased occupancy for green buildings ranging from 0.9 percent to 17 percent with a mean of 6.0 percent and median of 4.3 percent. The wide range of results is due to the heterogeneity of the comparable properties in the sample. Due to the same reason, similar results' range width can also be witnessed in other value drivers in the literature review. The increased occupancy should not come as a surprise since certified buildings offer tenants benefits like improved productivity, image benefits and lower operating cost, motivating them to occupy green buildings instead of uncertified brown ones. (Leskinen, Vimpari, and Junnila, 2020)

Similarly to the rental premium factor, occupancy rates, according to some papers, are not uniform across all submarkets and assets. Fuerst and McAllister (2009) applied a hedonic regression model controlling for age, size, height, building class, and submarket differences to investigate occupancy rate disparities between green and non-green buildings. They observed that only in the two worst-performing deciles of their sample were higher occupancy rates of Energy Star buildings statistically

significant. However, they report 8 percent and 3 percent higher occupancy for LEED and Energy Star-certified buildings, respectively (Fuerst and McAllister, 2009). Their results resemble the trend in rental premiums where LEED certificates, which focus on more categories other than energy efficiency and thus are more complex than Energy Star, offer higher premiums.

### 2.3.4 Impact on operating expense

Figure 8 – Literature on operating expense

| Paper | Rank, Citations | Location | Asset Class | Certification | Method | Data | Findings |
|---|---|---|---|---|---|---|---|
| **Reichardt, 2013** | No rating, 62 | US | Office | LEED and Energy Star | Regression | 4217 buildings from of which 485 are Energy Star labelled and 142 are LEED certified | Lower operating costs by 5.4% (LEED) and higher by 3.9% (Energy Star) |
| **Shiers, 1999** | No rating, 62 | UK | Commercial | BREEAM | Case Study | 14 certified buildings | Lower operating costs of 6-30% |
| **Nyikos et al., 2012** | B, 47 | USA | All | LEED | Descriptive statistics | 160 certified buildings | Operating costs lower by $0.7 per sf |
| **Miller et al., 2008** | No rating, 606 | USA | Office | Energy Star | Regression | 643 energy star and over 2k non- energy star buildings | Operating costs lower by 35% |
| **Leskinen et al., 2020** | C, 32 | Global | Commercial | LEED and Energy Star | Summary of papers | 5-peer reviews papers | Operating costs change by -14.3-25.8% (mean: -0.4%, median: -4.9%) |

Source: Based on literature research conducted

Lower operating expense is the second most common value driver based on the sample of literature used for this thesis. However, here the results are not as straightforward as with the rental premium and include some contradictory findings. For example, several studies show that LEED-certified buildings use considerably less energy than non-certified conventional buildings (Turner and Frankel, 2008; Fowler and Rauch, 2008 and Devine and Kok, 2010). Other studies, however, find that the energy use of LEED-certified buildings differs significantly or that such buildings do not necessarily save energy (Newsham, Mancini and Birt, 2009; Scofield 2009). Newsham, Mancini, and Birt (2009), for example, show on one hand that LEED-certified buildings use, on average, 18-39 percent less energy. On the other hand, around one-third of the sample's LEED-certified buildings use more energy than comparable non-certified buildings. The higher usage could be because energy efficiency is only one required attribute for the LEED certificates. Therefore, less energy-efficient buildings could have had other attributes stronger and thus afford to be less energy efficient and still be LEED certified. It is, however, important to stress that while energy costs are the most significant part of the operating expense, they only represent 30 percent of the total (Wiley, Benefield, and Johnson, 2008). Other parts include water, maintenance, cleaning, management, security, insurance, and other expenses. Thus, lower energy costs are not always translated directly into lower total operating expenses (Reichardt, 2013).

Most studies, however, lean toward lower operational expenses in certified green buildings. Studies conducted to determine the difference between green and brown energy efficiency usually compare descriptive statistics of the buildings of two types. Shiers (2000), for example, analyses the energy costs of 14 BREEAM-certified buildings by comparing data on energy costs of green buildings to organizations' experiences in other conventional buildings. Results show reductions in energy use and savings ranging between 6 and 30 percent. Due to the limited sample size, however, the author cannot control for building age, design, and functional characteristics. Nyikos, Thal, Hicks, and Leach (2012) used a simple correlation and descriptive statistics to analyze the resulting database. They found that operating costs in LEED-certified buildings were dollar 0.70 per square foot less than in non-LEED buildings, and energy costs were 31 percent lower. Reichardt (2013) also shows lower operating costs in LEED-certified buildings by an average of 5.4 percent. However, surprisingly, in Energy Star-certified buildings, the operating costs were 3.9 percent more than in non-certified

buildings. In addition, he expects negative relation between operating costs and certification level. Higher Energy Star and LEED certification standards are associated with lower operating costs. Partially disproving Reichardt's results, Miller et al. (2008) find operating costs lower by 35 percent for Energy Star-rated buildings compared to otherwise similar non-rated ones. Finally, Leskinen et al. (2020) show an inconclusive effect of operating costs in green-certified buildings. Based on a summary of 5 papers that are all North America based and include already mentioned Reichardt (2013), they identify a range of -14.3 percent to 25.8 percent decrease/increase in operating cost for green buildings certified by LEED or Energy Star. The mean is -0.4 percent, and the median is -4.9 percent. Both of these statistics show that despite the range being inconclusive mean and especially the median results indicate that operating costs decrease in green buildings compared to brown ones.

### 2.3.5 Cost of capital

The cost of capital encompasses the cost of both equity and debt. However, as these costs differ, the impact of green certification on REITs is investigated separately.

#### *2.3.5.1 Cost of equity*

Figure 9 – Literature on cost of equity

| Paper | Rank, Citations | Location | Asset Class | Certification | Method | Data | Findings |
|---|---|---|---|---|---|---|---|
| **Eichholtz et al., 2018** | Book, 3 | USA | All (REITs) | LEED and Energy Star | Regression | 211 US REITs | Increase from 0% to 100% green portfolio can decrease cost of equity (CoE) by 0.736% |
| **Hsieh et al., 2020** | C, 14 | USA | All (REITs) | LEED | Regression | 107 US REITs | 1% increase in green portfolio causes CoE to decrease by 0.21%. Max. decrease is 3.49%. |

Source: Based on literature research conducted

Starting with the cost of equity, one can see in figure 9 that only two papers are included. The reason for this is the lack of literature as the topic of lower cost of equity in green REITs or real estate companies is not so well investigated.

Eichholtz, Barron, and Yönder (2018) use the implied cost of capital approach to measure REITs' equity cost. This approach attempts to define the cost of equity capital as an internal rate of return that equates the stock's price today to the value of the sum of future expected dividends. Four implied cost of capital models are applied in the paper: ES, OJ, GLS, and CT. The average implied cost of capital measure is calculated based on each of the four models. Summary statistics for the implied cost of equity is estimated from 2003 until 2015 concern 211 US REITs, and green buildings are either LEED or Energy Star certified. The average cost of equity of the four individual models is 7.44 percent. In order to have a better perspective on the results, it makes sense to include a comparison of Damodaran (2015), who calculates the yearly cost of equity for REITs and estimates a mean of 8.3 percent in the same period from 2003 until 2015. The results also show a negative association between the core cost of equity estimate and measures of greenness. Therefore, many firms with (very) high shares of environmentally certified properties also have lower than the average cost of equity estimates. In addition, the regression portrays that a REIT with a zero percent of certified properties in its portfolio would reduce its cost of equity by 28.3 or 73.6 basis points if it transforms its assets into Energy Star or LEED certified, respectively. The average reduction of cost of equity stands at 37.7 basis points, and the results are at the 5 percent significance level and roughly 38 percent $R^2$. The main conclusion of the Eichholtz et al. (2018) paper is the following: *"Rather that these results incentivizing investment managers to trade unsustainable properties for sustainable ones (which, incidentally, would involve significant transaction costs), this result is more useful for*

*firms constructing a portfolio and thus benefiting from the average 37.7bps reduction in the cost of equity capital for a fully certified portfolio vs. an identical yet unsustainable portfolio."* (Eichholtz, Barron and Yönder, 2018)

The second and last paper concerning the issue of the cost of equity in REITs was written by Hsieh, Claresta and Bui (2020). This study uses data regarding US REITs from 2000 to 2016, employing a panel regression analysis. Unlike Eichholtz et al. (2019), it only adopts one ratio model, the Price Earning Growth (PEG). The results also indicate a negative relationship between green building certification and the cost of equity capital. More precisely, the regression shows that if a REIT increases its green portfolio by one percent cost of equity decreases by 0.21 percent. If it increases its square feet of certified buildings by one percent cost of equity falls by 0.19 percent, and finally, if it increases its LEED-certified green portfolio by one percent cost of equity goes down the most out of these three instances by 0.35 percent. Furthermore, suppose a REIT gains full LEED green building certification of its portfolio. In that case, it could lead to a decrease of up to 3.49 percent in the cost of equity compared to if they have no certification. Thus, according to Hsieh et al. (2020), the maximum cost of equity decrease green REITs can enjoy is 3.49 percent (Hsieh, Claresta and Bui, 2020).

#### *2.3.5.1 Cost of debt*

Figure 10 – Literature on cost of debt

| Paper | Rank, Citations | Location | Asset Class | Certification | Method | Data | Findings |
|---|---|---|---|---|---|---|---|
| **Eichholtz et al., 2019** | A, 37 | USA | All (REITs) | LEED and Energy Star | Regression | 191 mortgages collateralized by certified buildings | Loan spread lower by 24-68bps |
| **An and Pivo, 2018** | No rating, 40 | USA | Office | LEED and Energy Star | Regression | 6304 office loans | Loans on green buildings after loan origination have 0.081% lower spreads. At loan origination spreads are 0.115% lower. Green buildings carry 34% less default risk. |

Source: Based on literature research conducted

Similarly to the cost of equity, the cost of debt in green REITs is not so covered in the academic literature. Therefore, only two articles are included in this literature summary.

The first paper is written again by Eichholtz, Holtermans, Kok, and Yönder, (2019). They first study the spreads on commercial mortgages collateralized by real assets, some of which are environmentally certified. Mortgage spreads are regressed on an indicator of energy efficiency, environmental certification, and many control variables. The results show that the mortgage spread is lower by 24-29 basis points in the annual interest payment. The higher end of building certification offers even lower mortgage spreads. Gold and Platinum LEED buildings offer a reduction in the spread of 66-68 basis points. The second focus is on spreads on corporate debt of REITs, both at issuance and while trading in the secondary market. They analyze REIT corporate bond spreads by investigating the relationship between the share of environmentally certified space in a REIT portfolio and bond spreads at the time of origination. Control variables are also used, among which are, for example, credit rating and if the bond is callable or convertible. The results show that if a REIT doubles its green portfolio from 3 percent to 6 percent, the bond spread lowers by 21-74 basis points. In addition, it has been investigated that brown REITs, which do not have certified assets, pay a 1-4 percent bond yield premium in the secondary market (Eichholtz, Holtermans, Kok and Yönder, 2019).

The second paper investigating the cost of debt in green REITs is from An and Pivo (2018). They found that loans on green buildings at loan origination have slightly better terms than loans on

similar non-green buildings. This difference grows over time, but the effect is economically small compared to default risk. An and Pivo (2018) use a sample with about 86 percent of the green buildings neither certified nor registered at loan origination. Thus, they could compare the default risk of the same loans before and after buildings became green to help alleviate the problem of unobservable loans and building characteristics and isolate the effect of green certifications. The paper documents that commercial mortgages collateralized by environmentally certified buildings have lower default risk. Moreover, if a default occurs, they suggest that the loss-given default may be lower for a loan on green-certified buildings than for a loan on a conventional building. The reason is that green-certified buildings are consistently found to be more valuable and have higher liquidity, implying that such buildings represent a higher collateral quality. Additionally, the lower default risk and the likely reduced loss-given default may translate into a lower required risk premium and potentially a lower cost of debt. An and Pivo's (2018) results indicate that loans on green buildings had 8.1 basis points lower spreads and green loans had rate spreads lower by 11.5 basis points. Also, they found out that certification reduced default risk by 34 percent (An and Pivo, 2018).

### 2.3.6 Higher property values

Figure 11 – Literature on higher property values

| Paper | Rank, Citations | Location | Asset Class | Certification | Method | Data | Findings |
|---|---|---|---|---|---|---|---|
| **Eichholtz et al., 2010** | A+, 1336 | USA | Office | LEED and Energy Star | Regression | 10K commercial buildings (13.6% green) | Selling prices are higher about 16% |
| **Falkenbach et al., 2010** | No rating, 11 | USA | All | LEED and Energy Star | Summary of papers | 3 surveys and 6 regressions | Property values up by 5-35% |
| **Leskinen et al., 2020** | C, 32 | Global | Commercial | LEED and Energy Star | Summary of papers | 21-peer reviews papers | Operating costs change by 0-43% (mean: 14.8%, median: 14.1%) |

Source: Based on literature research conducted

All these mentioned value drivers (above and below) of green building certification lead to a sales price premium or higher property value than regular non-certified buildings.

Eichholtz, Kok, and Quigley (2010), similarly as when they investigate the rent premium, run a regression on a sales price to see if green-certified buildings are more expensive than their brown counterparts. They use a green dummy independent variable to categorize green and brown buildings and control for other factors like size, age, and location. The regression shows that the increment to the selling price might be as much as 16 percent. Furthermore, the value premium associated with a green certification is more seen in smaller markets and regions and the more peripheral parts of larger metropolitan areas. The most important factor driving the value of a green building compared to a brown building is energy efficiency. Eichholtz's study shows that a 10 percent decrease in energy consumption leads to an increase in value of about 1 percent, above the rent and value premium for a certified building. However, the intangible effects of the certification are also important. Beliefs about worker productivity or improved corporate image also seem to play a role in determining the value of green buildings in the market space (Eichholtz, Kok and Quigley, 2010).

Falkenbach et al. (2009) summary paper on value drivers of green buildings includes three surveys and six regressions indicating higher property values for certified buildings. In surveys from Cushman and Wakefield from 2007 and 2009 based in Europe, almost half of respondents, precisely 47 and 44 percent, respectively, are willing to pay the premium. In a US journal article from Ellison and Sayce (2007), 40 percent of respondents expected an impact on yield in the year 2000 and 23 percent in 2005. The six US-based working papers and journal articles, including above mentioned Eichholtz et

al. (2010), Miller et al. (2008), and Pivo and Fisher (2010), all state increased property values ranging from 5 to 35 percent when comparing certified and non-certified buildings (Falkenbach, Lindholm and Schleich, 2010).

Leskinen et al. (2020) show 17 reviewed studies that found evidence of sales price premiums. They range from 0 percent to 43 percent, with a mean of 14.8 percent and a median of 14.1 percent. However, four studies found no statistically significant relationship between sustainability, energy efficiency, and sales price. The sales premium is relatively large compared to other premiums like rent or cost of capital. It is probably due to the combined effects of all mentioned value drivers discussed above and below. Similarly to rental premiums, sales price premiums have been found to vary between market segments and over time. For example, Robinsons and McAllister (2015) found no sales premiums in high-value buildings, whereas low- and medium-value buildings did show premiums. According to the study, the reason could be that in high-value buildings, certification is already a norm. (Leskinen, Vimpari, and Junnila, 2020)

### 2.3.7 Cost premium

Figure 12 – Literature on cost premium

| Paper | Rank, Citations | Location | Asset Class | Certification | Method | Data | Findings |
|---|---|---|---|---|---|---|---|
| **Kats, 2003** | Book, 507 | USA | Office and school | LEED | Cost comparative analysis | 33 certified buildings | Cost premium of 1.84% |
| **Nyikos et al., 2012** | B, 47 | USA | All | LEED | Descriptive statistics | 160 certified buildings | Cost premiums ranges from 2.5-9.4% |
| **Miller et al., 2008** | No rating, 606 | USA | Office | LEED | Survey | USGBC data | Cost to go green is about 3% extra |
| **Kats, 2010** | Book, 2010 | USA | All | LEED | Cost comparative analysis | 170 constructed and 20 renovated buildings | Green premiums for renovation with a mean of 3.9% and median of 1.9%. For construction mean is 2.8% and median 1.5% |
| **Luay and Kherun, 2015** | n.a., 2012 | Global | All | LEED | Summary of literature | 17 empirical studies | 90% of the reported green cost premiums fall withing a range of -0.4% to 21% |

Source: Based on literature research conducted

With all the benefits that the value drivers of green buildings bring, there also comes a cost. This cost is portrayed in REIT's CAPEX as it needs to refurbish its buildings to turn them green. CAPEX would also include certification fees, which will also be needed to prove that the building is green and not brown anymore. The cost premium when comparing brown and green buildings is measured in two ways, comparing either construction or renovation cost of a brown versus green building. The methods for the papers studying cost premiums include cost comparable analysis and descriptive statistics or surveys, which vary quite a lot from the previous value driver methods, which are mainly regressions.

Kats (2003) investigates the construction cost of 33 LEED-certified properties, of which 25 are office buildings and 8 are schools. Kats interviews architects and members of senior building personnel, and he also collects information via written and verbal communication with California's Sustainable Building Task Force members. He finds an average cost premium of 1.84 percent, meaning that constructing green buildings from his sample is 1.84 percent more expensive than constructing comparable brown buildings (Kats, 2003).

Nyikos et al. (2012) conclude that there are too many variables in building construction to create an accurate cost for achieving LEED certification. However, Nyikos et al. still managed to draw a

worthwhile conclusion despite lacking such a model. Using correlation analysis, they found cost premiums ranging from 2.5 percent to 9.4 percent, with a mean of 4.1 percent. More precisely, cost premiums by LEED level were the following: Certified 2.6 percent, Silver 2.5 percent, Gold 4.4 percent, and Platinum 9.4 percent. (Nyikos, Thal, Hicks, and Leach, 2012)

Even though Miller et al. (2008) focused more on the income-generating premiums of green buildings, they also investigated cost premiums. In most of their paper, Miller et al. used regression to find the difference between green and brown buildings' rents, operating expenses, and occupancy. However, concerning cost premiums, they compared data supplied by the USGBC on uncertified buildings with anecdotal surveys. According to the surveys, with only a modest sample of 26 respondents, the average costs to go green are reported to be about 3 percent extra. Furthermore, with each higher level of certification, the cost increases. For example, the Silver certification level adds 2.5 percent to the 3 percent making green construction cost 5.5 percent more expensive than uncertified brown building (Miller, Spivey, and Florance, 2008).

Kats (2010) in his book *"Greening our Built World: Costs, Benefits, and Strategies"* constructs a cost comparative analysis on a sample of 170 constructed and 20 renovated green buildings and finds out green cost premium for renovation with a mean of 3.9 percent and median of 1.9 percent. For construction buildings, the mean is 2.8 percent, and the median is 1.5 percent which translates to 3.9 and 3.4 dollars more per square foot, respectively. Kats (2010) is the only author who looked into renovation cost premiums and found that the cost premium for renovation is higher than for construction (Kats, 2010).

Finally, Luay and Kherun (2015) summarize the literature on cost premium in green buildings. They use 17 empirical studies written all around the globe to find whether green buildings cost more or less than their brown counterparts. In those 17 studies, three different approaches are used to quantify the differential cost associated with the green design. The first compares green and brown buildings' design and construction costs. The second approach contrasts design and construction costs with a modeled cost of a proposed conventional design for the same building. The last approach analyzes the actual design and construction cost of a green building with its initially established budget. When putting all three approaches together and summarizing the researched empirical studies, the results depict a range of -0.4-21 percent cost premium of green buildings compared to brown ones (Luay and Kherun, 2015).

### 2.3.8 Other

Figure 13 – Literature on other value drivers

| Paper | Rank, Citations | Location | Asset Class | Certification | Method | Data | Findings |
|---|---|---|---|---|---|---|---|
| **Falkenbach et al., 2010** | No rating, 11 | USA | All | LEED and Energy Star | Summary of papers | 1 industry study and journal article | Confirmed image benefits for green property companies |
| **Leskinen et al., 2020** | C, 32 | Global | Commercial | LEED and Energy Star | Summary of papers | 2-peer reviews papers | Decreased initial yield, which indicates lower risk |
| **Devine and Kok, 2015** | B,113 | USA and Canada | Office | LEED and Energy Star | Surveys | Almost 300 buildings | Intangible benefits like tenant satisfaction, higher probability of renewing leases and decreased tenant rent concessions |

Source: Based on literature research conducted

Besides all the primary value drivers found in the literature, other drivers are also investigated by the literature papers. These other drivers are qualitative and thus are not prioritized in this thesis due to the difficulty of quantifying them in the empirical part. However, it is still vital to mention them as

they drive the value of green properties. These other value drivers are image benefits, decreased risk, and other intangible benefits.

Image benefits are discussed by Falkenbach et al. (2010), whose findings are based on an industry study by Davies (2005) and a journal article by Newell (2008). Davies (2005) researches 12 case studies from the U.S. and Canada and reports that about half of the interviewees confirmed measurable image benefits from considering sustainability issues. Altogether, the respondents ranked the increasing corporate image among the most important benefits of green investments. Newell (2008) analyzes approaches to the sustainability of property companies. He finds that property companies document their good environmental and social performance by publishing data on corporate social responsibility (CSR) and carbon disclosure reports. Leading property companies publish these data and thus gain considerable media exposure, resulting in notable branding opportunities. In addition, sustainable property companies received additional image benefits through inclusion in major internationally recognized sustainability indices. (Falkenbach, Lindholm and Schleich, 2010).

Leskinen et al. (2020) focus on the second of the other value drivers, namely decreased risk. They look into two papers, Miller et al. (2008) and McGrath (2013), which both show a decreased initial yield (capitalization rate) for green assets, which indicates lower risk. "*Initial yields depend on capital markets, the risks associated with the property, local market conditions, and the investor's expectation about market movements and the property's market position"* (Chaney and Hoesli, 2015). Rental income and sales price show a property's current income and capital value. However, initial yield also accounts for the future market position where sustainability will play a significant role. Lower initial yield in most cases translates into lower investment risk, increased number of potential buyers, lower expected depreciation, and higher rental growth, according to the summary made by Leskinen et al. (2020).

Devine and Kok (2015) documented intangible benefits such as a higher level of tenant satisfaction, a higher probability of renewing leases, and decreased tenant rent concessions in certified buildings compared to non-certified ones. These findings, gathered in the time span between 2004 and 2013, were consistent across US and Canada from almost 300 buildings provided by one of the biggest asset management companies in Northern America (Devine and Kok 2015).

# 3. Interviews

## 3.1 Methodology

The main idea of the Interviews part is to complement, expand and, at the same time, challenge the findings from the literature. The literature review summarizes the most common value drivers of green buildings. The literature also offers quantified data that could be usable for the empirical part as the assumptions in the green valuation. However, some of these findings are outdated and contradicting to some extent and reflect mostly a U.S. perspective. Therefore, interviews were conducted with three field experts to provide up-to-date information straight from the banking market in Europe. Besides commenting on the value drivers, the experts also touch on topics like the motivation of companies to become green, the process of renovating, and operating expenses. In the end, it is not the value drivers but these other topics that provide the most usable input from interviews to the empirical part and complement the green valuation by making it more realistic and thus improving the preciseness of the final result. In addition, the interview part also expands topics briefly mentioned in the literature review and introduction like sustainability based on geography and asset class, types of certifications, and sustainable finance.

All three interviews are semi-structured, meaning the main topics were pre-prepared based on the themes discussed in the literature review. However, many additional questions were raised during the interview. Therefore, every interview took a different way and provided answers on various topics mainly aimed at the expertise of the individual interviewee.

The mentioned experts all work at Raiffeisen Bank International (RBI). Expert 1, the first person interviewed on May 10th, 2022, is a Real Estate Industry Lead in the Corporate Customers division working in Banking for 15 years and having real estate industry experience of more than 14 years. Expert 1 has an excellent overview of Real Estate and the banking sector; thus, in the interview, all topics were covered on a more general level. The second interviewee is Expert 2, who has worked for over a year as a Sustainable Finance Manager at RBI and has more than five years of experience working for Institutional Shareholder Services ESG, which provides high-quality data, analytics, and insights into ESG. Expert 2 provides insights mostly about sustainable finance. Lastly, an interview was conducted with Expert 3 on May 23th, 2022. He has worked at RBI's Real Estate Finance department for over eleven years and is an industry lead for real estate asset class offices at RBI. In the interview, Expert 3 covers technical topics concerning the process of renovating a brown building into a green one and how to finance such a process.

Interviews were analyzed using Philipp Mayrings' (2010) *"Qualitative Inhaltsanalyse".* One of the three main techniques for qualitative content analysis was chosen, namely structuring, which aims to cross-evaluate the text material by picking up certain aspects and deductively forming categories based on these aspects. The material is then systematized based on these categories (Mayrings, 2010).

The categories are the following. First, the topics include a short commentary on the value drivers found in the literature. Then the motivation to go green is covered, vastly impacted by the external pressure of investors, tenants, banks, and regulators. Later, the interviewees explain whether it is better to buy, construct or renovate a building to increase the percentage of green buildings in the REITs portfolio. Next, renovation processes are investigated to explain how they can be done and depict the possible problems that could arise. After that, different types of leases where operational expenses are borne either by the landlord or tenant are explained on real-life examples from experience obtained by the interviewees. Then certification types and levels are compared with the current market's standards and geographical differences in green certifications are pinpointed. Furthermore, the difference in asset classes concerning green certification is explained, and the reason why office asset class is so commonly used in this topic is provided. Lastly, the connection between sustainable finance and real estate is introduced based on the interview with Expert 2, which also concludes the interview part of the thesis.

Transcripts of all three interviews can be found in the Appendix on pages 68-70.

## 3.2 Value drivers

When reflecting on the results from the literature from the market perspective, Expert 1 points out the importance of sales price increase for real estate companies. Since all the value drivers drive the value, the ultimate goal is to drive up the property value. Based on Expert 1's experience, real estate companies usually pursue green certification to have a higher valuation of their assets on their balance sheet or to increase the price of the buildings in order to sell them for more. Therefore, the most critical value driver for real estate companies would be the increase in value/sale price of the certified versus noncertified building. (Expert 1, p. 3)

Concerning rents, Expert 1 has not heard about rent premium for green buildings, nor was he in a meeting where a real estate company or a REIT would mention this as a reason to go green. (Expert 1, p. 12)

In addition, Expert 2 summarizes the topic of the cost of debt reduction in green bonds for real estate companies saying that in the past, there was a reduction in interest for green bonds compared to conventional bonds. However, this led to a flooded real estate industry with green bonds, which made the pricing more equal. (Expert 2, p. 4)

## 3.3 External pressure as a motivation to become green

The motivation to become green is influenced by external pressure from investors, tenants, banks, and regulators, according to the answers provided by the interviewees. Expert 1 sums it up by saying: "*We know that the pressure to be green and get a green portfolio comes from several sites. There are investors asking for it. There are tenants asking for it. The banks are asking for it. Thus, companies cannot avoid not to deal with this topic.*" (Expert 1, p.2)

Expert 1 then digs even deeper into the topic, saying that he thinks the green certification and sustainable finance topics will grow even further. The reason is that he thinks that from a bank's perspective, it is not really about how much a discount bank offers to green companies but if banks even finance a project that is not green. For example, if a brown company has no or minimal green elements, the bank would force them to build that green element or stop doing business with them (Expert 1, p.3). Expert 1 expands on this by saying*: "it is okay if you are brown, but you need to have a plan where you show that you will become green*" (Expert 1, p.3). Regarding *"greenness,"* banks are strict with their clients due to the pressure from the regulator that forces banks to finance more green assets to fulfill all the climate goals set by the regulator (Expert 1, p.3). Expert 2 adds that banks started to send different kinds of questionnaires to the companies asking them about their sustainability measures because they need to report this information of their clients to the regulator (Expert 2, p.11). Furthermore, according to Expert 1, the pressure on banks to finance green assets will only intensify in the future as it will be even more closely monitored by the regulator how much of the assets financed by the bank are green. There will also be more incentives for the banks to finance green assets, like, for example, less required Risk Weighted Assets (RWA) when financing green assets, which will mean that banks that will not adhere to this will have their equity consumed by higher RWAs. Financing brown assets will thus be more expensive for banks and drive their prices up, which will then pressure the brown companies to be greener so they can get cheaper financing from the bank (Expert 1, p.4).

In addition, Expert 2 adds her perspective on future pressures to be greener. She says*, "with future or already upcoming regulations coming our way in the sustainability sphere, there is much more to come."* (Expert 2, p.10). She explains further that these regulations are, for example, Corporate Sustainability Reporting Directive (CSRP), which is an EU law requiring certain large companies to disclose information on how they operate and manage social and environmental challenges they face (Corporate sustainability reporting, 2022). Companies start reporting, under the CSRD, in 2024 in line with mandatory EU sustainability reporting standards and alongside an external assurance of sustainability reporting (Wollmert and Hobbs, 2022). The second extensive upcoming regulation would be the EU Taxonomy, a classification system establishing a list of environmentally sustainable economic activities. The EU Taxonomy would provide companies, investors, and policymakers with appropriate definitions for which economic activities can be considered environmentally sustainable. This regulation will protect private investors from greenwashing, help companies to become more climate-friendly, mitigate market fragmentation and help shift investments where they are most

needed (EU taxonomy for sustainable activities, 2022). EU Taxonomy legislation also aims to reward and promote environmentally friendly business practices and technologies. It focuses on the following six environmental objectives: climate change mitigation, climate change adaption, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems. In order to be classified as a sustainable economic activity according to the EU taxonomy regulation, a company must contribute to at least one of the environmental objectives and not violate the remaining ones. The first-mentioned objectives were already applied in January 2022, and the remaining ones will come to force one year later in January 2023 (EU Taxonomy Timeline, 2022).

There is also pressure coming from investors to become green or greener. They often tend to look at various green data and reports of the companies and make their decision taking the green factor into account. As Expert 3 mentioned in the interview, it is often the marketing or image benefit motivation that makes the companies go green to attract more investors, which then implies higher prices. Expert 3 says*, "if you sell a brown building these days, it is probably much more difficult to do this than sell a green building. We talked to developers and asked them similar questions, and they told us that if the investors would not ask for a certification, we would not do it."* (Expert 3, p.26).

As all the pressures are already out there for quite a while, most companies have started acting on them. Expert 1 also confirms this by mentioning that*: "Every player in the market is thinking about going green, or at least at some point in time have thought about it (…) Especially in the last two to four years. (…) Some companies started earlier; some are still in the process of setting it up. But if I am talking to a client who has never heard about ESG and says it does not concern him, he would have a huge problem. (…) So hearing about a client who is not dealing with sustainability or ESG would be very, very strange."* (Expert 1, p.7). However, when talking more case-to-case basis, going green also depends a lot on the potential of the building. For example, a building with a good location would, in most cases, have much higher potential if turned green than a building with a bad location outside of a city. In such a case, it would make more sense to sell it to somebody with some specific strategy because it will not make much sense to refurbish it into green as it will not add value in most cases. Therefore, the building has to be attractive; otherwise, turning it green will not help, according to Expert 1 (Expert 1, p.8).

## 3.4 Renovating, constructing, or buying a green building?

A prevalent question real estate companies face when transforming their portfolio from brown to green is whether to renovate existing brown buildings, construct new green ones, or buy buildings that are already green. According to Expert 1, it depends as, on the one hand, the cost premium for constructing against renovating is lower, meaning that it is cheaper to construct a new green building than to refurbish one from brown to green (Expert 1, p.6). In addition, Expert 3 mentions that monument protection is sometimes applied to buildings, making the renovation even more expensive (Expert 3, p.3). However, on the other hand, it has to be considered that when constructing a new building, several difficulties can occur. One of them is rising construction costs and the second is growing pressure from communities around the construction, which do not want to live next to construction as it brings more noise and traffic into their neighborhood. In addition, construction is also not good for the carbon footprint as cement production is a massive burden regarding CO2 emissions (Expert 1, p. 6). Expert 1 adds that depending on the current market prices, it might be easiest to buy green buildings for the company's portfolio instead of renovating or constructing buildings. However, adding new green ones does not solve the problem entirely, as the brown ones remain in the company's portfolio. Therefore, at least some of the buildings would have

to be renovated as selling them would lose the company money since their sales price is often offered at a discount (Expert 1, p. 18-19).

## 3.5 Process of renovating

After discussing the three potential options for expanding REIT's portfolio, the renovation process is now set in focus. The reasons are the benefits mentioned above of scaling down the brown part of the real estate portfolio and its environmental and neighborhood friendliness compared to construction. In addition, renovation is analyzed more in detail because it is the mean of the brown-to-green transformation used in this thesis.

Regarding the renovation process, both Expert 1 and Expert 3 agree that it would be nearly impossible to renovate the entire portfolio within one year. Therefore, it would make more sense to flatten out the CAPEX requirement and expand the renovation of the entire portfolio for more years. It also depends on the lease contracts, occupancy, and the current status of the building, as some buildings require more renovation than others to achieve green certification (Expert 1, p.7 and Expert 3, p.38). Suppose the status of the building suggests a full-scale renovation, which is, according to Expert 1, the case most of the time. In that case, the REIT undergoing the renovation should look in its lease contracts and wait until some leases expire and then renovate those buildings or parts of buildings no longer occupied by tenants. A negative side of this approach would be not getting any rental revenue, as the building would be entirely vacant during the renovation process (Expert 1, p.7). However, it is not always the case that a REIT can renovate its portfolio depending on when its lease contracts expire. In such cases, it depends on the occupancy of the building. If the building is fully occupied, Expert 1 and Expert 3 say that the tenants would have to be moved elsewhere, which would incur additional expense to the REIT as it would have to find a new temporary place for the tenants until the renovation is over (Expert 1, p.8 and Expert 3, p.37). Expert 1 expands this thought by mentioning that tenants would have to be willing to cooperate, and if it is not so, then the renovation would not be possible. It is also relatively rare that a clause making the tenants move is included in the leasing contract. Therefore, this would have to be agreed upon with the tenant before the renovation on a bilateral basis (Expert 1, p.11-12). If the building is not fully occupied, it would be possible to renovate the vacant floor and shift tenants around floors until the entire building is renovated. Both experts agree that this is possible and has been done in reality; however, the renovating REIT would need again permission from the tenants (Expert 1, p.8 and Expert 3, p.37). In addition, Expert 3 highlights that in such cases, the REIT would have to give its tenants a revenue discount for causing such inconvenience (Expert 3, p.37). Therefore, REIT should prepare itself for a lower rent revenue in the renovation period if it decides to shift its tenants around. Additionally, this would require more time as renovating on a floor-by-floor basis is relatively inefficient, and collaboration with the tenants could also cause potential renovation time extensions, according to Expert 3 (Expert 3, p.23). It is essential to mention that it is also common that the whole building is renovated in a way where the core structure of the building stays, but the rest is fully refurbished, meaning that all additional parts apart from the skeleton of the building are replaced for new ones. In such case, tenants would have to permanently be moved somewhere else even if the building is not fully occupied as it would not be possible to use the building during the renovation, says Expert 3 (Expert 3, p.22).

## 3.6 Operating expense

Another topic investigated in the interviews was how operational expenses are covered differently. In the literature part, the difference between gross and net lease contracts is distinguished by Reichardt (2013). He explains that tenants pay the base rent in the gross lease contract, and the REIT

covers all operational expenses tenants incur in their occupied space. However, a net lease contract works the other way, meaning that tenants pay the base rent and cover the operational expenses incurred in their occupied space. This difference between these two leasing contracts was asked in the interviews in order to connect these two leasing contracts with reality to see which one is used more often (Reichardt, 2013).

Based on Expert 1s' experience, either the landlord arranges everything and then distributes the operational expense to the tenant, who must pay it, or the tenant concludes the utility agreement with the utility company as an individual agreement meaning that he pays the operational expense himself without any involvement of the landlord (Expert 1, p.13). Expert 3 also shares his experience, saying that it is primarily the landlord paying for all the operational expenses, and then he charges the tenants based on their occupied space operational use (Expert 3, p.32). They both agree that this is the most common practice in Europe, especially in countries they gathered their experience from which are Germany, Austria, and Central and Eastern European countries.

When it comes to the gross leasing agreement where the landlord pays the operational expense for the tenant, Expert 1 says: *"I have not heard about arrangements where the landlord charges a higher rent but pays utilities himself without passing on the cost, so taking the price risk, because then he would be taking the price rise in utility costs which does not give the tenant motivation to be more energy efficient and only causes financial hardship to the landlord."* (Expert 1, p.13)

## 3.7 Certification

As most of the literature comes from the US, it is crucial to compare the types of certifications and their standards in the US with Europe since Inovalis, a REIT chosen for the empirical part, possesses its portfolio in Germany and France. In addition, as this was not mentioned in the literature, the different levels of certification were discussed with the interviewees to determine which level of certification is the market standard and which ones most of the REITs and real estate companies aim for.

According to Expert 1, the most common green certificate in Europe is BREEAM, as most of the clients he works with have it as well as their peers (Expert 1, p.15). Expert 2 is less direct than Expert 1 as she sees both LEED and BREEAM certificates equally, which are very common in Europe (Expert 2, p.19). Expert 1 believes that the perception has changed significantly regarding the certification level, and everyone is trying to go for the best certification. He says, *"It started with the need to have a certification, but in the last years, this has shifted to getting the best. So, platinum certification is already more or less the standard. If you have (only) the gold certification, it shows already that you are not doing the best you could"* (Expert 1, p.16). Expert 2 partially agrees, saying that companies pursue the certification on the higher end of the spectrum; however, only the most ambitious ones go for the highest levels, and most REITs aim for the second highest on average (Expert 2, p.19-20).

## 3.8 Geographies

Interviewees were also asked about the geography of green certification to identify if France and Germany, Inovalis' two asset locations, are environmentally friendly, which suggests to some extent the ease of pursuing a certification there.

Regarding France, Expert 1 sees it as one of the front runners in green certifications. He says that French banks are well experienced in environmental advisory and so are their clients. Germany is a similar story, Expert 1 says, with many certifications issued and a strong public awareness of the environment (Expert 1, p.16). Expert 2 expands this by including the issuance of green bonds into the topic, as Western Europe generally has a potent green bond market, implying strong overall use

of sustainable finance, including green certificates (Expert 2, p.3). Expert 1 and Expert 2 agree that Central and Eastern Europe lag behind the West with green certificates; however, it is still a big topic that is expected to intensify soon (Expert 1, p. 16-17 and Expert 2, p.17). There is still a gap between Western and Eastern Europe because the execution of regulatory pressures regarding the sustainability of buildings in these countries might be a problem, assumes Expert 1 (Expert 1, p.17).

## 3.9 Difference in asset classes

As the literature points out, the offices are much greener than the other asset classes in real estate (Figure 4). Expert 1 elaborated on this topic in the interview and provided some explanations based on his experience.

Expert 1 agrees that offices are already or are becoming green. He sees the motivation of the REITs to go green due to image benefits and offices' considerable operational expenses led by high utility costs. He also witnessed a trend of office REITs and real estate companies pursuing ESG ratings at a much higher rate than before. Another current trend that could stay for a longer time is the new way of work, according to Expert 1. This new way includes, for example, home office, which makes fewer people come to the office each day, saving space and requiring tenants to lease smaller areas. Therefore, office developers are implementing new design strategies to fulfill tenants' needs. This includes open areas for collaboration or shared desk policies and strengthens the demand for flex offices, a dedicated workspace that can be rented on flexible terms (Expert 1, p.9)

Expert 1 argues that likewise to offices for retail buildings, green certification is an essential topic as their tenants also look at the green aspect of the building when choosing a place where they will lease. In addition, the energy consumption is substantial for retail tenants, and thus they favor green buildings as they tend to save energy costs.

Regarding the residential asset class, tenants are willing to pay less for green buildings, although most would like to live in such buildings, as the rent is already too high for them, explains Expert 1. Additionally, Expert 1 adds that even if the tenants in residential properties would like to live in a green building, it would be tough to renovate as often leases for residential buildings are indefinite. It is, therefore, hard to shift these tenants around as it is their homes, and they are often unwilling to move away temporarily (Expert 1, p.9-10).

In the logistics asset class, green certificates are also a big topic; however, this has just come up quite recently. Due to the worldwide pandemic, demand for deliveries and online sales rose substantially and triggered the immense construction of logistics centers. Since this happened recently, when the sustainability topic has been quite popular, especially in the US and Europe, most of the newly built logistics assets were constructed green and thus already have green certification, says Expert 1. He explains further that since logistics centers are pretty easy to build compared to other asset classes, it is common to build a new one as soon as the current one depreciates. Therefore, the renovation of logistics centers is rare (Expert 1, p.10).

## 3.10 Sustainable finance and real estate companies

The last summarized topic from the interviews is sustainable finance and real estate companies which were discussed with Expert 2, who works at a sustainable finance department at Raiffeisen Bank International in Vienna, Austria.

Expert 2 briefly introduces the topic by pinpointing the start of real estate interest in the environmental topic, which is, according to her, the asbestos scandal that made real estate companies look better at what materials they use when constructing buildings. Biodiversity was also one of the first environmental topics in real estate due to the pressure from green peace. However,

the biggest booms came up a few years ago when real estate companies started financing themselves with sustainable products. Some time ago, real estate companies were sustainable on the project level; however, only recently, with the introduction of green bonds and loans, real estate companies and REITs are starting to become greener. The trend in the market in 2021 before the interest hike was green bonds and loans, according to Expert 2, which are of two different types. First, real estate companies issued green bonds and loans using proceeds, which makes them invest all of the financing issued in green projects. This has been the more popular type, as most of the bonds and loan proceeds of real estate companies would be used on green projects. Currently, the trend is that every new construction is somehow green, at least in Europe and the US. The second type of green product used by real estate companies is sustainability-linked bonds and loans. These bonds and loans have either sustainable KPIs or are linked to an ESG rating. A sustainable KPI is, for example, a percentage of a green portfolio that the company issuing the bond or loan has to adhere to else it will get worse pricing. ESG rating linked bonds and loans motivates the company to maintain or better its ESG rating. Expert 2 says that real estate companies have also started doing these sustainability-linked bonds and loans by now; however, since these debt products require much sustainable information, which only some companies disclose or collect, it is pretty cumbersome. As little sustainable information is collected or disclosed, it is hard to set sustainable KPIs. However, as most real estate companies have rather bad ESG ratings, they focus on improving their reporting of sustainable information as they want to issue these sustainable-linked debt instruments leaning more towards sustainable KPIs (Expert 2, p.9-10).

# 4. Empirical part

## 4.1 Methodology

### 4.1.1 General approach

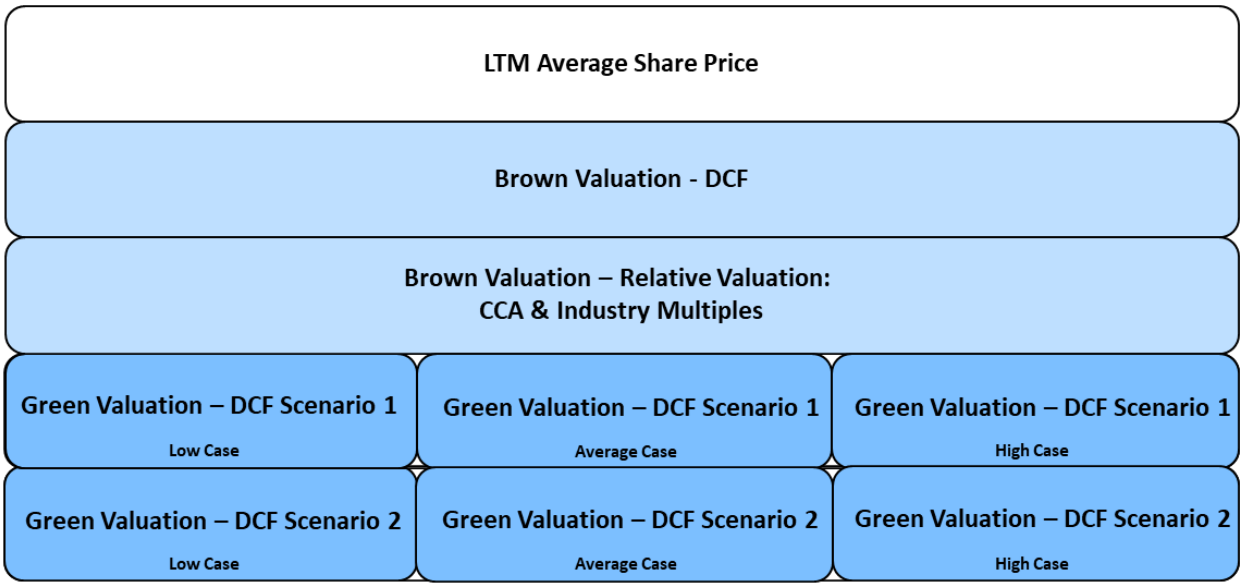
In order to answer the research questions, a case study was chosen which compares the value of a fully brown office REIT with zero percent of certified assets with the value of the same company with a fictitious fully green property portfolio. For this, two valuations were prepared; brown and green models. The first brown valuation is an “AS IS” perspective, meaning that the office REIT is valued based on its existing portfolio and thus with the existing growth, profitability, and risk according to chosen equity research analysts. The second green valuation is a hypothetical perspective that includes how the company’s growth, profitability, and risk would look if it transformed its property portfolio to a fully green one. In order to ensure comparability of the two valuations, the same methodological approach, namely the Discounted Cash Flow (DCF) approach, was used. The DCF method is well recognized and applied in practice. It is an intrinsic valuation method where the value of an asset is estimated based on its cash flows, growth potential, and risk. The DCF approach estimates the present value of the expected cash flows of the asset, discounted back at a rate that reflects the riskiness of these cash flows. This thesis follows the WACC approach for DCF, and thus the rate chosen is the Weighted Average Cost of Capital (WACC). It is the weighted average of the minimum rate of return that each provider of funds, namely equity shareholders and debt holders, for an underlying company expects (Damodaran, 2006).

The first step of the empirical part is the brown DCF valuation, which is based on equity research analysts’ assumptions. In order to make sure the results are plausible, a multiple method is applied, which consists of trading multiples of comparable companies (CCA) and industry multiples. Additionally, for the same purpose, the stock price of the office REIT is also analyzed. However, it is important to note that for answering the research question, the main point of comparison is the brown and the green DCF valuations and not the comparison of DCFs and the stock price or

multiples. The second step is the green DCF valuation prepared based on insights from the literature review and interview parts. Lastly, the brown and green valuations are compared.

A summary of the empirical part methodology is provided below in figure 14 - Overview of valuation methodology.

Figure 14 – Overview of valuation methodology




Source: Inovalis Real Estate Investment Trust (2022), Capital IQ (2022), and Refinitiv Datastream (2022)

### 4.1.2 Short description of the brown valuation

The first DCF model is of Inovalis Real Estate Investment Trust (Inovalis REIT) of the *"AS IS"* state. This company was chosen as it is a real estate company owning only office assets and, most notably, due to zero percent of its portfolio being certified, thus termed entirely brown. This first valuation uses analysts' estimates in calculating the DCF model and only serves for comparison purposes. A plausibility check is then conducted by calculating a Comparable Company Analysis (CCA) and Damodaran's industry multiples. In this relative valuation, the asset is valued based on how similar assets are priced in the market. Relative valuation provides an excellent opportunity to check if the DCF is plausible (Damodaran, 2006).

### 4.1.3 Short description of the green valuation

The second valuation is also a DCF model of Inovalis REIT; however, this time, not of its *"AS IS"* state but a hypothetical state when it retrofits its entire portfolio from completely brown into a fully certified green. This hypothetical valuation model uses assumptions on occupancy, operational expenses, capital expenditure, cost of debt, and equity. These assumptions impact the models based on the summary of the reviewed literature. For example, if the literature summary depicts occupancy rising by a range of 0.9-17 percent, the REIT's revenue will also rise by an equivalent percentage. The green hypothetical valuation follows two different scenarios. The first green scenario is simplistic and somewhat unrealistic as it is assumed that the entire portfolio transformation from brown to green will happen already in the second half of 2021, meaning capital expenditure incurs only this year, and all benefits of the green portfolio, like higher occupancy or lower operational expense, apply from 2022 on. The second green scenario is much more realistic as it also includes information from the interviews about the renovation process. Therefore, the

buildings are renovated only in groups, so the CAPEX needed for the renovation is spread between 2021 and 2026, making the renovation period much longer than in the first scenario. The benefits from green buildings also apply consecutively for each building only after it is renovated. Moreover, each of the two green models has three different cases, namely, *"Low Case," "Average Case," and "High Case."* These cases are determined based on the level of renovation and value driver ranges gathered from the literature. These three cases are described in more detail in the Green DCF chapter.

### 4.1.4 Comparisons of the brown and green valuations

The Internal Rate of Return (IRR) of the green renovation investment is calculated for both scenarios to show if the transformation to a green portfolio that requires substantial capital expenditure is financially worth it and which scenario has a higher return on investment. Afterwards, these three DCF valuation models, *"AS IS"* and both scenarios of the hypothetical valuation, are compared with one another and with Inovalis' average share price based on one year (27.3.2021-28.3.2022) to depict whether the portfolio greenness brought any value to the REIT.

Calculating a value of a fully brown non-certified REIT and then comparing it to a hypothetical valuation of the same REIT if it would fully transform its office building portfolio to entirely green certified helps to answer the research questions. First, such a method will depict if the benefits of green certification outweigh the costs and risks. If the REIT's green value is higher than the brown REIT's value, it would mean that certification of the buildings, assuming required retrofitting as well, brings value to the REIT and thus outweighs the costs. Second, one can determine the factors driving the value using the valuation method. Suppose the green valuation is higher than the brown one. In that case, the benefits of green buildings, such as higher occupancy, lower operational expenses, and cost of capital, outweigh the required capital expenditure needed for the renovation process and drive REIT's value. It can also be calculated in the valuation model which benefits drive the value of the REIT the most and what impact on the value they have. Lastly, the valuation method also allows for calculating the internal rate of return of the hypothetical green valuation model, where the free cash flows of both green scenarios are used to calculate the IRR rate. The calculated IRR rate then answers the research question of the internal rate of return on Inovalis REIT's portfolio green renovation investment and whether Inovalis should undergo such investment.

## 4.2 Introduction of Inovalis REIT

Inovalis REIT is an unincorporated, open-ended real estate investment trust pursuant to a declaration of trust under the laws of the Province of Ontario in Canada. The REIT's primary purpose is to acquire and own office properties, primarily located in France and Germany but also opportunistically in other European countries where the respective assets meet the REIT's investment criteria. In the third quartal of 2021, the REIT owned thirteen office properties, seven in France and six in Germany, either directly or via a Joint Venture. Inovalis was established in 2013 in Toronto, Canada. It has around 300 employees and trades on the Toronto Stock Exchange, where it had an IPO in 2013. As portrayed in figure 15, Inovalis had a last twelve months' total revenue of almost 35 million Canadian Dollars as of Q3 2021. Its net income was 36.6 million, and its FFO was 18.2 million Canadian Dollars (*Inovalis Real Estate Investment Trust,* 2022).

Figure 15 – Inovalis REIT brief financial overview (FY2016-Q3 LTM 2021)

| CAD million | FY2016 | FY2017 | FY2018 | FY2019 | FY2020 | Q3 LTM 2021 |
|---|---|---|---|---|---|---|
| Total Revenue | 32.057 | 35.109 | 39.336 | 45.719 | 29.243 | 34.830 |
| *Growth %* | | *10%* | *12%* | *16%* | *-36%* | *19%* |
| Total OPEX | 13.905 | 14.061 | 15.190 | 17.496 | 17.031 | 18.525 |
| *Margin %* | *43%* | *40%* | *39%* | *38%* | *58%* | *53%* |
| Net Income | 23.284 | 19.167 | 15.461 | 36.449 | 18.196 | 36.611 |
| *Growth %* | | *-18%* | *-19%* | *136%* | *-50%* | *101%* |
| FFO | 15.759 | 19.550 | 27.133 | 24.372 | 22.925 | 18.224 |
| *Margin %* | *49%* | *56%* | *69%* | *53%* | *78%* | *52%* |
| Total RE Assets | 412.232 | 440.813 | 421.937 | 478.700 | 541.218 | 440.422 |
| Net Debt | 244.626 | 270.958 | 262.424 | 238.749 | 222.099 | 235.906 |
| Payout Ratio % | 58.74% | 82.49% | 107.98% | 45.35% | 124.12% | 71.36% |

Source: Inovalis Real Estate Investment Trust (2022)

As mentioned above, The REIT was chosen due to its zero percent certified green portfolio and bad Environmental, Social, and Governance (ESG) performance. According to Refinitiv, they perform worst in their peer group, with the lowest ESG score of only 18.09 and a grade of D+. When looking into each pillar of Inovalis' rating, it is easily noticeable that the environmental pillar with D- is the worst and, with its highest weight of 37.6 percent, drives the entire ESG rating of Inovalis down. Compared with peers, Inovalis also has the worst environmental pillar grade. Slate Office REIT and True North Commercial REIT, two of Inovalis' peers, also have a D-. The reason for such a bad rating is that Inovalis has no ESG report and does not disclose nor gather ESG data (Refinitiv Datastream, 2022). In its 2021 annual report, Inovalis mentions that the portfolio-wide ESG audit of its assets is currently taking place and is expected to be completed in 2022. It adds that this assessment will generate critical data that can be used to identify measurable ESG objectives to be integrated into Inovalis' operational and financial performance targets. Besides this information on the upcoming ESG audit, Inovalis does not mention anything else in its reports, presentations, or website. It also has no information on its building certification and thus it is assumed to be at zero percent (Inovalis REIT *Annual Report 2021,* 2021).

Figure 16 shows an overview of Inovalis' portfolio with all relevant information. The (1) represents investments that are classified as joint ventures. According to Inovalis' Q3 2021 Management's Discussion and Analysis report, the results in Figure 16, excluding the number of tenants, occupancy metrics, and weighted average lease term, are presented on a proportionate share basis at the REIT's ownership percentage of the related investment. The (2) informs that the Jeneurs property is classified as held for sale as of Q3 2021 (*Q3 2021 Management's Discussion and Analysis Report,* 2021. The detailed information on Inovalis' portfolio is vital, especially for the second scenario renovation scheduling described in more detail in Scenario 2 assumptions.

Figure 16 – Inovalis' portfolio overview as of Q3 2021

| Asset | % owned | Fair value | REIT's Total Portfolio Value | Gross Leaseable Area (GLA) | Contribution to Total Portfolio rental revenue | # of tenants | Occupancy rate | Weighted occupancy rate | WALT (end of lease) |
|---|---|---|---|---|---|---|---|---|---|
| | | (CAD) | % | sq. ft. | % | | % | % | Years |
| Jeuneurs (2) | 100% | 104,571 | 15% | 50,407 | 11% | 1 | 100% | 100.0% | 1.9 |
| Courbevoie | 100% | 33,881 | 5% | 95,903 | 3% | 5 | 33% | 34.0% | 4.8 |
| Sablière | 100% | 34,266 | 5% | 41,043 | 3% | 6 | 59% | 59.4% | 3.1 |
| Baldi | 100% | 33,166 | 5% | 123,657 | 7% | 10 | 76% | 86.0% | 2.2 |
| Metropolitain | 100% | 96,911 | 14% | 78,818 | 11% | 6 | 91% | 88.5% | 5.9 |
| Arcueil | 100% | 142,067 | 20% | 334,521 | 28% | 1 | 100% | 100.0% | 1.4 |
| Délizy (1) | 50% | 19,092 | 2% | 71,617 | 3% | 19 | 70% | 71.5% | 4.4 |
| **Subtotal France** | | **463,954** | **66%** | **795,966** | **66%** | **48** | **82.5%** | **82.5%** | **2.6** |
| Trio | 94,9% | 68,271 | 10% | 193,487 | 10% | 7 | 87% | 87.0% | 3.8 |
| Bad Homburg | 100% | 31,860 | 5% | 109,104 | 4% | 4 | 52% | 56.2% | 2.3 |
| Duisburg (1) | 50% | 45,734 | 7% | 108,960 | 6% | 1 | 88% | 87.5% | 6.3 |
| Stuttgart (1) | 50% | 35,035 | 5% | 121,416 | 6% | 5 | 99% | 99.7% | 3.0 |
| Arrow - Neu-Isenburg (1) | 50% | 29,699 | 4% | 67,334 | 5% | 6 | 98% | 97.8% | 2.1 |
| Kösching (1) | 50% | 21,390 | 3% | 53,058 | 3% | 1 | 100% | 100.0% | 6.2 |
| **Subtotal Germany** | | **231,989** | **34%** | **653,359** | **34%** | **24** | **85.7%** | **86.8%** | **3.9** |
| **Total - France and Germany** | | **695,943** | **100%** | **1,449,325** | **100%** | **72** | **84.0%** | **84.9%** | **3.2** |
| **IP Portfolio** | | **544,993** | **78%** | **1,026,940** | **71%** | **40** | **80.9%** | **82.2%** | **2.6** |
| **JV Portfolio** | | **150,950** | **22%** | **422,385** | **29%** | **32** | **91.3%** | **91.1%** | **4.2** |

Source: Q3 2021 Management's Discussion and Analysis Report (2021)

## 4.3 Brown DCF

The first valuation model is a DCF of an *"AS IS"* state of Inovalis REIT as of Q3 2021. As mentioned above, this model serves as a benchmark to which the hypothetical green DCF models are compared to determine if the brown portfolio's transformation into green increases REIT's value.

### 4.3.1 Assumptions

The model forecasts years 2021-2025 and uses analysts' estimates from Capital IQ and Refinitiv and averages of the two, as shown in figure 17 (Capital IQ, 2022 and Refinitiv Datastream, 2022). The analysts do not estimate property expenses and thus they are estimated for the entire 2021-2025 period as a percentage of revenue from the financial year 2020, which is 31.8 percent. Other methods are used for forecasted years 2023 (partially), 2024, and 2025 where the forecasts do not apply. For revenue, the long-term goal of inflation of 2 percent is used. A tax rate of 2.3 percent is calculated as the average of the last five years between 2016 and 2021. However, 2018 is excluded as the 44.2 percent tax paid that year was an outlier. The estimates for CAPEX from 2021-2023 are prolonged to 2024 and 2025, meaning that CAPEX is also 0.8 million Canadian Dollars. For all other Profit and Loss statement accounts selling general and administrative expenses and other operating expenses/incomes, the average of the past percentage of revenue is calculated and applied as a margin for years 2023-2025.

Figure 17 – Equity analysts' estimates

| | FY2021 | FY2022 | FY2023 |
|---|---|---|---|
| **Revenue** | | | |
| YoY Growth S&P | 32.2% | 0.6% | 16.3% |
| YoY Growth Refinitiv | 32.6% | 4.1% | 11.5% |
| YoY Growth Average | 32.4% | 2.4% | 13.9% |
| **SG&A Expense** | | | |
| YoY Growth Refinitiv | 1.5% | 6.4% | -21.7% |
| **Maintanance CAPEX** | | | |
| S&P | 80.0% | 80.0% | 80.0% |
| **Occupancy rate** | | | |
| Refinitiv | 87.1% | 91.3% | |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

The change in net working capital (NWC) calculation is depicted in Appendix under Valuations, Brown valuation 1, Net working capital. Furthermore, D&A is not added back in the free cash flow calculation in figure 18 as Capital IQ, where the financial statements were taken from, deducts D&A, in its term "*Asset Writedown,"* only after operating income/EBIT and thus it is only showed in Inovalis' net profit but not in the operating income/EBIT. All of these above-mentioned forecasted items can be seen in figure 18, with the estimates' effect on Inovalis' future cash flows.

Figure 18 – Free cash flow calculation

| For the Fiscal Period Ending | Reclassified 12 months Dec-31-2016 | Reclassified 12 months Dec-31-2017 | Restated 12 months Dec-31-2018 | Reclassified 12 months Dec-31-2019 | 12 months Dec-31-2020 | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| *Currency in millions* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* |
| Rental Revenue | 24.404 | 24.946 | 25.434 | 25.524 | 28.858 | 33.535 | 34.326 | 39.109 | 39.891 | 40.689 |
| Other Revenue | 7.653 | 10.163 | 13.902 | 20.195 | 0.385 | 5.182 | 5.304 | 6.043 | 6.164 | 6.288 |
| **Total Revenue** | **32.057** | **35.109** | **39.336** | **45.719** | **29.243** | **38.717** | **39.630** | **45.152** | **46.055** | **46.977** |
| *YoY % growth RR* | | *-5.5%* | *9.0%* | *12.8%* | *2.8%* | *32.4%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* |
| *YoY % growth OR* | | | | | | *32.4%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* |
| *Occupancy* | | | | | | *84%* | *87.1%* | *91.3%* | | |
| Property Exp. | 8.923 | 8.768 | 9.957 | 10.948 | 9.167 | 10.653 | 10.904 | 12.423 | 12.672 | 12.925 |
| *% of revenue* | *36.6%* | *35.1%* | *39.1%* | *42.9%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* |
| Selling General & Admin Exp. | 5.152 | 5.293 | 5.223 | 6.548 | 7.864 | 7.978 | 8.492 | 6.650 | 6.783 | 6.919 |
| *% of revenue* | *16.1%* | *15.1%* | *13.3%* | *14.3%* | *26.9%* | *20.6%* | *21.4%* | *14.7%* | *14.7%* | *14.7%* |
| Other Operating Expense/(Income) | (0.170) | | | | | | | | | |
| **Operating Exp., Total** | **13.905** | **14.061** | **15.180** | **17.496** | **17.031** | **18.631** | **19.396** | **19.073** | **19.455** | **19.844** |
| *% of revenue* | *57.0%* | *56.4%* | *59.7%* | *68.5%* | *59.0%* | *55.6%* | *56.5%* | *48.8%* | *48.8%* | *48.8%* |
| **Operating Income / EBIT** | **18.152** | **21.048** | **24.156** | **28.223** | **12.212** | **20.086** | **20.235** | **26.079** | **26.601** | **27.133** |
| *% of revenue* | *56.6%* | *60.0%* | *61.4%* | *61.7%* | *41.8%* | *51.9%* | *51.1%* | *57.8%* | *57.8%* | *57.8%* |
| *Tax Rate %* | *5.2%* | *4.2%* | *44.2%* | *2.2%* | *0.6%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* |
| **NOPAT** | **17.211** | **20.169** | **13.477** | **27.609** | **12.140** | **19.614** | **19.759** | **25.467** | **25.976** | **26.496** |
| Capex | - | 0.100 | 0.700 | 1.800 | 1.366 | 0.800 | 0.800 | 0.800 | 0.800 | 0.800 |
| Change in NWC | 0.000 | 1.239 | 21.437 | (41.224) | 14.807 | 3.326 | (5.583) | (0.256) | (0.042) | (0.043) |
| **Free Cash Flows (FCF)** | | **18.830** | **(8.660)** | **67.033** | **(4.033)** | **15.489** | **24.542** | **24.922** | **25.218** | **25.738** |
| | | | | | | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 |
| *% discount factor* | | | | | | *94.1%* | *88.5%* | *83.3%* | *78.4%* | *73.8%* |
| **PV FCF** | | | | | | **14.574** | **21.729** | **20.762** | **19.767** | **18.983** |
| Terminal Value (TV) | | | | | | 613.721 | | | | |
| **PV TV** | | | | | | **452.648** | | | | |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

These free cash flows are then discounted by the chosen discount factor WACC. The perpetual growth needed to calculate the terminal value was set at 2 percent, as already mentioned above, which is the long-term goal of inflation. WACC for this model was calculated based on the data from figure 19. The cost of equity is calculated using the capital asset pricing model, where the risk-free return is the yield of a Canadian 10 Year Government Bond as of March 2022, as the valuation is based on the Canadian Dollar (*TMBMKCA-10Y: Canada 10 Year government bond overview,* 2022). Equity Risk Premium (ERP) is based on Damodaran's ERP data (Damodaran, 2022) and is calculated as an average of German and French ERP as Inovalis has its property portfolio in these two countries. Beta, the measure of the company's volatility and shows how much the company's stock deviates from the market (Damodaran, 2006), is calculated using the average unlevered Beta from years 2017-2021 based on European REITs, as Inovalis has its assets there. It is then levered to Inovalis capital structure using the Harris-Pringle formula (Damodaran, 2022). Size premium is also applied to

the cost of equity calculation as Inovalis has a small market capitalization of only about CAD 320 million and therefore is considered riskier based on Duff and Phelps's logic. This logic says that small companies are not well diversified and are more prone to competitors and changes in market conditions. Based on Duff and Phelps' size premium assessment, considering the low Inovalis' market cap, 3.39 percent is added to the cost of equity calculation (Duff and Phelps, 2019). The cost of debt is taken from the company's Q3 financial report and portrays Inovalis' weighted average interest rate of its debt. The tax rate is the average of past years (FY 2016-LTM 2021), excluding the year 2018, where the tax rate was a very high outlier. Net debt is used as of Q3 2021, and market capitalization is calculated on 21.3.2022.

Figure 19 – WACC calculation

| | |
|---|---|
| Net Debt | 235.906 |
| Market Cap | 319.898 |
| D/(D+E) | 42.44% |
| Tax Rate % | 2.35% |
| **Cost of Equity** | **9.45%** |
| Risk Free Rate | 2.4% |
| Beta | 0.82 |
| ERP | 4.49% |
| Size Premium | 3.39% |
| **Cost of Debt** | **2.02%** |
| | |
| **WACC** | **6.28%** |

Source: Capital IQ (2022), Refinitiv Datastream (2022), Damodaran (2022), Duff and Phelps (2019) and (*TMBMKCA-10Y: Canada 10 Year government bond overview,* 2022).

### 4.3.2 Results

As shown in figure 20, the results indicate that the company is neither over nor undervalued. There is only a one percent downside of its implied share price calculated by the DCF compared to Inovalis' share price, which is an average of the last twelve months from 27.3.2021 until 28.3.2022. Since the brown DCF valuation used mainly estimates from equity analysts, it is no surprise that the result also goes in hand with equity analysts' results that issued a *"hold"* recommendation for Inovalis' stock based on the Q3 2021 results. These equity analysts' results are obtained from Refinitiv, and the contributors are Laurentian Bank Securities, Desjardins Securities, and IA Capital Markets.

Figure 20 – Brown DCF valuation results

| | |
|---|---|
| **Enterprise Value** | **548.463** |
| Total Debt | 274.480 |
| Cash | 38.574 |
| Minority interest | 1.410 |
| **Equity** | **311.147** |
| Shares Outstanding | 32.401 |
| **Implied Share Price** | **9.60** |
| Share Price | 9.70 |
| **Upside/Downside** | **(1.00%)** |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

The brown DCF valuation serves as a benchmark for comparison with the green valuation results. The green valuation only differs from the brown valuation by green assumptions and by the process of renovation. Otherwise, all of the assumptions used in brown valuation are also used in green valuation. This means that any subjective or even faulty assumptions could, on the one hand, wrongly influence the implied share price but, on the other hand, which is more important, do not influence the result when comparing green results with the brown. If there is a faulty or subjective

assumption in brown valuation, it will automatically be in the green one as well. This faulty or subjective assumption will cancel itself out when comparing green and brown results. Therefore, despite having some degree of subjectiveness in the assumptions, the brown valuation results should still serve as a good base for the comparison with the results in the green valuations.

### 4.3.3 Plausibility check – CCA, industry multiples and LTM average share price

As mentioned in the methodology part, a relative valuation is performed as a plausibility check for the DCF valuation to challenge its result. Firstly, a CCA is conducted comparing Inovalis' implied share price from the DCF valuation with Inovalis' share price calculated based on its peers. Later, Inovalis' implied share price is compared to a share price of Inovalis calculated based on industry multiples.

Figure 21 – Inovalis' peer multiples

| Company Name | LTM EV/Total | NTM EV/Total Revenues | LTM EV/EBITDA | NTM EV/EBITDA | LTM Price/AFFO | NTM Price/AFFO |
|---|---|---|---|---|---|---|
| **Inovalis Real Estate Investment Trust (TSX:INO.UN)** | 13.1x | 9.49x | 28.58x | 18.47x | 22.00x | 20.13x |
| | | | | | | |
| **Minto Apartment Real Estate Investment Trust (TSX:MI.UN)** | 14.2x | 12.4x | 25.6x | 21.3x | 20.5x | 16.6x |
| **Allied Properties Real Estate Investment Trust (TSX:AP.UN)** | 17.1x | 15.5x | 29.0x | 26.5x | 22.9x | 21.4x |
| **Slate Office REIT (TSX:SOT.UN)** | 8.6x | 7.2x | 33.2x | 17.5x | 10.9x | 10.0x |
| **Artis Real Estate Investment Trust (TSX:AX.UN)** | 8.5x | 9.5x | 15.6x | 16.1x | 12.9x | 12.8x |
| **Dream Office Real Estate Investment Trust (TSX:D.UN)** | 9.3x | 14.0x | 14.1x | 23.6x | 22.3x | 22.1x |
| **True North Commercial Real Estate Investment Trust (TSX:TNT.UN)** | 10.7x | 10.7x | 19.6x | 19.5x | 12.6x | 13.4x |
| | | | | | | |
| **Median** | **10.0x** | **11.6x** | **22.6x** | **20.4x** | **16.7x** | **15.0x** |
| **Average** | **11.4x** | **11.5x** | **22.9x** | **20.7x** | **17.0x** | **16.1x** |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

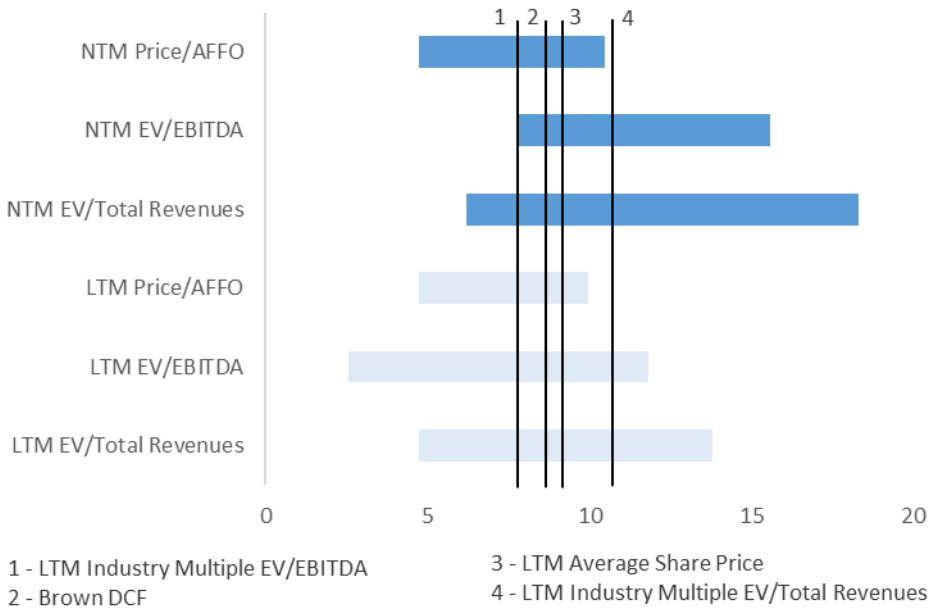
In Inovalis' case, a peer group of six companies similar to Inovalis was chosen based on an overlap of peers picked by financial market data providers Capital IQ and Refinitiv as of Q3 2021 (figure 21). For these peers, last twelve months (LTM) and next twelve months (NTM) multiples, namely Enterprise Value (EV)-to-Revenues, Enterprise Value (EV)-to-EBITDA and Price to Adjusted Funds from Operations (AFFO), were chosen. The reason for this multiple selection has been based on the Financial Edge course (Cordone, 2022). The Price-to-AFFO is the least known one, used explicitly in REIT valuations. AFFO is an adjusted version of funds from operations (FFO) which includes net income, subtracts depreciation and amortization, gains on the sale of real estate assets, and adds back losses. FFO is still somewhat of an imprecise measure as it is not standardized. Therefore, it makes more sense to calculate the AFFO. AFFO subtracts from the FFO the maintenance CAPEX, amortization of leasing commissions and tenant improvements, removes the straight-line rent expense, and adjusts for financing costs and gains/losses on early retirement of debt (Cordone, 2022). The LTM Price-to-AFFO multiple gives a price range from 4.74 to 9.94 Canadian Dollars, and the NTM Price-to-AFFO shows a slightly higher price range of 4.75-10.48 Canadian Dollars. The LTM EV-to-Revenues multiple gives a price range from 4.72 to 13.82 Canadian Dollars. The NTM EV-to-Revenues shows a higher price range of 6.21-18.31 Canadian Dollars as Inovalis' revenues are estimated to grow by more than 32 percent. The LTM EV-to-EBITDA multiple gives a price range from 2.55 to 11.81 Canadian Dollars and the NTM Price-to-AFFO shows a lot higher price range of 7.83-15.57 Canadian Dollars, again driven mainly by vast revenue growth. These price ranges are portrayed in figure 22.

Another plausibility check in the relative valuation is the comparison with industry multiples. When looking into Professor Damodaran's database, one can find, besides other data, REIT-specific industry multiples from the US companies. Specifically, the database shows an LTM Enterprise Value-to-Sales multiple of 14.23 and an LTM Enterprise Value-to-EBITDA of 26.81 for REITs based on

238 US REITs. Calculating these multiples into Inovalis' price, the result is 10.78 and 8.72 Canadian Dollars, respectively. This indicates that LTM Enterprise Value-to-Sales overvalues Inovalis share price, calculated as an average between 27.3.2021 – 28.3.2022, by approximately 12 percent, and LTM Enterprise Value-to-EBITDA undervalues it by roughly 9 percent (Damodaran, 2022).

Both comparisons, namely the one with peer group and the other with industry multiples, give similar results to the DCF valuation share price result and thus approve the DCF valuation. A summary of brown DCF, CCA, industry multiples and LTM average share price results can be found in the figure 22.

Figure 22 – Intrinsic vs. relative valuation: comparison of results




Source: Capital IQ (2022) and Refinitiv Datastream (2022)
Note: X-axis shows Canadian Dollars

Unlike the DCF valuation, the relative valuation using the Comparable Company Analysis (CAA) is not required to be that detailed as it is not used in the green valuation as a comparison. The reason for this is that in the CCA, the multiples used do not depict CAPEX spent on renovation and thus would give a faulty result compared to other comparable companies as they would not show the full image of the renovation process. Also, in the second green valuation scenario, the effect of the value drivers is not shown in the following year but much later; thus, their impact will not be reflected in the forward-looking multiples. Therefore, the relative valuation is used only to challenge the brown DCF result and is not used further as a comparison tool in the green DCF models.

## 4.4 Green DCF

The second and main part of the empirical part of the thesis is the green valuation. The green valuation attempts to answer the research questions by recreating the brown DCF model into a green one in which Inovalis would retrofit its portfolio from entirely brown to fully green. On the one hand, this renovation process would cost Inovalis a lot of money, increasing capital expenditure. On the other hand, it will benefit Inovalis through higher occupancy, lower operating expense, and lower cost of debt and equity. These costs and benefits assumptions are based on the literature review and used as quantifiable assumptions in the green DCF models. For example, the literature papers depict an average lower operational expense for green buildings compared to brown

buildings by 8.03 percent. Therefore, an assumption in the green valuation is that after the buildings are renovated, they will incur 8.03 percent less operational expense than when they were brown. The goal of the green valuation is to determine if these benefits outweigh the required CAPEX and drive the value of Inovalis up.

The chosen mean of the transformation process from brown to green is renovation, as it is the simplest process to use in the valuation. It is the best way to transfer an entirely brown property portfolio to a fully green one. As mentioned in the interviews, buying new, already green buildings would be the most profitable way of green portfolio transformation. However, it will be hard to transform the whole portfolio by only buying new green buildings. Construction despite being cheaper can be carbon intensive, hard to implement and it takes a much longer transformation period. Also, it will be very cumbersome to approximate in a valuation model (Expert 1, p.6, 18-19 and Expert 3, p.3).

The green valuation consists of two scenarios. The first scenario, as mentioned in the methodology part, is simple but unrealistic as it assumes the whole renovation process to be done by the end of 2021, meaning CAPEX incurs only in 2021, and all benefits of the green portfolio, like higher occupancy or lower operational expense, apply from 2022 on. The second scenario is more realistic because it also includes information gathered in the interviews about the renovation process. This means that the building portfolio is not renovated all at once but in several stages. Therefore, the capital expenditure needed for the renovation is spread between 2021 and 2026. The benefits from green buildings also apply consecutively for each building only after it is renovated (Expert 1, p.7 and Expert 3, p.38).

Each of the two scenarios has three cases. These three cases are *"Low," "Average,"* and *"High"* and refer to the numerical amounts used as the quantified assumptions. For example, according to the literature, occupancy increased by 0.9 to 17 percent when comparing green against brown buildings. Therefore, in the *"Low Case,"* the amount 0.9 percent is used, in the *"High Case,"* 17 percent is used and in the *"Average Case"* an average based on the literature and not just by summing 0.9 and 17 percent and then dividing it by two, of 6 percent is used. The same logic is applied to other assumptions of value drivers like operational expense, cost of capital, and capital expenditure. The *"Low Case"* resembles the lowest level of LEED certification, *"Certified,"* while the *"High Case"* shows the benefits and costs of the *"Gold"* and *"Platinum"* LEED green certification levels. However, this could only be perceived approximately as each literature paper has a different sample, and not every paper has the lowest level of certification *"Certified"* or equivalent (for other certifiers like BREEAM) and the highest *"Platinum"* or *"Gold"* and equivalents.

All of the assumptions from the brown DCF model stay the same and are only adjusted by the green assumptions gathered from the literature. This means that the base assumptions on growth, margins, WACC, terminal growth, and all others are the same for both brown and green DCF models. However, in the green DCF models, the green assumptions from the literature are added to the existing brown assumptions from the equity research analysts. For example, an assumption used in the brown DCF states that in 2022 the property expense will be 31.8 percent of rental revenue. In the green DCF (scenario 1), however, the property expense will decrease by 8.3 percent in 2022 since the portfolio is already green, and therefore the buildings become more energy efficient. Thus, the overall property expense in 2022 for the green valuation (scenario 1) will be 29.2 percent as it decreases by 8.3 percent due to the green portfolio transformation in comparison to the 31.8 percent estimate from the brown valuation.

### 4.4.1 Scenario 1 assumptions

As mentioned above, the first green DCF scenario is relatively simple but still uses all assumptions gathered from the literature. However, it does not use any information from the interviews about the renovation process. The model is forecasted for five years until 2025 and assumes the renovation will be done by the end of 2021. That is why the renovation's capital expenditure is fully accounted for in the forecasted year 2021. All benefits of the green transformation are accounted for in 2022 after the renovation is done, and Inovalis' portfolio is entirely green. These benefits and CAPEX ranges are depicted in Figure 23 and are described in more detail in the text below.

Figure 23 – Green value driver assumptions

| | Low Case | Average Case | High Case |
|---|---|---|---|
| Occupancy | 0.90% | 6.00% | 17.00% |
| Operating Cost | 4.10% | (8.03%) | (15.28%) |
| Cost of Equity | (1.12%) | (1.65%) | (2.19%) |
| Cost of Debt | (0.16%) | (0.28%) | (0.40%) |
| CAPEX | 1.24% | 4.02% | 11.29% |

Source: Leskinen et al (2020), Pivo and Fisher (2009), Fuerst and McAllister (2009), Miller et al. (2008), Reichardt (2013), Shiers (1999), Nyikos et al. (2012), Eichholtz et al. (2018), Hsieh et al. (2020), Eichholtz et al. (2019), An and Pivo (2018), Kats (2003), Kats (2010) and Luay and Kherun (2015)

However, it is important first to mention why the rental premium is not included in the empirical green valuation. The reason for this is, as Reichardt (2013) found out in his paper, that there is no rental premium if the landlord directly benefits from the energy efficiency of his/hers building lowered operating expense. This is the case for Inovalis, exactly as Expert 1 and Expert 3 explain in the interviews (Expert 1, p.13 and Expert 3, p.32), as it pays all the operational expenses and then charges the tenants based on how much space they occupy via rent. Therefore, if the operational expense is lower due to the greenness of the buildings, Inovalis saves costs due to lower property expenses and by keeping the rent and the operational expense charge at the same price as before when the buildings were brown.

Occupancy, the first used value driver in the valuation, increases by 0.90 to 17.00 percent, according to the literature, depending on the certification level and other factors like location, type, and age of buildings. On average, the literature shows a 6 percent increase in occupancy when comparing green-certified buildings against brown non-certified buildings. This range is calculated based on Leskinen et al. (2020), who summarize the results of seven different papers, including Pivo and Fisher (2010), Fuerst and McAllister (2009), and Miller, Spivey, and Florance, 2008 (Equation 1).

Equation 1 – Occupancy, *"Average Case"*

$$6.00\% = 6.00\% \ (Leskinen\ et\ al., 2020)$$

The next value driver in the first scenario of the green DCF is operational expenses. These range from a 4.10 percent increase in the *"Low Case"* to a 15.28 percent decrease in the *"High Case"* with an average of 8.03 percent decrease. These numbers are calculated as a weighted average of literature papers concerning this topic based on the quality. This means that the papers with higher journal ranks and citations have a higher weight in the weighted average than those with lower or no journal ranks and low citations. The highest weight in calculating operational expense change for green buildings is Leskinen et al. (2020) primarily as it summarizes five papers concerning the operating expense green value driver (Pivo and Fisher (2010), Devine and Kok (2015) and others). The second highest weight is assigned to Nyikos et al. (2012) due to its B journal rating and 47

citations on Google Scholar. Finally, Shiers (1999), Miller et al. (2008), and Reichardt (2013) all have the same lowest weight because they do not have a journal rating (Equation 2).

Equation 2 – Operational expense, *"Average Case"*

$$-8.03\% = \frac{1}{2} * -3.17\%(Lesiknen\ et\ al., 2020) + \frac{1}{2} * (\frac{1}{2} * -6.30\%(Nyikos\ et\ al., 2012) + \frac{1}{2} * (-18.00\%(Shiers, 1999) - 35.00\%(Miller\ et\ al., 2008) - 5.40\%(Reichardt, 2013))/3)$$

The lower cost of equity is not vastly covered in the reviewed literature, and thus the calculation of the range is relatively simple. Two-thirds of the weight are assigned to Hsieh et al. (2020), who have a C rank and 14 citations. The remaining one-third is assigned to Eichholtz et al. (2018), who only have three citations and no rating. However, Eichholtz is considered a prominent figure in real estate academics as he has other papers written about green buildings with A+ and B journal rankings**.** The weighted average of the two papers results in decreasing cost of equity ranging from 1.12 to 2.19 percent. The average stands at a decrease of 1.65 percent (Equation 3).

Equation 3 – Cost of equity, *"Average Case"*

$$-1.65\% = \frac{2}{3} * -3.49\%(Hsieh\ et\ al., 2020) + \frac{1}{3} * -0.74\%(Eichholtz\ et\ al., 2018)$$

Similarly to the cost of equity, the cost of debt is calculated based on two papers, namely Eichholtz et al. (2017) and An and Pivo (2020). The range for decreasing the cost of debt for green buildings compared to brown ones is calculated as the average of these two papers. It results in a decreasing range of 0.16-0.40 percent with an average of 0.28 percent (Equation 4).

Equation 4 – Cost of debt, *"Average Case"*

$$-0.28\% = \frac{1}{2} * -0.46\%(Eichholtz\ et\ al., 2017) + \frac{1}{2} * -0.10\%(An\ and\ Pivo, 2020)$$

The last value driver is the capital expenditure which is assumed to be higher than in the brown valuation due to the renovation cost. The amount of required CAPEX for the portfolio renovation is determined based on a weighted average of values from eleven literature papers. The highest weight in the calculation is assigned to Nyikos et al. (2012) due to its B journal rank and Miller et al. (2008) and Luay and Kherun (2015) due to their high number of citations (606 and 212, respectively). All other papers, namely Kats (2003), Steven Winters Associates (2004), Rawlinson (2007), Gabay et al. (2014), Chegut et al. (2013), Ciochetti and McGowan (2010), Tobias (2009) and Latief et al. (2017) have the same weight in the cost premium calculation. This weight is lower than the first three papers mentioned above (roughly 4.2 percent per paper). The weighted average calculation results in a cost premium range of 1.24-11.29 percent with an average of 4.02 percent (Equation 5). These percentages are used as a cost premium increase to Inovalis' portfolio fair value as of Q3 2021 (excluding Jeuneurs property as it is held for sale). Then this increase is adjusted to renovation as these cost premium percentages mainly refer to construction. According to Kats (2010), the renovation of buildings so they become green is more expensive than the construction of green buildings, and thus a premium for renovation should be applied. The LEED fees from certification and registration are also added to these cost premium values according to the fees from USGBC website *"LEED certification fees: U.S. Green Building Council"* (Equation 6). This CAPEX calculation is consulted and agreed upon in the interview with Expert 3 (Expert 3, p.5-15). The final CAPEX applied to the *"Low Case"* is 9.85 million Canadian Dollars; for the *"High Case,"* it is 82.5 million Canadian Dollars, and for the *"Average Case,"* it is 29.92 million Canadian Dollars (Equation 6).

Equation 5 – Cost premium, *"Average Case"*

$$4.02\% = \frac{2}{3} * (4.10\%(Nyikos\ et\ al., 2012) + 4.64\%(Luay\ and\ Kherun, 2015) + 3.00\%(Miller\ et\ al., 2008))/3 + \frac{1}{3} * (2.00\%(Kats, 2003) + 4.00\%(Steven\ Winters\ Associates, 2004) + 6.00\%(Rawlinson, 2007) + 8.00\%(Gabay\ et\ al., 2014) + 6.50\%(Chegut\ et\ al., 2013) + 4.00\%(Ciochetti\ and\ McGowan, 2010) + 2.00\%(Tobias, 2009) + 1.84\%(Latief\ et\ al., 2017))/8$$

Equation 6 – CAPEX calculation

$$CAPEX = \big(Portfolio\ Fair\ Value\ (Q3\ 2021) * (1 + Cost\ Premium) - Portfolio\ Fair\ Value\ (Q3\ 2021)\big) * \big(1 + Renovation\ Premium(Kats, 2010)\big) + LEED\ Fees$$

All value driver assumptions used in the green valuation prioritize LEED results and only use a combination of LEED and Energy Star results if LEED is not available separately. The reason for this is that LEED is a multi-attribute green certification providing a more complex picture of the building's greenness, while Energy Star is *"only"* a single- certification focusing only on energy efficiency. In addition, other multi-attribute certifications like BREEAM were used in the literature a lot less, and thus their use in the assumption calculations is also minimal.

### 4.4.2 Scenario 1 results

After applying all of the assumptions described in the section above, Scenario 1 assumptions, the valuation shows three different results for three different cases, all of which are portrayed in Figure 24. *"Average Case"* shows an upside of 15.73 percent compared to the average share price between 27.3.2021-28.3.2022. This is a 16.73 percent higher upside than the brown DCF share price estimate. *"Low Case"* shows a 0.55 percent downside compared to Inovalis' average share price, 45 basis points more than the brown DCF. Last but not least is the *"High Case,"* which results in the highest upside of 29.81 percent, 30.81 percent more than the brown valuation model. According to these results, it is worth investing in the highest green certification levels (Gold and Platinum and equivalent) as they bring the most value to the REIT despite the highest CAPEX investment out of all three cases required. In addition, each case results in a better share price than the base brown case implying a general value uplift for a REIT from green building transformation.

Figure 24 – Scenario 1 green DCF results

| | Average Case | Low Case | High Case |
|---|---|---|---|
| **Enterprise Value** | **601.048** | **549.875** | **645.295** |
| Total Debt | 274.480 | 274.480 | 274.480 |
| Cash | 38.574 | 38.574 | 38.574 |
| Minority interest | 1.410 | 1.410 | 1.410 |
| **Equity** | **363.732** | **312.559** | **407.979** |
| Shares Outstanding | 32.401 | 32.401 | 32.401 |
| **Implied Share Price** | **11.23** | **9.65** | **12.59** |
| LTM Average Share Price (27.3.2021-28.3.2022) | 9.70 | 9.70 | 9.70 |
| Brown DCF Share Price | 9.60 | 9.60 | 9.60 |
| Brown DCF Downside | (1.00%) | (1.00%) | (1.00%) |
| Green DCF Upside/Downside | 15.73% | (0.55%) | 29.81% |
| **Green DCF Share Price Upside Compared to Brown DCF** | **16.73%** | **0.45%** | **30.81%** |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

However, looking into the internal rate of return (IRR) in Figure 25, a financial metric used to measure the profitability of an investment, one can spot that the investment into green transformation is not profitable. In all three cases, the IRRs turn negative, meaning that the discount rate would have to be negative to make the net present value (NPV) of all free cash flows equal zero. In addition, IRR should be higher than WACC to cover the company's financing, which is not the case in this instance. The investment required for the renovation is too high, and the future cash flows until 2030 will not compensate for such a high investment in none of the three cases. This investment will only turn positive in a period longer than 2021-2030. The IRR would equal the WACC of 6.28 percent, meaning that the green transformation investment will break even only if the capital expenditure decreases by 46.32 percent in the *"Average Case"* and by 51.00 percent in the *"High Case."* In the *"Low Case,"* as portrayed in figure 25, the difference between *"FCF Low"* and *"FCF Brown"* is widening, meaning that no decrease in CAPEX will make IRR positive. The problem is that according to the literature in the *"Low Case,"* operational expenses increase with green transformation, increasing costs and lowering free cash flows.

Figure 25 – Scenario 1 green DCF IRRs

| | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
|---|---|---|---|---|---|---|---|---|---|---|
| FCF Average | (14.434) | 26.272 | 27.229 | 27.611 | 28.179 | 28.743 | 29.318 | 29.904 | 30.502 | 31.112 |
| FCF Brown | 15.489 | 24.542 | 24.922 | 25.218 | 25.738 | 26.253 | 26.778 | 27.314 | 27.860 | 28.417 |
| Difference | (29.923) | 1.729 | 2.307 | 2.393 | 2.441 | 2.490 | 2.540 | 2.590 | 2.642 | 2.695 |
| **IRR - Average Case** | **-5.64%** | | | | | | | | | |

| | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
|---|---|---|---|---|---|---|---|---|---|---|
| FCF Low | 5.634 | 24.518 | 24.654 | 24.916 | 25.430 | 25.939 | 26.457 | 26.987 | 27.526 | 28.077 |
| FCF Brown | 15.489 | 24.542 | 24.922 | 25.218 | 25.738 | 26.253 | 26.778 | 27.314 | 27.860 | 28.417 |
| Difference | (9.855) | (0.024) | (0.268) | (0.302) | (0.308) | (0.314) | (0.321) | (0.327) | (0.334) | (0.340) |
| **IRR - Low Case** | **#NUM!** | **Negative** | | | | | | | | |

| | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
|---|---|---|---|---|---|---|---|---|---|---|
| FCF High | (67.013) | 29.105 | 30.729 | 31.213 | 31.853 | 32.490 | 33.140 | 33.803 | 34.479 | 35.168 |
| FCF Brown | 15.489 | 24.542 | 24.922 | 25.218 | 25.738 | 26.253 | 26.778 | 27.314 | 27.860 | 28.417 |
| Difference | (82.502) | 4.562 | 5.806 | 5.995 | 6.115 | 6.237 | 6.362 | 6.489 | 6.619 | 6.751 |
| **IRR - High Case** | **-7.17%** | | | | | | | | | |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

Note: FY26-10 assume a 2 percent annual growth based on a long-term 2 percent inflation target

Figure 26 shows the impact of individual value drivers on Inovalis' share price. The individual value driver impact is calculated as if only one particular value driver, together with the required CAPEX, will impact Inovalis' cash flows and its share price. For example, the negative 0.81 percent in figure 26 in the *"Higher Occupancy" row and the "Average Case"* column shows how Inovalis' share price would change if only occupancy increases by 6 percent in 2022 and CAPEX, the cost of the green investment, would increase by 29 million Canadian Dollars in 2021. All other value drivers would not be used; thus, all stay at zero percent. In the Brown DCF, no value drivers are used; therefore, they are all at zero percent.

Only the benefits from higher occupancy in the *"Average Case"* and especially in the *"High Case"* and lower WACC in the *"Low Case"* outweigh the required investment for the green transformation included in the capital expenditure. All other not mentioned factors and cases do not offer sufficient benefits to outmatch the required capital expenditure, and thus, the share price decreases more than in the base *"Brown DCF"* case. The cost of equity has the lowest positive effect on Inovalis' share price; however, when considered together with the cost of debt in WACC, it has a more positive effect than lower operational expenses. The cost of equity and the cost of debt individually push the share price down as the benefits do not compensate for the incurred CAPEX cost. Higher occupancy only brings value to Inovalis with a higher level of certification. Interestingly, the opposite is true for WACC, where it only increases the value of Inovalis' share price in the *"Low Case,"* meaning that it positively impacts Inovalis' value at a low investment cost. As seen with WACC in the

*"Average"* and *"High"* cases, the capital expenditure becomes too high for the benefits that the lower WACC brings in terms of value to Inovalis.

Figure 26 – Scenario 1 Inovalis' share price upsides/downsides (compared to LTM (27.3.2021-28.3.2022) average share price)

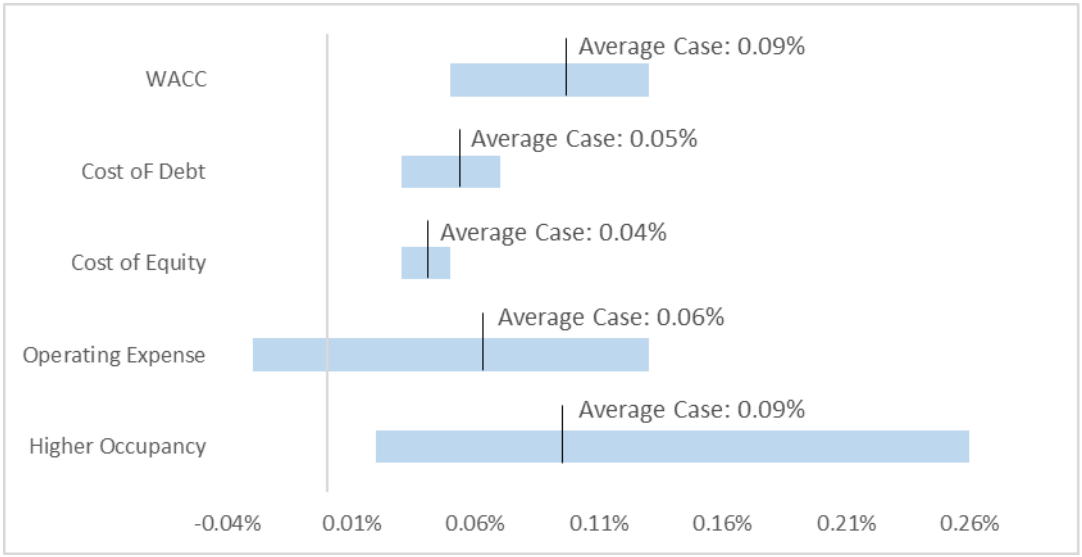
| | | Green DCF | | |
|---|---|---|---|---|
| | **Brown DCF** | **Low Case** | **Average Case** | **High Case** |
| Higher Occupancy | (1.00%) | (2.58%) | (0.81%) | 0.21% |
| Operating Expense | (1.00%) | (7.25%) | (3.50%) | (13.42%) |
| Cost of Equity | (1.00%) | (1.41%) | (6.16%) | (20.63%) |
| Cost oF Debt | (1.00%) | (1.16%) | (5.05%) | (18.62%) |
| WACC | (1.00%) | 1.47% | (1.04%) | (13.14%) |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

Figure 27 depicts a one percent incremental change range of all value drivers in the three scenarios. This means that each value driver is increased by one percent. For example, the value driver with a higher occupancy in the *"Average Case"* shows an increase of Inovalis' occupancy by six percent. When the one percent incremental change is applied, the occupancy rises by six percent times one plus one percent (6%* (1+1%)), equaling 6.06 percent. This 6.06 percent occupancy assumption is then, as in the case in the two paragraphs above, solely applied to the DCF calculation together only with the underlying CAPEX, which is not increased by one percent. All other value driver assumptions stay the same and equal to zero. The result of this example indicates that Inovalis' share price goes up by 0.09 percent if the occupancy assumption is increased by one percent from 6.00 percent to 6.06 percent.

Figure 27 shows *"Low Case"* results on the left side of the bars and *"High Case"* results on the right side. The black lines depict the *"Average Case"*. In the *"Average Case,"* higher occupancy and lower WACC value drivers have the highest impact on Inovalis' share price as both have a 0.09 percent increase of the share price if the two value drivers are each increased by one percent. The lowest positive impact in the *"Average Case"* on Inovalis' share price comes from the cost of equity, as it increases the share price by only 0.04 percent. In the *"High Case,"* the most remarkable incremental change is assigned to higher occupancy with an increase of 0.26 percent and then WACC and operating expense with 0.13 percent. The worst performer in the *"High Case"* is the cost of equity, with only a 0.05 percent increase. In the *"Low Case,"* WACC takes the lead with the most substantial incremental change of 0.05 percent increase, followed by the cost of debt and cost of equity, both equally with a 0.03 percent increase. The worst performer in the *"Low Case"* is operating expense, with the only negative change of -0.03 percent. The results go in hand with the previous section, which looks at each value driver's individual share price impact. There, similarly as with the incremental change, the best result of all value drivers in the *"Average"* and *"High"* cases is attributed to the higher occupancy, and the best result in the *"Low Case"* is attributed to WACC.

Figure 27 – Inovalis' share price percentage impacted by the incremental change of all value drivers in all 3 cases




Source: Capital IQ (2022) and Refinitiv Datastream (2022)

### 4.4.3 Scenario 2 assumptions

The same assumptions for value drivers in three cases were used in the second scenario of the green DCF valuation. However, the model is made more realistic using the information on the renovation process gathered from interviews.

In figure 28 renovation schedule can be seen with buildings from Inovalis' portfolio and their time and strategy of renovation, the way how it impacts Inovalis' revenue, and the impact on revenue and property expense in percentage terms. Jeuneurs building in France is not included in the renovation schedule as it is, as of Q3 2021, classified as held for sale. Additionally, it is assumed that the counterparty in Inovalis' joint venture cooperates in renovating its part in the buildings it partially owns (50 percent ownership in Délizy, Duisburg, Stuttgart, Arrow-Neu-Isenburg and Kösching and a 5.1 percent ownership in Trio, see figure 16). The entire renovation schedule was based on the information about the renovation process gathered from the expert interviews.

Figure 28 – Renovation schedule

| Renovation Round | Buildings | Renovating Period | % of Total Portfolio | Strategy | Impact on Revenue | Impact on Revenue/ Property Expenses in % |
|---|---|---|---|---|---|---|
| 1st Renovation | Courbevoie, Sabliere & Bad Homburg | Q4 2021-Q4 2023 | 17.6% | Shift Tenants Around | Discount on Rent | 30%, No Impact |
| 2nd Renovation | Baldi, Arcueil and Arrow-Neu-Isenburg | Q1 2024-Q4 2024 | 37.6% | Lease Expiry, Empty House | No Revenue | 100%, 100% |
| 3rd Renovation | Stuttgart and Trio | Q1 2025-Q4 2025 | 22.5% | Lease Expiry, Empty House | No Revenue | 100%, 100% |
| 4th Renovation | Metropolitain, Délizy, Duisburg and Kösching | Q1 2026-Q4 2026 | 22.3% | Find a Replacement for Tenants, Empty House | Cost for Replacement | 80%, 80% |

Source: Q3 2021 Management's Discussion and Analysis Report (2021) and Expert Interviews

Note: The revenue and property expense reductions are approximated on the higher end to provide stricter assumptions with the goal of improving the credibility of the results.

The first round of renovation starts in Q4 2021 and will run until Q4 2023. This renovation round includes Inovalis' buildings Courbevoie, Sabliere, and Bad Homburg. The renovation strategy is to shift tenants around these buildings as each building has a relatively low occupancy rate, 33, 59, and 52 percent, respectively. The impact on Inovalis' revenue due to the renovation is approximately 30 percent, meaning that Inovalis will lose in the period of Q4 2021-Q4 2023 30 percent of its rental revenue as it will have to pay a rent discount to the tenants for shifting them around (Expert 3,

p.37). In addition, this renovation round is the longest and will take 2.25 years as shifting around the tenants require longer renovation time, according to Expert 3 (Expert 3, p.23).

The second round of renovation will last one year and will happen in the financial year 2024 (Q1 2024-Q4 2024). The one year needed for renovation and certification is approximated based on Ciochetti and McGowan (2010) paper. This renovation will include Baldi, Arcueil, and Arrow-Neu-Isenburg buildings, as these buildings' weighted average lease term (WALT) expires by the beginning of 2024. An exception is Arcueil, whose WALT is 1.4 years in Q3 2021. In this case, it is assumed that Inovalis will find a short-term tenant for Arcueil for the period remaining until the renovation starts in Q1 2024. The three buildings in the second round of renovation account for 37.6 percent of the portfolio Gross Leasable Area (GLA), the highest GLA of all four renovation rounds. The renovation strategy, in this case, is a renovation of empty buildings as the leases expired and the buildings are not leased to anyone. This, however, comes at a cost, as there is no revenue generated in this period for these buildings. Although, also the property expenses are lowered to zero as there will be no tenants occupying building spaces, offering Inovalis a cost saving (Expert 1, p.7).

In the third round of renovation, the same process is repeated as in the second round, meaning that no revenue will be generated, and no property expense will be charged for the buildings under renovation as there will be no tenants leasing the space. However, this round includes Stuttgart and Trio buildings in Q1 2025-Q4 2025. As these buildings have a WALT in Q3 2021 of 3.0 and 3.8 years, respectively, it is assumed, similarly to the Arcueil building, that they will have an additional short-term lease until Q1 2025, when the renovation starts (Expert 1, p.7).

The fourth and last renovation round, occurring in Q1 2026-Q4 2026, includes buildings with very long WALTs, and thus a replacement would have to be found for these buildings' tenants. This will cost Inovalis' some money as it would have to compensate the tenants for the inconvenience. The compensation is assumed at 80 percent of the revenue, meaning that Inovalis will only get 20 percent of the revenue from the three buildings' tenants in the renovation period in the financial year 2026. However, the property expenses will also be lowered only to 20 percent, assuming that Inovalis will pay a small premium for property expenses in the outsourced building (Expert 3, p.22).

The value drivers of green transformation and CAPEX are applied in the valuation according to the renovation process. This means that after the first renovation round, the green value drivers, like higher occupancy, lower operating expense, and lower WACC, are applied only to the part of the portfolio that has been renovated. For example, the first three buildings, Courbevoie, Sabliere, and Bad Homburg, will be renovated by the end of Q4 2023, which means that starting from Q1 2024, these three buildings will have the three previously mentioned benefits applied. The second round of renovation will be done in Q4 2024, and thus the benefits of higher occupancy, lower operating expense, and lower WACC will be applied from Q1 2025. The third and fourth rounds follow the same logic. Therefore, the entire portfolio of Inovalis will be green by the end of the financial year 2026.

### 4.4.4 Scenario 2 results

In the second scenario, green DCF valuation shows a share price upside in two out of three cases compared to brown DCF. In the "Average Case," there is a 2.23 percent upside to the average share price of the period 27.3.2021 to 28.3.2022. Compared with the brown benchmark valuation, there is an upside of 2.84 percent basis points since the brown DCF valuation has a share price downside of 0.61. There is a 0.39 percentage difference between the brown valuation in the first and second scenarios (1 percent downside vs. 0.61 downside). The reason for this difference is that the second scenario brown valuation had to be adjusted to fit as a comparison of the second green scenario

valuation and was therefore changed from a five to ten-year forecast period. The second green scenario *"Low Case,"* shows a different story as it is worse than the base brown DCF valuation result. It shows a downside of 7.44 percent, which is 6.83 percent worse than the brown DCF result. The *"High Case"* shows a 0.51 percent downside which is 0.10 percent upside compared to the base case. These results are all summarized in Figure 29.

Figure 29 – Scenario 2 green DCF results

| | Average Case | Low Case | High Case |
|---|---|---|---|
| **Enterprise Value** | **558.595** | **528.213** | **549.990** |
| Total Debt | 274.480 | 274.480 | 274.480 |
| Cash | 38.574 | 38.574 | 38.574 |
| Minority interest | 1.410 | 1.410 | 1.410 |
| **Equity** | **321.279** | **290.897** | **312.674** |
| Shares Outstanding | 32.401 | 32.401 | 32.401 |
| **Implied Share Price** | **9.92** | **8.98** | **9.65** |
| LTM Average Share Price (27.3.2021-28.3.2022 | 9.70 | 9.70 | 9.70 |
| Brown DCF Share Price | 9.64 | 9.64 | 9.64 |
| Brown DCF Downside | (0.61%) | (0.61%) | (0.61%) |
| Green DCF Upside/Downside | 2.23% | (7.44%) | (0.51%) |
| **Green DCF Share Price Upside/Downside Compared to Brown DCF** | **2.84%** | **(6.83%)** | **0.10%** |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

The Internal Rate of Return calculation in figure 30 shows that the green transformation of Inovalis' portfolio is not profitable in either of the three cases as the IRR is negative and thus lower than the WACC, which equals 6.28 percent (as of Q3 2021). Furthermore, the difference between free cash flows in the *"Low Case"* is negative throughout the entire ten-year period; however, it shrinks over time. A similar trend can be observed in the *"Average"* and *"High"* cases. However there, the difference in free cash flows becomes positive in the financial year 2027 when the whole portfolio is already green, and no more CAPEX for green renovation is required. These results indicate that this green transformation investment could turn positive, however, only in the longer term than until 2030.

Figure 30 – Scenario 2 green DCF IRRs

| | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
|---|---|---|---|---|---|---|---|---|---|---|
| FCF Average | 9.912 | 22.818 | 22.930 | 4.865 | 14.975 | 16.630 | 28.368 | 28.554 | 29.141 | 29.740 |
| FCF Brown | 15.489 | 24.543 | 24.923 | 25.218 | 25.739 | 26.269 | 26.811 | 27.363 | 27.926 | 28.501 |
| Difference | (5.577) | (1.724) | (1.993) | (20.353) | (10.764) | (9.639) | 1.557 | 1.191 | 1.215 | 1.240 |
| **IRR - Average Case** | **#NUM!** | **Negative** | | | | | | | | |

| | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
|---|---|---|---|---|---|---|---|---|---|---|
| FCF Low | 13.441 | 22.818 | 22.930 | 12.240 | 18.718 | 19.741 | 26.564 | 26.540 | 27.087 | 27.645 |
| FCF Brown | 15.489 | 24.543 | 24.923 | 25.218 | 25.739 | 26.269 | 26.811 | 27.363 | 27.926 | 28.501 |
| Difference | (2.047) | (1.724) | (1.993) | (12.978) | (7.021) | (6.528) | (0.246) | (0.823) | (0.839) | (0.856) |
| **IRR - Low Case** | **#NUM!** | **Negative** | | | | | | | | |

| | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
|---|---|---|---|---|---|---|---|---|---|---|
| FCF High | 0.664 | 22.818 | 22.930 | (14.734) | 3.857 | 5.723 | 29.374 | 29.695 | 30.305 | 30.927 |
| FCF Brown | 15.489 | 24.543 | 24.923 | 25.218 | 25.739 | 26.269 | 26.811 | 27.363 | 27.926 | 28.501 |
| Difference | (14.825) | (1.724) | (1.993) | (39.952) | (21.882) | (20.546) | 2.564 | 2.332 | 2.379 | 2.426 |
| **IRR - High Case** | **#NUM!** | **Negative** | | | | | | | | |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

The results for individual value drivers are provided in figure 31 (same calculation as in figure 26; however, for the second green DCF scenario). It can easily be seen that all factors individually give a more robust downside to Inovalis' share price than the brown DCF case. In *"Low Case,"* the worst performing value driver is operating expense as it increases even further and thus drags the share price down the most alongside the required CAPEX for the renovation. The best performer in the *"Low Case"* is WACC, with the lowest downside of 4.83 percent. This is, however, still much worse than the base brown case of a 0.61 percent share price decrease. In the *"Average Case,"* the worst

performer is the occupancy increase as the operating expense is no longer higher but lower in the *"Average Case."* The best performance in the *"Average Case"* is again WACC though it is still much worse than the *"Brown Case"* and slightly worse than the *"Low Case."* The same story as in the *"Average Case"* is repeated in the *"High Case";* however, there the negative percentage decreases of Inovalis' share price are much worse, with all value drivers being more than 16 percent negative.

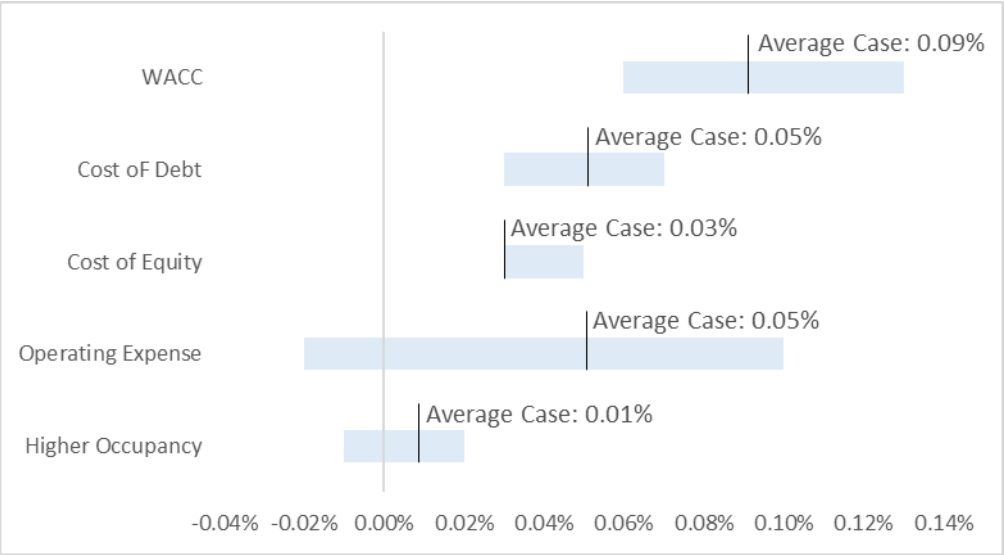
Figure 31 - Scenario 2 Inovalis' share price upsides/downsides (compared to LTM (27.3.2021-28.3.2022) average share price)

| | | Green DCF | | |
|---|---|---|---|---|
| | **Brown DCF** | **Low Case** | **Average Case** | **High Case** |
| Higher Occupancy | (0.61%) | (9.73%) | (12.64%) | (24.82%) |
| Operating Expense | (0.61%) | (12.96%) | (9.45%) | (17.44%) |
| Cost of Equity | (0.61%) | (7.62%) | (11.39%) | (23.26%) |
| Cost oF Debt | (0.61%) | (7.38%) | (10.32%) | (21.32%) |
| WACC | (0.61%) | (4.83%) | (6.43%) | (16.02%) |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

Incremental change of one percent increase of each value driver and its effect on Inovalis' share price shows a similar result to the individual value driver impact on the share price in the section below. The results are similar since WACC has the most significant impact on the share price in the incremental change, and occupancy has the lowest. In the *"Average Case,"* higher occupancy has only a 0.01 percent upside on the share price when the occupancy increasing percentage from the literature increases by one percent. This is the lowest impact in the *"Average Case"* of all individual value drivers in the second green scenario. In comparison, WACC increases the share price by 0.09 percent if the WACC assumption increases by 1 percent. Similar results are also observed in *"Low"* and *"High"* cases where WACC has the highest impact on Inovalis' share price after the incremental change. Occupancy has the worst impact on the share price in the *"High Case"* as the incremental change of one percent makes Inovalis' share price drop by one basis point. Operating expense has the lowest impact on the share price in the *"Low Case."* This is again due to increasing operating expense in the *"Low Case."* All of these results are also captured in figure 32 (the same calculation as in figure 27 but for the second green DCF scenario).

Figure 32 - Inovalis' share price percentage impacted by the incremental change of all value drivers in all 3 cases




Source: Capital IQ (2022) and Refinitiv Datastream (2022)

## 4.5 Brown vs. green DCF comparison

Figure 33 compares brown valuation against the two green valuation scenarios. Scenario one outperforms the brown valuation in all three cases indicating that if Inovalis renovates its entire portfolio by the end of the financial year 2021, its value will increase based on the five-year DCF valuation. However, when incorporating a realistic renovation process spread out through six years agreed upon by industry experts, including revenue deductions and a ten-year DCF valuation, Inovalis' value would only significantly increase in *"Average Case"* compared to the benchmark brown valuation. The revenue deductions and the spread of the renovation process for a six-year period which then delays benefits received from the green portfolio transformation are two main reasons why the second green scenario offers lower value to Inovalis than scenario one. In addition, the Internal Rate of Return of renovation investment in both scenarios is negative and thus also lower than WACC, indicating that the investment is not profitable, at least not until 2030, as it does not even cover the cost of funding.

Figure 33 – Results of all valuations: Inovalis' share price upsides/downsides compared to LTM (27.3.2021-28.3.2022) average share price

| | Brown DCF | Green DCF Scenario 1 | Green DCF Upside Compared to Brown DCF |
|---|---|---|---|
| Average Case | (1.00%) | 15.73% | 16.73% |
| Low Case | (1.00%) | (0.55%) | 0.45% |
| High Case | (1.00%) | 29.81% | 30.81% |

| | Brown DCF | Green DCF Scenario 2 | Green DCF Upside Compared to Brown DCF |
|---|---|---|---|
| Average Case | (0.61%) | 2.23% | 2.84% |
| Low Case | (0.61%) | (7.44%) | (6.83%) |
| High Case | (0.61%) | (0.51%) | 0.10% |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

Further, in figure 34, the brown valuation is compared with the green DCF scenario one and two, focused on a change of an individual value driver. This means that, for example, in the row *"Higher*

*Occupancy,"* only the occupancy increases alongside the required CAPEX, and all other factors, like operating expense, do not change. The sole change of higher occupancy increases Inovalis' value in green scenario one, *"Average"* and *"High"* cases. In green scenario two, Inovalis' price drops vastly due to reduced revenue in some of the renovation years and shorter period of received green benefits since the renovation takes longer than in the first green scenario. WACC is also positive in green scenario one *"Low Case"*; however, in scenario two, it decreases Inovalis' value by 4.83 percent in the *"Low Case"* which is 6.3 percent worse performance compared to the green scenario one *"Low Case."* Generally, green scenario two performs by several percentage points worse than green scenario one. Scenario one outperforming scenario two can also be observed in figure 33 when all value drivers are applied at once in the valuation model.

Figure 34 - Inovalis' share price upsides/downsides compared to LTM (27.3.2021-28.3.2022) average share price (all valuations)

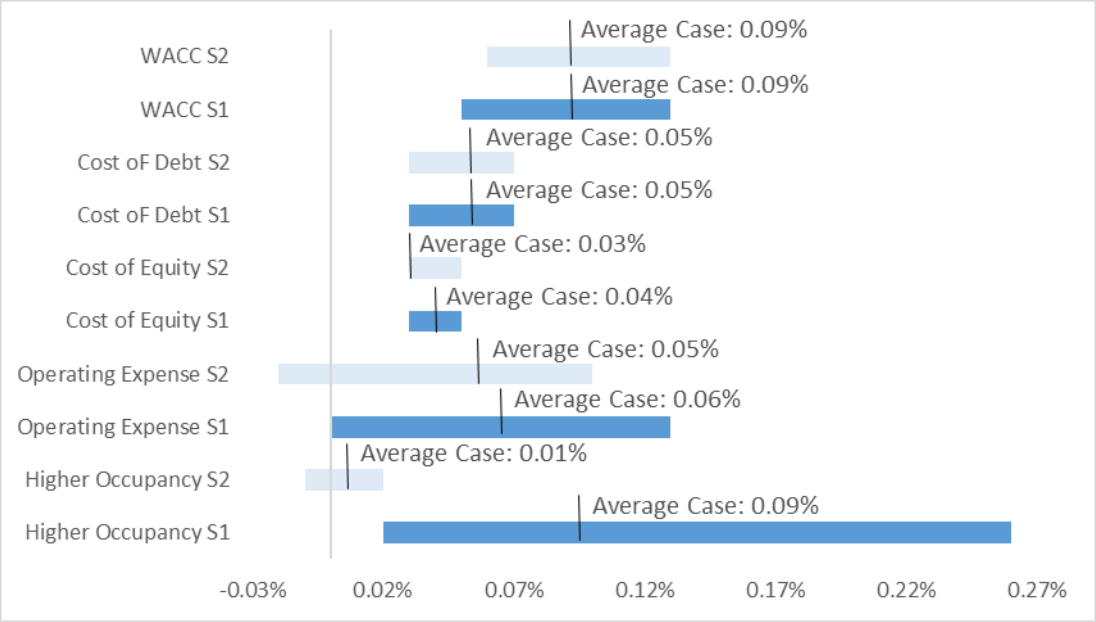
| | Brown DCF | | Green DCF Scenario 1 | | | Green DCF Scenario 2 | | |
|---|---|---|---|---|---|---|---|---|
| | Green Scenario 1 | Green Scenario 2 | Low Case | Average Case | High Case | Low Case | Average Case | High Case |
| Higher Occupancy | (1.00%) | (0.61%) | (2.58%) | (0.81%) | 0.21% | (9.73%) | (12.64%) | (24.82%) |
| Operating Expense | (1.00%) | (0.61%) | (7.25%) | (3.50%) | (13.42%) | (12.96%) | (9.45%) | (17.44%) |
| Cost of Equity | (1.00%) | (0.61%) | (1.41%) | (6.16%) | (20.63%) | (7.62%) | (11.39%) | (23.26%) |
| Cost oF Debt | (1.00%) | (0.61%) | (1.16%) | (5.05%) | (18.62%) | (7.38%) | (10.32%) | (21.32%) |
| WACC | (1.00%) | (0.61%) | 1.47% | (1.04%) | (13.14%) | (4.83%) | (6.43%) | (16.02%) |

Source: Capital IQ (2022) and Refinitiv Datastream (2022)

Figure 35 compares the incremental changes of each value driver of the two scenarios. As explained above in the thesis, the incremental change shows how many percentage points Inovalis' value rises when a single value driver increases by one percent. This gives a reasonable estimate of how strong of an impact each value driver has on the value of Inovalis. It can be seen that WACC has the most substantial impact on Inovalis' value in both scenarios when considering the *"Average"* and *"Low"* cases. The reason is that WACC is a combination of two factors, namely cost of equity and cost of debt which together have a stronger impact and outperform the required CAPEX cost. Also, since WACC directly influences the present value of the terminal value, which is the most significant part of the enterprise value, it has the biggest impact on the valuation result. In green scenario one, higher occupancy also has the same impact as WACC in the *"Average Case"* (0.09 percent). In *"High Case,"* the best performer varies in the two green scenarios. In green scenario one, occupancy offers the highest increase in value out of all individual value drivers. This is because CAPEX and occupancy are 2.8x higher than in the *"Average Case,"* which is not the case in other value drivers that increase less than CAPEX. In addition, in green scenario one, the impact of higher occupancy is already included in the valuation from the financial year 2022, which is not the case in green scenario two, where the full green portfolio transformation takes six years. Therefore, in green scenario two, the one percent increase in the occupancy value driver is negligible to Inovalis' price as the revenue increases gradually and occupancy effect is fully incorporated only in the financial year 2027. The highest value driver based on the incremental change in the green scenario two *"High Case"* is WACC, with 13 basis points increase in Inovalis' share price. The worst performer in green scenario one in the *"Average Case"* is the cost of equity as it only changes Inovalis' share price by four basis points if increased by one percent. In the *"Low Case,"* the worst performer in green scenario one is operating expense as an increase of 1 percent of the operating expense value driver decreases the value of Inovalis by 0.3 percent. In the *"High Case,"* the worst performer in the green scenario one is again the cost of equity. In green scenario two, the story of the worst performer is different since in the *"High"* and *"Average"* cases higher occupancy value driver performs the worst. The *"Low Case"* is similar to the green scenario one, as the operating expense decreases Inovalis' share price even

more by 0.02 percent. Operating expense performs the worst in both scenarios in the *"Low Case"* because the literature shows a higher operating expense for companies with a low level of green certification. Thus, if operating expense increases incrementally by one percent, it pushes the expense even higher and Inovalis' value further down.

Figure 35 - Inovalis' share price percentage impacted by the incremental change of all value drivers in all 3 cases and both scenarios




Source: Capital IQ (2022) and Refinitiv Datastream (2022)

Overall, based on the valuations, the results show that transforming the portfolio from brown to green increases the REIT's value if the portfolio can be renovated quickly so that the green benefits can generate value as soon as possible. However, when a more realistic renovation process is introduced, where the benefits are implemented in the valuation slower, and revenue deductions as a result of the renovation process are incurred, the company only increases significantly in value in the *"Average Case."* However, calculating the internal rate of returns for both valuation scenarios show that the capital expenditure investment required for the green renovation outweighs the benefits like higher occupancy or lower operating expense and thus makes the green investment unworthy in the horizon until 2030.

Looking more into individual value drivers, the ones with the strongest impact on Inovalis' share price are higher occupancy and WACC in the green scenario one. In green scenario two, all value drivers individually result in a relatively vast decrease in Inovalis' share price, meaning that individually the value drivers are much weaker than in green scenario one. They also result in much worse downsides compared to the brown valuation. Based on the incremental change, the most substantial sole impact on Inovalis' share price has WACC in both scenarios. Higher occupancy has a strong impact in scenario one and almost no impact in scenario two.

# 5. Conclusion and limitations

## 5.1 Limitation

Several limitations exist in each part of the thesis: the literature review, interviews, and empirical part.

Starting with the literature review, the focus of the thesis is on office REITs and real estate companies as they were the real estate asset class covered the most in literature papers. The other asset classes are discussed in the literature and interview; however, the vast focus of the literature review and the overall thesis is on the office REITs and real estate companies. Similarly, the location focus is also limited as most of the literature originates in the US. There is also a mismatch since the literature review focuses mainly on the US papers (39 percent of all literature comes from there), and the case study includes a valuation of a Canadian company with assets in Germany and France.

Second, the interviews conducted include a degree of limitation. All three interviewees are from the same company and country, implying a certain bias in their answers. In addition, all three interviewees answered based on their expertise and experience, resulting in a subjective perception. In addition to the limited diversity of interviewees, the number of interviews (three) could be portrayed as insufficient. Including more interviews could have resulted in different results and answers.

Lastly, also the empirical part is limited. It is primarily because it is a case study based on a single company; thus, it is not generalizable. If more companies had been valued, the results could have differed greatly. In addition, the assumptions from the literature were weighted following a logic where the higher quality of papers based on the ranking and number of citations received higher weight. If the weighting method had been different, the valuation results and each value driver's impact on Inovalis' value could have differed. Also, there is a risk of double accounting in the value drivers, especially in the cost of equity, which could include the effects of other value drivers like higher occupancy or lower operating expense, which are already used separately in the valuation. The entire DCF valuation can be perceived as a subjective practice, which is also reflected in this thesis paper. Due to this, several additional limitations come up, such as assumptions from equity analysts could have been used from different sources, the thesis author had to create his own assumptions due to lack of information in the equity analysts' forecasts and subjectively quantified information received in the interviews like the plan of the renovation process and revenue/operating expense deductions. Additionally, also no inside information on Inovalis was known to the author, which also limits the valuation results. There was also no detailed information available on Inovalis' buildings which restricted the author from assuming a tailor-made renovation process for each building based on its needs to become certified.

Therefore, all of these limitations should be considered when reading the thesis. In addition, research on more fully brown REITs of different asset classes, sizes, and locations is required to get a more reliable picture of how much value a transformation into a fully green portfolio brings.

## 5.2 Conclusion

The thesis paper pursues to answer three research questions concerning the value difference between brown and green REIT and the value drivers driving the difference. Unlike many other papers that research only individual value drivers, this thesis's uniqueness, that might benefit the reader, arises in its method as it analyzes a combined effect of several value drivers applied in a real case.

The first question asks if the benefits of green certification drive value and outweigh the costs and risks in a REIT which transitions its portfolio from 100 percent brown to 100 percent green. The thesis analysis finds that it depends on the process of renovation and the degree of green investment used. Assuming a somewhat unrealistic renovation process where the entire portfolio is turned from fully brown to entirely green within one quarter (scenario one), the green valuation results show a share price upside compared to a brown DCF in all three cases. 16.73 percent upside

in *"Average Case,"* 0.45 percent upside in *"Low Case,"* and 30.81 percent upside in *"High Case"* (figure 25). This indicates that the green portfolio transformation benefits increase REIT's value and also outweigh the costs and risks. The results differ in a more realistic version where the renovation process is spread over a more extended period (scenario two). The only significant upside of the share price calculated in the green DCF compared to the brown DCF is in the average case, where the upside is 2.84 percent. In the *"Low Case,"* there is a downside of 6.83 percent, and in the *"High Case,"* the price is almost the same as in the brown DCF, as the upside is only 0.10 percent (figure 30). The green scenario two does not indicate such a clear result of value increase and benefits outweighing the costs and risks as in the green scenario one. The value difference between green DCF scenarios one and two is the renovation process assumptions used in scenario two. Scenario two assumes a longer time for green portfolio transformation, meaning that the benefits of value drivers like higher occupancy, which drives the rental revenue, are only applied gradually later in the valuation. Also, in the second scenario, revenue reductions are used for renovated properties, significantly influencing the rental revenue and thus Inovalis' free cash flows in the years when the renovation takes place.

The second question concerns the individual value drivers, who they are, and their impact on REIT's value. The literature review identifies several value drivers, including rental premium, higher occupancy, impact on operating expense, cost of equity, cost of debt, higher property values, cost premiums, image benefits, decreased risk, and intangible benefits like tenant satisfaction, higher probability of renewing leases and decreased tenant rent concessions. Higher occupancy, impact on operating expense, cost of equity and debt, and cost premium are all used in the case study's valuations since they are quantifiable and relevant to Inovalis' case. The strongest impact comes from higher occupancy and cost of capital (WACC) in scenario one and cost of capital in scenario two (figure 35). However, in most cases, CAPEX strongly outweighs the individual value drivers' impact on Inovalis' value, especially in scenario two (figure 34).

The third and last question investigates the internal rate of return on green investment. In both scenarios and all three cases, the IRRs are negative and below the funding rate (WACC), implying that the green investment is not worth it (figures 25 and 30). However, the IRRs could become positive in the *"Average"* and *"High"* cases if a longer horizon above 2030 is considered. This implies that the investment into a green portfolio transformation is a long-term project paying off only in the long run (more than ten years) if a REIT invests to obtain sufficiently high certification levels.

It is also important to state that according to the expert interviews, real estate players would have to transform their portfolios to green relatively soon due to the pressure from regulators, banks, and investors (Expert 1, p.2-4, Expert 2, p.10-11 and Expert 3, p.26). If they do not comply and will not transform their portfolios to green, they might face some severe problems resulting, for example, in plummeting share prices. This impact, as it is tough to quantify, is only partially included in the valuations.

The portfolio transformation from entirely brown to fully green does not always bring value to a REIT, and the required CAPEX outweighs the investment benefits at least in the medium run. However, due to future pressures on the REITs from regulators, banks, and investors, the green transformation might bring higher value and be more profitable than the valuation models depict.

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### Interviews

Expert 1. (2022) 'REIT's value change driven by portfolio transformation from entirely brown to fully green'. Interview by Tomas Havelka [Microsoft Teams], May 10

Expert 2. (2022) 'REIT's value change driven by portfolio transformation from entirely brown to fully green'. Interview by Tomas Havelka [Microsoft Teams], May 17

Expert 3. (2022) 'REIT's value change driven by portfolio transformation from entirely brown to fully green'. Interview by Tomas Havelka [Microsoft Teams], May 23

# Appendix

## Valuations

### Brown valuation 1

*DCF*

| For the Fiscal Period Ending | Reclassified 12 months Dec-31-2016 | Reclassified 12 months Dec-31-2017 | Restated 12 months Dec-31-2018 | Reclassified 12 months Dec-31-2019 | 12 months Dec-31-2020 | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| *Currency in millions* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* |
| Rental Revenue | 24.404 | 24.946 | 25.434 | 25.524 | 28.858 | 33.535 | 34.326 | 39.109 | 39.891 | 40.689 |
| Other Revenue | 7.653 | 10.163 | 13.902 | 20.195 | 0.385 | 5.182 | 5.304 | 6.043 | 6.164 | 6.288 |
| **Total Revenue** | **32.057** | **35.109** | **39.336** | **45.719** | **29.243** | **38.717** | **39.630** | **45.152** | **46.055** | **46.977** |
| *YoY % growth RR* | | *-5.5%* | *9.0%* | *12.8%* | *2.8%* | *32.4%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* |
| *YoY % growth OR* | | | | | | *32.4%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* |
| *Occupancy* | | | | | | *84%* | *87.1%* | *91.3%* | | |
| Property Exp. | 8.923 | 8.768 | 9.957 | 10.948 | 9.167 | 10.653 | 10.904 | 12.423 | 12.672 | 12.925 |
| *% of revenue* | *36.6%* | *35.1%* | *39.1%* | *42.9%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* |
| Selling General & Admin Exp. | 5.152 | 5.293 | 5.223 | 6.548 | 7.864 | 7.978 | 8.492 | 6.650 | 6.783 | 6.919 |
| *% of revenue* | *16.1%* | *15.1%* | *13.3%* | *14.3%* | *26.9%* | *20.6%* | *21.4%* | *14.7%* | *14.7%* | *14.7%* |
| Other Operating Expense/(Income) | (0.170) | | | | | | | | | |
| **Operating Exp., Total** | **13.905** | **14.061** | **15.180** | **17.496** | **17.031** | **18.631** | **19.396** | **19.073** | **19.455** | **19.844** |
| *% of revenue* | *57.0%* | *56.4%* | *59.7%* | *68.5%* | *59.0%* | *55.6%* | *56.5%* | *48.8%* | *48.8%* | *48.8%* |
| **Operating Income / EBIT** | **18.152** | **21.048** | **24.156** | **28.223** | **12.212** | **20.086** | **20.235** | **26.079** | **26.601** | **27.133** |
| *% of revenue* | *56.6%* | *60.0%* | *61.4%* | *61.7%* | *41.8%* | *51.9%* | *51.1%* | *57.8%* | *57.8%* | *57.8%* |
| *Tax Rate %* | *5.2%* | *4.2%* | *44.2%* | *2.2%* | *0.6%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* |
| **NOPAT** | **17.211** | **20.169** | **13.477** | **27.609** | **12.140** | **19.614** | **19.759** | **25.467** | **25.976** | **26.496** |
| Capex | - | 0.100 | 0.700 | 1.800 | 1.366 | 0.800 | 0.800 | 0.800 | 0.800 | 0.800 |
| Change in NWC | 0.000 | 1.239 | 21.437 | (41.224) | 14.807 | 3.326 | (5.583) | (0.256) | (0.042) | (0.043) |
| **Free Cash Flows (FCF)** | | **18.830** | **(8.660)** | **67.033** | **(4.033)** | **15.489** | **24.542** | **24.922** | **25.218** | **25.738** |
| | | | | | | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 |
| *% discount factor* | | | | | | *94.1%* | *88.5%* | *83.3%* | *78.4%* | *73.8%* |
| **PV FCF** | | | | | | **14.574** | **21.729** | **20.762** | **19.767** | **18.983** |
| Terminal Value (TV) | | | | | | 613.721 | | | | |
| **PV TV** | | | | | | **452.648** | | | | |

| | | |
|---|---|---|
| **Enterprise Value** | **548.463** | |
| Total Debt | 274.480 | |
| Cash | 38.574 | |
| Minority interest | 1.410 | |
| **Equity** | **311.147** | |
| Shares Outstanding | 32.401 | |
| **Implied Share Price** | **9.60** | |
| Share Price | 9.70 | Last 12 month average (27.3.2021-28.3.2022) |
| **Upside/Downside** | **(1.00%)** | |

| | | |
|---|---|---|
| g | 2.00% | long term inflation |
| WACC FY21 | 6.28% | 6.28% |
| WACC FY22-TV | 6.28% | |

## *Net working capital*

| For the Fiscal Period Ending | Reclassified Dec-31-2016 | Dez-31-2017 | Restated Dec-31-2018 | Dez-31-2019 | Dez-31-2020 | Sep-30-2021 | Average | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Currency in millions* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* |
| Accounts receivables | 2.671 | 2.493 | 1.813 | 1.735 | 3.517 | 4.811 | | 5.348 | 4.201 | 4.786 | 4.882 | 4.979 |
| Other receivables | 2.237 | 3.988 | 3.174 | 4.630 | 5.375 | 6.681 | | 7.427 | 6.169 | 7.028 | 7.169 | 7.312 |
| Accounts payables | 4.181 | 3.362 | 3.406 | 6.409 | 4.366 | 6.096 | | 6.021 | 5.389 | 6.140 | 6.263 | 6.388 |
| **Selected case:** | | | | | | | | | | | | |
| DSO (Account Receivables) | 30 | 26 | 17 | 14 | 43 | 50 | 38 | 50 | 38 | 38 | 38 | 38 |
| DSO (Other Recievables) | 25 | 41 | 29 | 36 | 66 | 69 | 56 | 69 | 56 | 56 | 56 | 56 |
| DPO (Accpunts Payables) | 169 | 138 | 123 | 211 | 171 | 203 | 178 | 203 | 178 | 178 | 178 | 178 |
| Other Current Assets | 0.618 | 1.373 | 46.934 | 10.718 | 0.175 | 4.276 | | 4.753 | 3.341 | 3.807 | 3.883 | 3.961 |
| *% of Revenue* | *2%* | *4%* | *119%* | *23%* | *1%* | *12%* | 8% | *12%* | *8%* | *8%* | *8%* | *8%* |
| Accrued Exp. | | 0.431 | 0.321 | 10.429 | 1.114 | 1.637 | | 1.820 | 1.046 | 1.191 | 1.215 | 1.239 |
| *% of Revenue* | | *1%* | *1%* | *23%* | *4%* | *5%* | 3% | *5%* | *3%* | *3%* | *3%* | *3%* |
| Curr. Income Taxes Payable | | | | | 4.069 | 2.213 | | | | | | |
| *% of Revenue* | | | | | *14%* | *6%* | 10% | | | | | |
| Unearned Revenue, Current | 1.975 | 4.195 | 4.394 | 5.491 | 0.521 | 0.569 | | 0.569 | 2.953 | 3.364 | 3.432 | 3.500 |
| *% of Revenue* | *6%* | *12%* | *11%* | *12%* | *2%* | *2%* | 7% | *0.02* | *7%* | *7%* | *7%* | *7%* |
| Other Current Liabilities | 4.143 | 3.4 | 25.897 | 18.075 | 7.511 | 4.831 | | 5.370 | 6.159 | 7.017 | 7.157 | 7.301 |
| *% of Revenue* | *13%* | *10%* | *66%* | *40%* | *26%* | *14%* | 16% | *14%* | *16%* | *16%* | *16%* | *16%* |
| **NWC** | **(4.773)** | **(3.534)** | **17.903** | **(23.321)** | **(8.514)** | **0.422** | | **3.748** | **(1.836)** | **(2.091)** | **(2.133)** | **(2.176)** |
| **Change in NWC** | | **1.239** | **21.437** | **(41.224)** | **14.807** | **8.936** | | **3.326** | **(5.583)** | **(0.256)** | **(0.042)** | **(0.043)** |

## *WACC*

| | |
|---|---|
| Net Debt | 235.906 |
| Market Cap | 319.898 |
| D/(D+E) | 42.44% |
| Tax Rate % | 2.35% |
| **Cost of Equity** | **9.45%** |
| Risk Free Rate | 2.4% |
| Beta | 0.82 |
| ERP | 4.49% |
| Size Premium | 3.39% |
| **Cost of Debt** | **2.02%** |
| **WACC** | **6.28%** |

# Brown valuation 2

## *DCF*

| For the Fiscal Period Ending | Reclassified 12 months Dec-31-2016 | Reclassified 12 months Dec-31-2017 | Restated 12 months Dec-31-2018 | Reclassified 12 months Dec-31-2019 | 12 months Dec-31-2020 | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 | Forecast 2026 | Forecast 2027 | Forecast 2028 | Forecast 2029 | Forecast 2030 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Currency* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | |
| Rental Revenue | 24.404 | 24.946 | 25.434 | 25.524 | 28.858 | 33.535 | 34.326 | 39.110 | 39.892 | 40.690 | 41.503 | 42.333 | 43.180 | 44.044 | 44.925 | |
| Revenue Discount due to Renovation | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Brown | | | | | | | | | 32.875 | 18.248 | 9.270 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Green FY 24 | | | | | | | | | 7.016 | 7.157 | 7.300 | 7.446 | 7.595 | 7.747 | 7.902 | |
| Green FY 25 | | | | | | | | | | 15.285 | 15.591 | 15.903 | 16.221 | 16.545 | 16.876 | |
| Green FY 26 | | | | | | | | | | | 9.343 | 9.529 | 9.720 | 9.914 | 10.113 | |
| Green FY 27 | | | | | | | | | | | | 9.455 | 9.644 | 9.837 | 10.034 | |
| Other Revenue | 7.653 | 10.163 | 13.902 | 20.195 | 0.385 | 5.182 | 5.304 | 6.043 | 6.164 | 6.288 | 6.413 | 6.542 | 6.672 | 6.806 | 6.942 | |
| **Total Revenue** | **32.057** | **35.109** | **39.336** | **45.719** | **29.243** | **38.717** | **39.631** | **45.153** | **46.056** | **46.977** | **47.917** | **48.875** | **49.852** | **50.850** | **51.867** | |
| *YoY % growth forecasted RR* | | | | | | *32%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | |
| *YoY % growth due to green portfolio* | | | | | | | | *0.00%* | *0.00%* | *0.00%* | *0.00%* | *0.00%* | *0.00%* | *0.00%* | *0.00%* | |
| *YoY % growth forecasted OR* | | | | | | | | | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | |
| | | | | | | *32%* | *2%* | *14%* | | | | | | | | |
| Property Exp. | 8.923 | 8.768 | 9.957 | 10.948 | 9.167 | 10.653 | 10.904 | 12.423 | 12.672 | 12.925 | 13.184 | 13.448 | 13.717 | 13.991 | 14.271 | |
| Property Expense Discount due to Renovation | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Brown | | | | | | | | | 10.443 | 5.796 | 2.945 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Green FY 24 | | | | | | | | | 2.229 | 2.273 | 2.319 | 2.365 | 2.413 | 2.461 | 2.510 | |
| Green FY 25 | | | | | | | | | | 4.856 | 4.953 | 5.052 | 5.153 | 5.256 | 5.361 | |
| Green FY 26 | | | | | | | | | | | 2.968 | 3.027 | 3.088 | 3.149 | 3.212 | |
| Green FY 27 | | | | | | | | | | | | 3.004 | 3.064 | 3.125 | 3.187 | |
| *% of revenue* | *36.6%* | *35.1%* | *39.1%* | *42.9%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | |
| Total Property Exp. | | | | | | *10.653* | *10.904* | *12.423* | *12.672* | *12.925* | *13.184* | *13.448* | *13.717* | *13.991* | *14.271* | |
| Selling General & Admin Exp. | 5.152 | 5.293 | 5.223 | 6.548 | 7.864 | 7.978 | 8.492 | 6.650 | 6.783 | 6.919 | 7.057 | 7.198 | 7.342 | 7.489 | 7.639 | |
| *% of revenue* | *21.1%* | *21.2%* | *20.5%* | *25.7%* | *27.3%* | *20.6%* | *21.4%* | *14.7%* | *14.7%* | *14.7%* | *14.7%* | *14.7%* | *14.7%* | *14.7%* | *14.7%* | |
| Other Operating Expense/(Income) | (0.170) | | | | | | | | | | | | | | | |
| **Operating Exp., Total** | **13.905** | **14.061** | **15.180** | **17.496** | **17.031** | **18.631** | **19.396** | **19.073** | **19.455** | **19.844** | **20.241** | **20.646** | **21.059** | **21.480** | **21.909** | |
| *% of revenue* | *43.4%* | *40.0%* | *38.6%* | *38.3%* | *58.2%* | *48.1%* | *48.9%* | *42.2%* | *42.2%* | *42.2%* | *42.2%* | *42.2%* | *42.2%* | *42.2%* | *42.2%* | |
| **Operating Income / EBIT** | **18.152** | **21.048** | **24.156** | **28.223** | **12.212** | **20.086** | **20.235** | **26.080** | **26.601** | **27.133** | **27.676** | **28.229** | **28.794** | **29.370** | **29.957** | |
| *% of revenue* | *56.6%* | *60.0%* | *61.4%* | *61.7%* | *41.8%* | *51.9%* | *51.1%* | *57.8%* | *57.8%* | *57.8%* | *57.8%* | *57.8%* | *57.8%* | *57.8%* | *57.8%* | |
| Tax Rate % | *5.2%* | *4.2%* | *44.2%* | *2.2%* | *0.6%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | |
| **NOPAT** | **17.211** | **20.169** | **13.477** | **27.609** | **12.140** | **19.614** | **19.760** | **25.467** | **25.976** | **26.496** | **27.026** | **27.566** | **28.118** | **28.680** | **29.254** | |
| Capex | - | 0.100 | 0.700 | 1.800 | 1.366 | 0.800 | 0.800 | 0.800 | 0.800 | 0.800 | 0.800 | 0.800 | 0.800 | 0.800 | 0.800 | |
| Change in NWC | 0.000 | 1.239 | 21.437 | (41.224) | 14.807 | 3.326 | (5.583) | (0.256) | (0.042) | (0.043) | (0.044) | (0.044) | (0.045) | (0.046) | (0.047) | |
| **FCF** | | **18.830** | **(8.660)** | **67.033** | **(4.033)** | **15.489** | **24.543** | **24.923** | **25.218** | **25.739** | **26.269** | **26.811** | **27.363** | **27.926** | **28.501** | **679.592** |
| | | | | | | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | |
| % discount factor | | | | | | *94.1%* | *88.5%* | *83.3%* | *78.4%* | *73.8%* | *69.4%* | *65.3%* | *61.4%* | *57.8%* | *54.4%* | |
| **PV FCF** | | | | | | **14.574** | **21.729** | **20.762** | **19.767** | **18.983** | **18.230** | **17.507** | **16.812** | **16.145** | **15.504** | |
| **PV TV** | | | | | | **369.682** | | | | | | | | | | |

| | |
|---|---|
| **Enterprise Value** | **549.696** |
| Total Debt | 274.480 |
| Cash | 38.574 |
| Minority interest | 1.410 |
| **Equity** | **312.380** |
| Shares Outstanding | 32.401 |
| **Implied Share Price** | **9.64** |
| Share Price | 9.70 Last 12 month average (27.3.2021-28.3.2022) |
| **Upside/Downside** | **-0.61%** |

g 2.00% long term inflation

| | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
|---|---|---|---|---|---|---|---|---|---|---|
| **WACC** | 6.28% | 6.28% | 6.28% | 6.28% | 6.28% | 6.28% | 6.28% | 6.28% | 6.28% | 6.28% |

## *Net working capital*

| For the Fiscal Period Ending | Reclassified | | Restated | | | | Average | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec-31-2016 | Dez-31-2017 | Dec-31-2018 | Dez-31-2019 | Dez-31-2020 | Sep-30-2021 | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| *Currency in millions* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* |
| Accounts receivables | 2.671 | 2.493 | 1.813 | 1.735 | 3.517 | 4.811 | | 5.348 | 4.201 | 4.786 | 4.882 | 4.979 | 5.079 | 5.181 | 5.284 | 5.390 | 5.498 |
| Other receivables | 2.237 | 3.988 | 3.174 | 4.630 | 5.375 | 6.681 | | 7.427 | 6.169 | 7.028 | 7.169 | 7.312 | 7.458 | 7.607 | 7.760 | 7.915 | 8.073 |
| Accounts payables | 4.181 | 3.362 | 3.406 | 6.409 | 4.366 | 6.096 | | 6.021 | 5.389 | 6.140 | 6.263 | 6.388 | 6.516 | 6.646 | 6.779 | 6.914 | 7.053 |
| **Selected case:** | | | | | | | | | | | | | | | | | |
| DSO (Account Receivabl | 30.0 | 25.6 | 16.6 | 13.7 | 43.3 | 49.7 | 38.2 | 49.7 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 |
| DSO (Other Recievables | 25.1 | 40.9 | 29.0 | 36.5 | 66.2 | 69.1 | 56.0 | 69.1 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 |
| DPO (Accpunts Payable | 168.7 | 138.0 | 123.1 | 210.7 | 171.5 | 203.5 | 177.9 | 203.5 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 |
| Other Current Assets | 0.618 | 1.373 | 46.934 | 10.718 | 0.175 | 4.276 | | 4.75 | 3.34 | 3.81 | 3.88 | 3.96 | 4.04 | 4.12 | 4.20 | 4.29 | 4.37 |
| *margin* | *2%* | *4%* | *119%* | *23%* | *1%* | *12%* | *8%* | *12%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* |
| Accrued Exp. | | 0.431 | 0.321 | 10.429 | 1.114 | 1.637 | | 1.82 | 1.05 | 1.19 | 1.22 | 1.24 | 1.26 | 1.29 | 1.32 | 1.34 | 1.37 |
| *margin* | | *1%* | *1%* | *23%* | *4%* | *5%* | *3%* | *5%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* |
| Curr. Income Taxes Payable | | | | | 4.069 | 2.213 | | | | | | | | | | | |
| *margin* | | | | | *14%* | *6%* | *10%* | | | | | | | | | | |
| Unearned Revenue, Curr | 1.975 | 4.195 | 4.394 | 5.491 | 0.521 | 0.569 | | 0.57 | 2.95 | 3.36 | 3.43 | 3.50 | 3.57 | 3.64 | 3.71 | 3.79 | 3.86 |
| *margin* | *6%* | *12%* | *11%* | *12%* | *2%* | *2%* | *7%* | *1%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* |
| Other Current Liabilities | 4.143 | 3.4 | 25.897 | 18.075 | 7.511 | 4.831 | | 5.37 | 6.16 | 7.02 | 7.16 | 7.30 | 7.45 | 7.60 | 7.75 | 7.90 | 8.06 |
| *margin* | *13%* | *10%* | *66%* | *40%* | *26%* | *14%* | *16%* | *14%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* |
| **NWC** | **(4.773)** | **(3.534)** | **17.903** | **(23.321)** | **(8.514)** | **0.422** | | **3.748** | **(1.836)** | **(2.091)** | **(2.133)** | **(2.176)** | **(2.219)** | **(2.264)** | **(2.309)** | **(2.355)** | **(2.402)** |
| **Change in NWC** | | **1.239** | **21.437** | **(41.224)** | **14.807** | **8.936** | | **3.326** | **(5.583)** | **(0.256)** | **(0.042)** | **(0.043)** | **(0.044)** | **(0.044)** | **(0.045)** | **(0.046)** | **(0.047)** |

## *WACC*

| | |
|---|---|
| Net Debt | 235.906 |
| Market Cap | 319.898 |
| D/(D+E) | 42.4% |
| Tax Rate % | 2.3% |
| **Cost of Equity** | **9.45%** |
| Risk Free Rate | 2.4% |
| Beta | 0.8 |
| ERP | 4.49% |
| Size Premium | 3.39% |
| **Cost of Debt** | **2.02%** |
| | |
| **WACC** | **6.28%** |

# Green valuation 1 (average case)

## *DCF*

| For the Fiscal Period Ending | Reclassified 12 months Dec-31-2016 | Reclassified 12 months Dec-31-2017 | Restated 12 months Dec-31-2018 | Reclassified 12 months Dec-31-2019 | 12 months Dec-31-2020 | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| *Currency in millions* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* |
| Rental Revenue | 24.404 | 24.946 | 25.434 | 25.524 | 28.858 | 33.535 | 36.078 | 41.106 | 41.928 | 42.766 |
| Other Revenue | 7.653 | 10.163 | 13.902 | 20.195 | 0.385 | 5.182 | 5.304 | 6.043 | 6.164 | 6.288 |
| **Total Revenue** | **32.057** | **35.109** | **39.336** | **45.719** | **29.243** | **38.717** | **41.383** | **47.149** | **48.092** | **49.054** |
| *YoY % growth RR* | | *-5.5%* | *9.0%* | *12.8%* | *2.8%* | *32.4%* | *7.6%* | *13.9%* | *2.0%* | *2.0%* |
| *YoY % growth OR* | | | | | | *32.4%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* |
| *Occupancy* | | | | | | *84%* | *87.1%* | *91.3%* | | |
| Property Exp. | 8.923 | 8.768 | 9.957 | 10.948 | 9.167 | 10.653 | 10.541 | 12.010 | 12.250 | 12.495 |
| *% of revenue* | *36.6%* | *35.1%* | *39.1%* | *42.9%* | *31.8%* | *31.8%* | *29.2%* | *29.2%* | *29.2%* | *29.2%* |
| Selling General & Admin Exp. | 5.152 | 5.293 | 5.223 | 6.548 | 7.864 | 7.978 | 8.492 | 6.650 | 6.783 | 6.919 |
| *% of revenue* | *16.1%* | *15.1%* | *13.3%* | *14.3%* | *26.9%* | *20.6%* | *20.5%* | *14.1%* | *14.1%* | *14.1%* |
| Other Operating Expense/(Income) | (0.170) | | | | | | | | | |
| **Operating Exp., Total** | **13.905** | **14.061** | **15.180** | **17.496** | **17.031** | **18.631** | **19.033** | **18.660** | **19.033** | **19.414** |
| *% of revenue* | *57.0%* | *56.4%* | *59.7%* | *68.5%* | *59.0%* | *55.6%* | *52.8%* | *45.4%* | *45.4%* | *45.4%* |
| **Operating Income / EBIT** | **18.152** | **21.048** | **24.156** | **28.223** | **12.212** | **20.086** | **22.350** | **28.489** | **29.059** | **29.640** |
| *% of revenue* | *56.6%* | *60.0%* | *61.4%* | *61.7%* | *41.8%* | *51.9%* | *54.0%* | *60.4%* | *60.4%* | *60.4%* |
| *Tax Rate %* | *5.2%* | *4.2%* | *44.2%* | *2.2%* | *0.6%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* |
| **NOPAT** | **17.211** | **20.169** | **13.477** | **27.609** | **12.140** | **19.614** | **21.825** | **27.820** | **28.377** | **28.944** |
| Capex | - | 0.100 | 0.700 | 1.800 | 1.366 | 30.723 | 0.800 | 0.800 | 0.800 | 0.800 |
| Change in NWC | 0.000 | 1.239 | 21.437 | (41.224) | 14.807 | 3.326 | (5.247) | (0.209) | (0.034) | (0.035) |
| **Free Cash Flows (FCF)** | | **18.830** | **(8.660)** | **67.033** | **(4.033)** | **(14.434)** | **26.272** | **27.229** | **27.611** | **28.179** |
| | | | | | | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 |
| *% discount factor* | | | | | | *94.1%* | *88.9%* | *83.8%* | *79.0%* | *74.5%* |
| **PV FCF** | | | | | | **(13.582)** | **23.350** | **22.816** | **21.811** | **20.986** |
| Terminal Value (TV) | | | | | | 705.856 | | | | |
| **PV TV** | | | | | | **525.667** | | | | |

| | | |
|---|---|---|
| **Enterprise Value** | **601.048** | |
| Total Debt | 274.480 | |
| Cash | 38.574 | |
| Minority interest | 1.410 | |
| **Equity** | **363.732** | |
| Shares Outstanding | 32.401 | |
| **Implied Share Price** | **11.23** | |
| Share Price | 9.70 | Last 12 month average (27.3.2021-28.3.2022) |
| **Upside/Downside** | **15.73%** | |

| | | |
|---|---|---|
| g | 2.00% | long term inflation |
| WACC FY21 | 6.28% | 6.07% |
| WACC FY22-TV | 6.07% | |

## *Net working capital*

| For the Fiscal Period Ending | Reclassified Dec-31-2016 | Dez-31-2017 | Restated Dec-31-2018 | Dez-31-2019 | Dez-31-2020 | Sep-30-2021 | Average | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Currency in millions* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* |
| Accounts receivables | 2.671 | 2.493 | 1.813 | 1.735 | 3.517 | 4.811 | | 5.348 | 4.386 | 4.998 | 5.098 | 5.200 |
| Other receivables | 2.237 | 3.988 | 3.174 | 4.630 | 5.375 | 6.681 | | 7.427 | 6.441 | 7.339 | 7.486 | 7.635 |
| Accounts payables | 4.181 | 3.362 | 3.406 | 6.409 | 4.366 | 6.096 | | 6.021 | 5.209 | 5.935 | 6.054 | 6.175 |
| **Selected case:** | | | | | | | | | | | | |
| DSO (Account Receivables) | 30 | 26 | 17 | 14 | 43 | 50 | 38 | 50 | 38 | 38 | 38 | 38 |
| DSO (Other Recievables) | 25 | 41 | 29 | 36 | 66 | 69 | 56 | 69 | 56 | 56 | 56 | 56 |
| DPO (Accpunts Payables) | 169 | 138 | 123 | 211 | 171 | 203 | 178 | 203 | 178 | 178 | 178 | 178 |
| Other Current Assets | 0.618 | 1.373 | 46.934 | 10.718 | 0.175 | 4.276 | | 4.753 | 3.489 | 3.975 | 4.055 | 4.136 |
| *% of Revenue* | *2%* | *4%* | *119%* | *23%* | *1%* | *12%* | 8% | *12%* | *8%* | *8%* | *8%* | *8%* |
| Accrued Exp. | | 0.431 | 0.321 | 10.429 | 1.114 | 1.637 | | 1.820 | 1.092 | 1.244 | 1.269 | 1.294 |
| *% of Revenue* | | *1%* | *1%* | *23%* | *4%* | *5%* | 3% | *5%* | *3%* | *3%* | *3%* | *3%* |
| Curr. Income Taxes Payable | | | | | 4.069 | 2.213 | | | | | | |
| *% of Revenue* | | | | | *14%* | *6%* | 10% | | | | | |
| Unearned Revenue, Current | 1.975 | 4.195 | 4.394 | 5.491 | 0.521 | 0.569 | | 0.569 | 3.083 | 3.513 | 3.583 | 3.655 |
| *% of Revenue* | *6%* | *12%* | *11%* | *12%* | *2%* | *2%* | 7% | *0.02* | *7%* | *7%* | *7%* | *7%* |
| Other Current Liabilities | 4.143 | 3.4 | 25.897 | 18.075 | 7.511 | 4.831 | | 5.370 | 6.431 | 7.327 | 7.474 | 7.623 |
| *% of Revenue* | *13%* | *10%* | *66%* | *40%* | *26%* | *14%* | 16% | *14%* | *16%* | *16%* | *16%* | *16%* |
| **NWC** | **(4.773)** | **(3.534)** | **17.903** | **(23.321)** | **(8.514)** | **0.422** | | **3.748** | **(1.499)** | **(1.708)** | **(1.742)** | **(1.777)** |
| **Change in NWC** | | **1.239** | **21.437** | **(41.224)** | **14.807** | **8.936** | | **3.326** | **(5.247)** | **(0.209)** | **(0.034)** | **(0.035)** |

## *WACC*

| | 2021 | 2022+ |
|---|---|---|
| Net Debt | 235.906 | |
| Market Cap | 319.898 | |
| D/(D+E) | 42.44% | |
| Tax Rate % | 2.35% | |
| **Cost of Equity** | **9.45%** | **9.30%** |
| Risk Free Rate | 2.4% | |
| Beta | 0.82 | |
| ERP | 4.49% | |
| Size Premium | 3.39% | |
| **Cost of Debt** | **2.02%** | **1.74%** |
| **WACC** | **6.28%** | **6.07%** |

# Green valuation 1 (low case)

## *DCF*

| For the Fiscal Period Ending | Reclassified 12 months Dec-31-2016 | Reclassified 12 months Dec-31-2017 | Restated 12 months Dec-31-2018 | Reclassified 12 months Dec-31-2019 | 12 months Dec-31-2020 | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Currency in millions* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | |
| Rental Revenue | 24.404 | 24.946 | 25.434 | 25.524 | 28.858 | 33.535 | 34.589 | 39.409 | 40.197 | 41.001 | |
| Other Revenue | 7.653 | 10.163 | 13.902 | 20.195 | 0.385 | 5.182 | 5.304 | 6.043 | 6.164 | 6.288 | |
| **Total Revenue** | **32.057** | **35.109** | **39.336** | **45.719** | **29.243** | **38.717** | **39.893** | **45.452** | **46.361** | **47.288** | |
| *YoY % growth RR* | | *-5.5%* | *9.0%* | *12.8%* | *2.8%* | *32.4%* | *3.1%* | *13.9%* | *2.0%* | *2.0%* | |
| *YoY % growth OR* | | | | | | *32.4%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* | |
| *Occupancy* | | | | | | *84%* | *87.1%* | *91.3%* | | | |
| Property Exp. | 8.923 | 8.768 | 9.957 | 10.948 | 9.167 | 10.653 | 11.438 | 13.032 | 13.292 | 13.558 | |
| *% of revenue* | *36.6%* | *35.1%* | *39.1%* | *42.9%* | *31.8%* | *31.8%* | *33.1%* | *33.1%* | *33.1%* | *33.1%* | |
| Selling General & Admin Exp. | 5.152 | 5.293 | 5.223 | 6.548 | 7.864 | 7.978 | 8.492 | 6.650 | 6.783 | 6.919 | |
| *% of revenue* | *16.1%* | *15.1%* | *13.3%* | *14.3%* | *26.9%* | *20.6%* | *21.3%* | *14.6%* | *14.6%* | *14.6%* | |
| Other Operating Expense/(Income) | (0.170) | | | | | | | | | | |
| **Operating Exp., Total** | **13.905** | **14.061** | **15.180** | **17.496** | **17.031** | **18.631** | **19.930** | **19.682** | **20.075** | **20.477** | |
| *% of revenue* | *57.0%* | *56.4%* | *59.7%* | *68.5%* | *59.0%* | *55.6%* | *57.6%* | *49.9%* | *49.9%* | *49.9%* | |
| **Operating Income / EBIT** | **18.152** | **21.048** | **24.156** | **28.223** | **12.212** | **20.086** | **19.963** | **25.770** | **26.286** | **26.811** | |
| *% of revenue* | *56.6%* | *60.0%* | *61.4%* | *61.7%* | *41.8%* | *51.9%* | *50.0%* | *56.7%* | *56.7%* | *56.7%* | |
| *Tax Rate %* | *5.2%* | *4.2%* | *44.2%* | *2.2%* | *0.6%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | |
| **NOPAT** | **17.211** | **20.169** | **13.477** | **27.609** | **12.140** | **19.614** | **19.495** | **25.165** | **25.668** | **26.182** | |
| Capex | - | 0.100 | 0.700 | 1.800 | 1.366 | 10.655 | 0.800 | 0.800 | 0.800 | 0.800 | |
| Change in NWC | 0.000 | 1.239 | 21.437 | (41.224) | 14.807 | 3.326 | (5.823) | (0.289) | (0.047) | (0.048) | |
| **Free Cash Flows (FCF)** | | **18.830** | **(8.660)** | **67.033** | **(4.033)** | **5.634** | **24.518** | **24.654** | **24.916** | **25.430** | 624.96 |
| | | | | | | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | |
| *% discount factor* | | | | | | *94.1%* | *88.7%* | *83.6%* | *78.8%* | *74.2%* | |
| **PV FCF** | | | | | | **5.301** | **21.759** | **20.612** | **19.624** | **18.869** | |
| Terminal Value (TV) | | | | | | 624.963 | | | | | |
| **PV TV** | | | | | | **463.709** | | | | | |

| | | |
|---|---|---|
| **Enterprise Value** | **549.875** | |
| Total Debt | 274.480 | |
| Cash | 38.574 | |
| Minority interest | 1.410 | |
| **Equity** | **312.559** | |
| Shares Outstanding | 32.401 | |
| **Implied Share Price** | **9.65** | |
| Share Price | 9.70 | Last 12 month average (27.3.2021-28.3.2022) |
| **Upside/Downside** | **(0.55%)** | |
| g | 2.00% | long term inflation |
| WACC FY21 | 6.28% | 6.15% |
| WACC FY22-TV | 6.15% | |

## *Net working capital*

| For the Fiscal Period Ending | Reclassified Dec-31-2016 | Dez-31-2017 | Restated Dec-31-2018 | Dez-31-2019 | Dez-31-2020 | Sep-30-2021 | Average | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Currency in millions*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** |
| Accounts receivables | 2.671 | 2.493 | 1.813 | 1.735 | 3.517 | 4.811 | | 5.348 | 4.229 | 4.818 | 4.914 | 5.012 |
| Other receivables | 2.237 | 3.988 | 3.174 | 4.630 | 5.375 | 6.681 | | 7.427 | 6.209 | 7.075 | 7.216 | 7.360 |
| Accounts payables | 4.181 | 3.362 | 3.406 | 6.409 | 4.366 | 6.096 | | 6.021 | 5.653 | 6.440 | 6.569 | 6.701 |
| **Selected case:** | | | | | | | | | | | | |
| DSO (Account Receivables) | 30 | 26 | 17 | 14 | 43 | 50 | 38 | 50 | 38 | 38 | 38 | 38 |
| DSO (Other Recievables) | 25 | 41 | 29 | 36 | 66 | 69 | 56 | 69 | 56 | 56 | 56 | 56 |
| DPO (Accpunts Payables) | 169 | 138 | 123 | 211 | 171 | 203 | 178 | 203 | 178 | 178 | 178 | 178 |
| Other Current Assets | 0.618 | 1.373 | 46.934 | 10.718 | 0.175 | 4.276 | | 4.753 | 3.364 | 3.832 | 3.909 | 3.987 |
| *% of Revenue* | *2%* | *4%* | *119%* | *23%* | *1%* | *12%* | 8% | *12%* | *8%* | *8%* | *8%* | *8%* |
| Accrued Exp. | | 0.431 | 0.321 | 10.429 | 1.114 | 1.637 | | 1.820 | 1.052 | 1.199 | 1.223 | 1.248 |
| *% of Revenue* | | *1%* | *1%* | *23%* | *4%* | *5%* | 3% | *5%* | *3%* | *3%* | *3%* | *3%* |
| Curr. Income Taxes Payable | | | | | 4.069 | 2.213 | | | | | | |
| *% of Revenue* | | | | | *14%* | *6%* | 10% | | | | | |
| Unearned Revenue, Current | 1.975 | 4.195 | 4.394 | 5.491 | 0.521 | 0.569 | | 0.569 | 2.972 | 3.387 | 3.454 | 3.523 |
| *% of Revenue* | *6%* | *12%* | *11%* | *12%* | *2%* | *2%* | 7% | *0.02* | *7%* | *7%* | *7%* | *7%* |
| Other Current Liabilities | 4.143 | 3.4 | 25.897 | 18.075 | 7.511 | 4.831 | | 5.370 | 6.200 | 7.064 | 7.205 | 7.349 |
| *% of Revenue* | *13%* | *10%* | *66%* | *40%* | *26%* | *14%* | 16% | *14%* | *16%* | *16%* | *16%* | *16%* |
| **NWC** | **(4.773)** | **(3.534)** | **17.903** | **(23.321)** | **(8.514)** | **0.422** | | **3.748** | **(2.076)** | **(2.365)** | **(2.412)** | **(2.461)** |
| **Change in NWC** | | **1.239** | **21.437** | **(41.224)** | **14.807** | **8.936** | | **3.326** | **(5.823)** | **(0.289)** | **(0.047)** | **(0.048)** |

## *WACC*

| | 2021 | 2022+ |
|---|---|---|
| Net Debt | 235.906 | |
| Market Cap | 319.898 | |
| D/(D+E) | 42.44% | |
| Tax Rate % | 2.35% | |
| **Cost of Equity** | **9.45%** | **9.35%** |
| Risk Free Rate | 2.4% | |
| Beta | 0.82 | |
| ERP | 4.49% | |
| Size Premium | 3.39% | |
| **Cost of Debt** | **2.02%** | **1.86%** |
| **WACC** | **6.28%** | **6.15%** |

# Green valuation 1 (high case)

## *DCF*

| For the Fiscal Period Ending | Reclassified 12 months Dec-31-2016 | Reclassified 12 months Dec-31-2017 | Restated 12 months Dec-31-2018 | Reclassified 12 months Dec-31-2019 | 12 months Dec-31-2020 | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Currency in millions*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | |
| Rental Revenue | 24.404 | 24.946 | 25.434 | 25.524 | 28.858 | 33.535 | 39.291 | 44.766 | 45.662 | 46.575 | |
| Other Revenue | 7.653 | 10.163 | 13.902 | 20.195 | 0.385 | 5.182 | 5.304 | 6.043 | 6.164 | 6.288 | |
| **Total Revenue** | **32.057** | **35.109** | **39.336** | **45.719** | **29.243** | **38.717** | **44.596** | **50.810** | **51.826** | **52.863** | |
| *YoY % growth RR* | | *-5.5%* | *9.0%* | *12.8%* | *2.8%* | *32.4%* | *17.2%* | *13.9%* | *2.0%* | *2.0%* | |
| *YoY % growth OR* | | | | | | *32.4%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* | |
| *Occupancy* | | | | | | *84%* | *87.1%* | *91.3%* | | | |
| Property Exp. | 8.923 | 8.768 | 9.957 | 10.948 | 9.167 | 10.653 | 10.575 | 12.048 | 12.289 | 12.535 | |
| *% of revenue* | *36.6%* | *35.1%* | *39.1%* | *42.9%* | *31.8%* | *31.8%* | *26.9%* | *26.9%* | *26.9%* | *26.9%* | |
| Selling General & Admin Exp. | 5.152 | 5.293 | 5.223 | 6.548 | 7.864 | 7.978 | 8.492 | 6.650 | 6.783 | 6.919 | |
| *% of revenue* | *16.1%* | *15.1%* | *13.3%* | *14.3%* | *26.9%* | *20.6%* | *19.0%* | *13.1%* | *13.1%* | *13.1%* | |
| Other Operating Expense/(Income) | (0.170) | | | | | | | | | | |
| **Operating Exp., Total** | **13.905** | **14.061** | **15.180** | **17.496** | **17.031** | **18.631** | **19.067** | **18.698** | **19.072** | **19.454** | |
| *% of revenue* | *57.0%* | *56.4%* | *59.7%* | *68.5%* | *59.0%* | *55.6%* | *48.5%* | *41.8%* | *41.8%* | *41.8%* | |
| **Operating Income / EBIT** | **18.152** | **21.048** | **24.156** | **28.223** | **12.212** | **20.086** | **25.529** | **32.112** | **32.754** | **33.409** | |
| *% of revenue* | *56.6%* | *60.0%* | *61.4%* | *61.7%* | *41.8%* | *51.9%* | *57.2%* | *63.2%* | *63.2%* | *63.2%* | |
| *Tax Rate %* | *5.2%* | *4.2%* | *44.2%* | *2.2%* | *0.6%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | |
| **NOPAT** | **17.211** | **20.169** | **13.477** | **27.609** | **12.140** | **19.614** | **24.930** | **31.357** | **31.985** | **32.624** | |
| Capex | - | 0.100 | 0.700 | 1.800 | 1.366 | 83.302 | 0.800 | 0.800 | 0.800 | 0.800 | |
| Change in NWC | 0.000 | 1.239 | 21.437 | (41.224) | 14.807 | 3.326 | (4.975) | (0.171) | (0.028) | (0.029) | |
| **Free Cash Flows (FCF)** | | **18.830** | **(8.660)** | **67.033** | **(4.033)** | **(67.013)** | **29.105** | **30.729** | **31.213** | **31.853** | 813.53 |
| | | | | | | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | |
| *% discount factor* | | | | | | *94.1%* | *89.0%* | *84.0%* | *79.2%* | *74.7%* | |
| **PV FCF** | | | | | | **(63.055)** | **25.906** | **25.805** | **24.729** | **23.809** | |
| Terminal Value (TV) | | | | | | 813.533 | | | | | |
| **PV TV** | | | | | | **608.100** | | | | | |

| | | |
|---|---|---|
| **Enterprise Value** | **645.295** | |
| Total Debt | 274.480 | |
| Cash | 38.574 | |
| Minority interest | 1.410 | |
| **Equity** | **407.979** | |
| Shares Outstanding | 32.401 | |
| **Implied Share Price** | **12.59** | |
| Share Price | 9.70 | Last 12 month average (27.3.2021-28.3.2022) |
| **Upside/Downside** | **29.81%** | |
| g | 2.00% | long term inflation |
| WACC FY21 | 6.28% | 5.99% |
| WACC FY22-TV | 5.99% | |

## *Net working capital*

| For the Fiscal Period Ending | Reclassified Dec-31-2016 | Dez-31-2017 | Restated Dec-31-2018 | Dez-31-2019 | Dez-31-2020 | Sep-30-2021 | Average | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Currency in millions*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** |
| Accounts receivables | 2.671 | 2.493 | 1.813 | 1.735 | 3.517 | 4.811 | | 5.348 | 4.727 | 5.386 | 5.493 | 5.603 |
| Other receivables | 2.237 | 3.988 | 3.174 | 4.630 | 5.375 | 6.681 | | 7.427 | 6.941 | 7.909 | 8.067 | 8.228 |
| Accounts payables | 4.181 | 3.362 | 3.406 | 6.409 | 4.366 | 6.096 | | 6.021 | 5.226 | 5.954 | 6.073 | 6.195 |
| **Selected case:** | | | | | | | | | | | | |
| DSO (Account Receivables) | 30 | 26 | 17 | 14 | 43 | 50 | 38 | 50 | 38 | 38 | 38 | 38 |
| DSO (Other Recievables) | 25 | 41 | 29 | 36 | 66 | 69 | 56 | 69 | 56 | 56 | 56 | 56 |
| DPO (Accpunts Payables) | 169 | 138 | 123 | 211 | 171 | 203 | 178 | 203 | 178 | 178 | 178 | 178 |
| Other Current Assets | 0.618 | 1.373 | 46.934 | 10.718 | 0.175 | 4.276 | | 4.753 | 3.760 | 4.284 | 4.370 | 4.457 |
| *% of Revenue* | *2%* | *4%* | *119%* | *23%* | *1%* | *12%* | 8% | *12%* | *8%* | *8%* | *8%* | *8%* |
| Accrued Exp. | | 0.431 | 0.321 | 10.429 | 1.114 | 1.637 | | 1.820 | 1.177 | 1.340 | 1.367 | 1.395 |
| *% of Revenue* | | *1%* | *1%* | *23%* | *4%* | *5%* | 3% | *5%* | *3%* | *3%* | *3%* | *3%* |
| Curr. Income Taxes Payable | | | | | 4.069 | 2.213 | | | | | | |
| *% of Revenue* | | | | | *14%* | *6%* | 10% | | | | | |
| Unearned Revenue, Current | 1.975 | 4.195 | 4.394 | 5.491 | 0.521 | 0.569 | | 0.569 | 3.323 | 3.786 | 3.862 | 3.939 |
| *% of Revenue* | *6%* | *12%* | *11%* | *12%* | *2%* | *2%* | 7% | *0.02* | *7%* | *7%* | *7%* | *7%* |
| Other Current Liabilities | 4.143 | 3.4 | 25.897 | 18.075 | 7.511 | 4.831 | | 5.370 | 6.931 | 7.896 | 8.054 | 8.215 |
| *% of Revenue* | *13%* | *10%* | *66%* | *40%* | *26%* | *14%* | 16% | *14%* | *16%* | *16%* | *16%* | *16%* |
| **NWC** | **(4.773)** | **(3.534)** | **17.903** | **(23.321)** | **(8.514)** | **0.422** | | **3.748** | **(1.228)** | **(1.399)** | **(1.427)** | **(1.455)** |
| **Change in NWC** | | **1.239** | **21.437** | **(41.224)** | **14.807** | **8.936** | | **3.326** | **(4.975)** | **(0.171)** | **(0.028)** | **(0.029)** |

## *WACC*

| | 2021 | 2022+ |
|---|---|---|
| Net Debt | 235.906 | |
| Market Cap | 319.898 | |
| D/(D+E) | 42.44% | |
| Tax Rate % | 2.35% | |
| **Cost of Equity** | **9.45%** | **9.25%** |
| Risk Free Rate | 2.4% | |
| Beta | 0.82 | |
| ERP | 4.49% | |
| Size Premium | 3.39% | |
| **Cost of Debt** | **2.02%** | **1.62%** |
| **WACC** | **6.28%** | **5.99%** |

# Green valuation 2 (average case)

## *DCF*

| For the Fiscal Period Ending | Reclassified 12 months Dec-31-2016 | Reclassified 12 months Dec-31-2017 | Restated 12 months Dec-31-2018 | Reclassified 12 months Dec-31-2019 | 12 months Dec-31-2020 | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 | Forecast 2026 | Forecast 2027 | Forecast 2028 | Forecast 2029 | Forecast 2030 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Currency*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | ***CAD*** | |
| Rental Revenue | 24.404 | 24.946 | 25.434 | 25.524 | 28.858 | 33.535 | 34.326 | 39.110 | 39.958 | 41.135 | 42.219 | 43.185 | 44.049 | 44.930 | 45.828 | |
| Revenue Discount due to Renovation | | | | | | (0.442) | (1.811) | (2.064) | (14.986) | (9.159) | (7.416) | 0.00 | 0.00 | 0.00 | 0.00 | |
| Brown | | | | | | | | | 32.875 | 18.248 | 9.270 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Green FY 24 | | | | | | | | | 7.083 | 7.224 | 7.369 | 7.516 | 7.667 | 7.820 | 7.976 | |
| Green FY 25 | | | | | | | | | | 15.663 | 15.977 | 16.296 | 16.622 | 16.955 | 17.294 | |
| Green FY 26 | | | | | | | | | | | 9.604 | 9.796 | 9.992 | 10.192 | 10.396 | |
| Green FY 27 | | | | | | | | | | | | 9.577 | 9.768 | 9.964 | 10.163 | |
| Other Revenue | 7.653 | 10.163 | 13.902 | 20.195 | 0.385 | 5.182 | 5.304 | 6.043 | 6.164 | 6.288 | 6.413 | 6.542 | 6.672 | 6.806 | 6.942 | |
| **Total Revenue** | **32.057** | **35.109** | **39.336** | **45.719** | **29.243** | **38.274** | **37.819** | **43.089** | **31.137** | **38.263** | **41.217** | **49.727** | **50.721** | **51.736** | **52.770** | |
| *YoY % growth forecasted RR* | | | | | | *32%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | |
| *YoY % growth due to green portfolio* | | | | | | | | *0.00%* | *0.96%* | *2.52%* | *2.85%* | *1.31%* | *0.00%* | *0.00%* | *0.00%* | |
| *YoY % growth forecasted OR* | | | | | | | | | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | |
| | | | | | | *32%* | *2%* | *14%* | | | | | | | | |
| Property Exp. | 8.923 | 8.768 | 9.957 | 10.948 | 9.167 | 10.653 | 10.904 | 12.423 | 12.512 | 12.484 | 12.571 | 12.617 | 12.870 | 13.127 | 13.390 | |
| Property Expense Discount due to Renovation | | | | | | 0.00 | 0.00 | 0.00 | (4.760) | (2.910) | (2.356) | 0.00 | 0.00 | 0.00 | 0.00 | |
| Brown | | | | | | | | | 10.443 | 5.796 | 2.945 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Green FY 24 | | | | | | | | | 2.069 | 2.111 | 2.153 | 2.196 | 2.240 | 2.285 | 2.330 | |
| Green FY 25 | | | | | | | | | | 4.576 | 4.668 | 4.761 | 4.856 | 4.954 | 5.053 | |
| Green FY 26 | | | | | | | | | | | 2.806 | 2.862 | 2.919 | 2.978 | 3.037 | |
| Green FY 27 | | | | | | | | | | | | 2.798 | 2.854 | 2.911 | 2.969 | |
| *% of revenue* | *36.6%* | *35.1%* | *39.1%* | *42.9%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *31.3%* | *30.3%* | *29.8%* | *29.2%* | *29.2%* | *29.2%* | *29.2%* | |
| Total Property Exp. | | | | | | *10.653* | *10.904* | *12.423* | *7.752* | *9.574* | *10.216* | *12.617* | *12.870* | *13.127* | *13.390* | |
| Selling General & Admin Exp. | 5.152 | 5.293 | 5.223 | 6.548 | 7.864 | 7.978 | 8.492 | 6.650 | 4.805 | 5.905 | 6.361 | 7.674 | 7.828 | 7.984 | 8.144 | |
| *% of revenue* | *21.1%* | *21.2%* | *20.5%* | *25.7%* | *27.3%* | *20.8%* | *22.5%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | |
| Other Operating Expense/(Income) | (0.170) | | | | | | | | | | | | | | | |
| **Operating Exp., Total** | **13.905** | **14.061** | **15.180** | **17.496** | **17.031** | **18.631** | **19.396** | **19.073** | **12.557** | **15.479** | **16.577** | **20.292** | **20.697** | **21.111** | **21.534** | |
| *% of revenue* | *43.4%* | *40.0%* | *38.6%* | *38.3%* | *58.2%* | *48.7%* | *51.3%* | *44.3%* | *40.3%* | *40.5%* | *40.2%* | *40.8%* | *40.8%* | *40.8%* | *40.8%* | |
| **Operating Income / EBIT** | **18.152** | **21.048** | **24.156** | **28.223** | **12.212** | **19.643** | **18.424** | **24.016** | **18.579** | **22.784** | **24.640** | **29.435** | **30.024** | **30.624** | **31.237** | |
| % of revenue | 56.6% | 60.0% | 61.4% | 61.7% | 41.8% | 51.3% | 48.7% | 55.7% | 59.7% | 59.5% | 59.8% | 59.2% | 59.2% | 59.2% | 59.2% | |
| Tax Rate % | 5.2% | 4.2% | 44.2% | 2.2% | 0.6% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | |
| **NOPAT** | **17.211** | **20.169** | **13.477** | **27.609** | **12.140** | **19.182** | **17.991** | **23.452** | **18.143** | **22.249** | **24.062** | **28.744** | **29.319** | **29.905** | **30.503** | |
| Capex | - | 0.100 | 0.700 | 1.800 | 1.366 | 6.063 | 0.800 | 0.800 | 12.041 | 7.536 | 7.483 | 0.800 | 0.800 | 0.800 | 0.800 | |
| Change in NWC | 0.000 | 1.239 | 21.437 | (41.224) | 14.807 | 3.207 | (5.627) | (0.278) | 1.237 | (0.261) | (0.052) | (0.424) | (0.036) | (0.036) | (0.037) | |
| **FCF** | | **18.830** | **(8.660)** | **67.033** | **(4.033)** | **9.912** | **22.818** | **22.930** | **4.865** | **14.975** | **16.630** | **28.368** | **28.554** | **29.141** | **29.740** | **744.958** |
| | | | | | | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | |
| % discount factor | | | | | | *94.1%* | *88.5%* | *83.3%* | *78.5%* | *74.1%* | *70.0%* | *66.2%* | *62.4%* | *58.8%* | *55.5%* | |
| **PV FCF** | | | | | | **9.326** | **20.202** | **19.102** | **3.819** | **11.104** | **11.646** | **18.777** | **17.818** | **17.144** | **16.494** | |
| **PV TV** | | | | | | **413.163** | | | | | | | | | | |

| | |
|---|---|
| **Enterprise Value** | **558.595** |
| Total Debt | 274.480 |
| Cash | 38.574 |
| Minority Interest | 1.410 |
| **Equity** | **321.279** |
| Shares Outstanding | 32.401 |
| **Implied Share Price** | **9.92** |
| Share Price | 9.70 Last 12 month average (27.3.2021-28.3.2022) |
| **Upside/Downside** | 2.23% |

g 2.00% long term inflation

| | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
|---|---|---|---|---|---|---|---|---|---|---|
| **WACC** | 6.28% | 6.28% | 6.28% | 6.24% | 6.16% | 6.12% | 6.07% | 6.07% | 6.07% | 6.07% |

## *Net working capital*

| For the Fiscal Period Ending | Reclassified | | Restated | | | | Average | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec-31-2016 | Dez-31-2017 | Dec-31-2018 | Dez-31-2019 | Dez-31-2020 | Sep-30-2021 | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| *Currency in millions* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* |
| Accounts receivables | 2.671 | 2.493 | 1.813 | 1.735 | 3.517 | 4.811 | | 5.287 | 4.009 | 4.567 | 3.300 | 4.056 | 4.369 | 5.271 | 5.376 | 5.484 | 5.593 |
| Other receivables | 2.237 | 3.988 | 3.174 | 4.630 | 5.375 | 6.681 | | 7.342 | 5.887 | 6.707 | 4.846 | 5.956 | 6.415 | 7.740 | 7.895 | 8.053 | 8.214 |
| Accounts payables | 4.181 | 3.362 | 3.406 | 6.409 | 4.366 | 6.096 | | 6.021 | 5.389 | 6.140 | 3.831 | 4.732 | 5.049 | 6.236 | 6.360 | 6.487 | 6.617 |
| **Selected case:** | | | | | | | | | | | | | | | | | |
| DSO (Account Receivabl | 30.0 | 25.6 | 16.6 | 13.7 | 43.3 | 49.7 | 38.2 | 49.7 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 |
| DSO (Other Recievables | 25.1 | 40.9 | 29.0 | 36.5 | 66.2 | 69.1 | 56.0 | 69.1 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 |
| DPO (Accpunts Payable | 168.7 | 138.0 | 123.1 | 210.7 | 171.5 | 203.5 | 177.9 | 203.5 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 |
| Other Current Assets | 0.618 | 1.373 | 46.934 | 10.718 | 0.175 | 4.276 | | 4.70 | 3.19 | 3.63 | 2.63 | 3.23 | 3.48 | 4.19 | 4.28 | 4.36 | 4.45 |
| *margin* | *2%* | *4%* | *119%* | *23%* | *1%* | *12%* | *8%* | *12%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* |
| Accrued Exp. | | 0.431 | 0.321 | 10.429 | 1.114 | 1.637 | | 1.80 | 1.00 | 1.14 | 0.82 | 1.01 | 1.09 | 1.31 | 1.34 | 1.36 | 1.39 |
| *margin* | | *1%* | *1%* | *23%* | *4%* | *5%* | *3%* | *5%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* |
| Curr. Income Taxes Payable | | | | | 4.069 | 2.213 | | | | | | | | | | | |
| *margin* | | | | | *14%* | *6%* | *10%* | | | | | | | | | | |
| Unearned Revenue, Curr | 1.975 | 4.195 | 4.394 | 5.491 | 0.521 | 0.569 | | 0.57 | 2.82 | 3.21 | 2.32 | 2.85 | 3.07 | 3.71 | 3.78 | 3.85 | 3.93 |
| *margin* | *6%* | *12%* | *11%* | *12%* | *2%* | *2%* | *7%* | *1%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* |
| Other Current Liabilities | 4.143 | 3.4 | 25.897 | 18.075 | 7.511 | 4.831 | | 5.31 | 5.88 | 6.70 | 4.84 | 5.95 | 6.41 | 7.73 | 7.88 | 8.04 | 8.20 |
| *margin* | *13%* | *10%* | *66%* | *40%* | *26%* | *14%* | *16%* | *14%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* |
| **NWC** | **(4.773)** | **(3.534)** | **17.903** | **(23.321)** | **(8.514)** | **0.422** | | **3.629** | **(1.998)** | **(2.276)** | **(1.039)** | **(1.301)** | **(1.353)** | **(1.777)** | **(1.813)** | **(1.849)** | **(1.886)** |
| **Change in NWC** | | **1.239** | **21.437** | **(41.224)** | **14.807** | **8.936** | | **3.207** | **(5.627)** | **(0.278)** | **1.237** | **(0.261)** | **(0.052)** | **(0.424)** | **(0.036)** | **(0.036)** | **(0.037)** |

## *WACC*

| | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| Net Debt | 235.906 | | | | | | | | | |
| Market Cap | 319.898 | | | | | | | | | |
| D/(D+E) | 42.4% | | | | | | | | | |
| Tax Rate % | 2.3% | | | | | | | | | |
| **Cost of Equity** | **9.45%** | **9.45%** | **9.45%** | **9.42%** | **9.37%** | **9.33%** | **9.30%** | **9.30%** | **9.30%** | **9.30%** |
| Risk Free Rate | 2.4% | | | | | | | | | |
| Beta | 0.8 | | | | | | | | | |
| ERP | 4.49% | | | | | | | | | |
| Size Premium | 3.39% | | | | | | | | | |
| **Cost of Debt** | **2.02%** | **2.02%** | **2.02%** | **1.97%** | **1.87%** | **1.80%** | **1.74%** | **1.74%** | **1.74%** | **1.74%** |
| **WACC** | **6.28%** | **6.28%** | **6.28%** | **6.24%** | **6.16%** | **6.12%** | **6.07%** | **6.07%** | **6.07%** | **6.07%** |

# Green valuation 2 (low case)

## *DCF*

| For the Fiscal Period Ending | Reclassified 12 months | Reclassified 12 months | Restated 12 months | Reclassified 12 months | 12 months | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec-31-2016 | Dec-31-2017 | Dec-31-2018 | Dec-31-2019 | Dec-31-2020 | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 | Forecast 2026 | Forecast 2027 | Forecast 2028 | Forecast 2029 | Forecast 2030 | |
| *Currency* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | |
| Rental Revenue | 24.404 | 24.946 | 25.434 | 25.524 | 28.858 | 33.532 | 34.326 | 39.110 | 39.902 | 40.756 | 41.609 | 42.458 | 43.308 | 44.174 | 45.057 | |
| Revenue Discount due to Renovation | | | | | | (0.442) | (1.811) | (2.064) | (14.986) | (9.159) | (7.416) | 0.00 | 0.00 | 0.00 | 0.00 | |
| Brown | | | | | | | | | 32.875 | 18.248 | 9.270 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Green FY 24 | | | | | | | | | 7.026 | 7.167 | 7.310 | 7.456 | 7.606 | 7.758 | 7.913 | |
| Green FY 25 | | | | | | | | | | 15.341 | 15.648 | 15.961 | 16.281 | 16.606 | 16.938 | |
| Green FY 26 | | | | | | | | | | | 9.381 | 9.568 | 9.760 | 9.955 | 10.154 | |
| Green FY 27 | | | | | | | | | | | | 9.472 | 9.662 | 9.855 | 10.052 | |
| Other Revenue | 7.653 | 10.163 | 13.902 | 20.195 | 0.385 | 5.182 | 5.304 | 6.043 | 6.164 | 6.288 | 6.413 | 6.542 | 6.672 | 6.806 | 6.942 | |
| **Total Revenue** | **32.057** | **35.109** | **39.336** | **45.719** | **29.243** | **38.274** | **37.819** | **43.089** | **31.080** | **37.884** | **40.606** | **49.000** | **49.980** | **50.980** | **51.999** | |
| *YoY % growth forecasted RR* | | | | | | *32%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | |
| *YoY % growth due to green portfolio* | | | | | | | | *0.00%* | *0.14%* | *0.38%* | *0.41%* | *0.19%* | *0.00%* | *0.00%* | *0.00%* | |
| *YoY % growth forecasted OR* | | | | | | | | | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | |
| | | | | | | *32%* | *2%* | *14%* | | | | | | | | |
| Property Exp. | 8.923 | 8.768 | 9.957 | 10.948 | 9.167 | 10.653 | 10.904 | 12.423 | 12.767 | 13.240 | 13.639 | 14.040 | 14.321 | 14.607 | 14.900 | |
| Property Expense Discount due to Renovation | | | | | | 0.00 | 0.00 | 0.00 | (4.760) | (2.910) | (2.356) | 0.00 | 0.00 | 0.00 | 0.00 | |
| Brown | | | | | | | | | 10.443 | 5.796 | 2.945 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Green FY 24 | | | | | | | | | 2.323 | 2.370 | 2.417 | 2.466 | 2.515 | 2.565 | 2.617 | |
| Green FY 25 | | | | | | | | | | 5.073 | 5.175 | 5.278 | 5.384 | 5.491 | 5.601 | |
| Green FY 26 | | | | | | | | | | | 3.102 | 3.164 | 3.227 | 3.292 | 3.358 | |
| Green FY 27 | | | | | | | | | | | | 3.132 | 3.195 | 3.259 | 3.324 | |
| *% of revenue* | *36.6%* | *35.1%* | *39.1%* | *42.9%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *32.0%* | *32.5%* | *32.8%* | *33.1%* | *33.1%* | *33.1%* | *33.1%* | |
| Total Property Exp. | | | | | | *10.653* | *10.904* | *12.423* | *8.006* | *10.330* | *11.283* | *14.040* | *14.321* | *14.607* | *14.900* | |
| Selling General & Admin Exp. | 5.152 | 5.293 | 5.223 | 6.548 | 7.864 | 7.978 | 8.492 | 6.650 | 4.797 | 5.847 | 6.267 | 7.562 | 7.713 | 7.868 | 8.025 | |
| *% of revenue* | *21.1%* | *21.2%* | *20.5%* | *25.7%* | *27.3%* | *20.8%* | *22.5%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | |
| Other Operating Expense/(Income) | (0.170) | | | | | | | | | | | | | | | |
| **Operating Exp., Total** | **13.905** | **14.061** | **15.180** | **17.496** | **17.031** | **18.631** | **19.396** | **19.073** | **12.803** | **16.177** | **17.550** | **21.602** | **22.034** | **22.475** | **22.925** | |
| *% of revenue* | *43.4%* | *40.0%* | *38.6%* | *38.3%* | *58.2%* | *48.7%* | *51.3%* | *44.3%* | *41.2%* | *42.7%* | *43.2%* | *44.1%* | *44.1%* | *44.1%* | *44.1%* | |
| **Operating Income / EBIT** | **18.152** | **21.048** | **24.156** | **28.223** | **12.212** | **19.643** | **18.424** | **24.016** | **18.277** | **21.707** | **23.057** | **27.398** | **27.946** | **28.504** | **29.075** | |
| *% of revenue* | *56.6%* | *60.0%* | *61.4%* | *61.7%* | *41.8%* | *51.3%* | *48.7%* | *55.7%* | *58.8%* | *57.3%* | *56.8%* | *55.9%* | *55.9%* | *55.9%* | *55.9%* | |
| Tax Rate % | *5.2%* | *4.2%* | *44.2%* | *2.2%* | *0.6%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | |
| **NOPAT** | **17.211** | **20.169** | **13.477** | **27.609** | **12.140** | **19.182** | **17.991** | **23.452** | **17.848** | **21.198** | **22.515** | **26.754** | **27.289** | **27.835** | **28.392** | |
| Capex | - | 0.100 | 0.700 | 1.800 | 1.366 | 2.533 | 0.800 | 0.800 | 4.502 | 3.018 | 3.001 | 0.800 | 0.800 | 0.800 | 0.800 | |
| Change in NWC | 0.000 | 1.239 | 21.437 | (41.224) | 14.807 | 3.207 | (5.627) | (0.278) | 1.106 | (0.538) | (0.227) | (0.610) | (0.051) | (0.052) | (0.053) | |
| **FCF** | | **18.830** | **(8.660)** | **67.033** | **(4.033)** | **13.441** | **22.818** | **22.930** | **12.240** | **18.718** | **19.741** | **26.564** | **26.540** | **27.087** | **27.645** | **679.391** |
| | | | | | | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | |
| % discount factor | | | | | | *94.1%* | *88.5%* | *83.3%* | *78.5%* | *74.0%* | *69.8%* | *65.8%* | *62.0%* | *58.4%* | *55.1%* | |
| **PV FCF** | | | | | | **12.648** | **20.202** | **19.102** | **9.602** | **13.851** | **13.777** | **17.492** | **16.464** | **15.829** | **15.219** | |
| **PV TV** | | | | | | **374.027** | | | | | | | | | | |

| | |
|---|---|
| **Enterprise Value** | **528.213** |
| Total Debt | 274.480 |
| Cash | 38.574 |
| Minority interest | 1.410 |
| **Equity** | **290.897** |
| Shares Outstanding | 32.401 |
| **Implied Share Price** | **8.98** |
| Share Price | 9.70 Last 12 month average (27.3.2021-28.3.2022) |
| **Upside/Downside** | **-7.44%** |

g 2.00% long term inflation

| | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
|---|---|---|---|---|---|---|---|---|---|---|
| **WACC** | 6.28% | 6.28% | 6.28% | 6.26% | 6.21% | 6.18% | 6.15% | 6.15% | 6.15% | 6.15% |

## *Net working capital*

| For the Fiscal Period Ending | Reclassified | | Restated | | | | Average | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec-31-2016 | Dez-31-2017 | Dec-31-2018 | Dec-31-2019 | Dez-31-2020 | Sep-30-2021 | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| *Currency in millions* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* |
| Accounts receivables | 2.671 | 2.493 | 1.813 | 1.735 | 3.517 | 4.811 | | 5.287 | 4.009 | 4.567 | 3.294 | 4.016 | 4.304 | 5.194 | 5.298 | 5.404 | 5.512 |
| Other receivables | 2.237 | 3.988 | 3.174 | 4.630 | 5.375 | 6.681 | | 7.342 | 5.887 | 6.707 | 4.838 | 5.897 | 6.320 | 7.627 | 7.779 | 7.935 | 8.094 |
| Accounts payables | 4.181 | 3.362 | 3.406 | 6.409 | 4.366 | 6.096 | | 6.021 | 5.389 | 6.140 | 3.957 | 5.105 | 5.576 | 6.939 | 7.078 | 7.219 | 7.364 |
| **Selected case:** | | | | | | | | | | | | | | | | | |
| DSO (Account Receivabl | 30.0 | 25.6 | 16.6 | 13.7 | 43.3 | 49.7 | 38.2 | 49.7 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 |
| DSO (Other Recievables | 25.1 | 40.9 | 29.0 | 36.5 | 66.2 | 69.1 | 56.0 | 69.1 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 |
| DPO (Accpunts Payable | 168.7 | 138.0 | 123.1 | 210.7 | 171.5 | 203.5 | 177.9 | 203.5 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 |
| Other Current Assets | 0.618 | 1.373 | 46.934 | 10.718 | 0.175 | 4.276 | | 4.70 | 3.19 | 3.63 | 2.62 | 3.19 | 3.42 | 4.13 | 4.21 | 4.30 | 4.38 |
| *margin* | *2%* | *4%* | *119%* | *23%* | *1%* | *12%* | *8%* | *12%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* |
| Accrued Exp. | | 0.431 | 0.321 | 10.429 | 1.114 | 1.637 | | 1.80 | 1.00 | 1.14 | 0.82 | 1.00 | 1.07 | 1.29 | 1.32 | 1.34 | 1.37 |
| *margin* | | *1%* | *1%* | *23%* | *4%* | *5%* | *3%* | *5%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* |
| Curr. Income Taxes Payable | | | | | 4.069 | 2.213 | | | | | | | | | | | |
| *margin* | | | | | *14%* | *6%* | *10%* | | | | | | | | | | |
| Unearned Revenue, Curr | 1.975 | 4.195 | 4.394 | 5.491 | 0.521 | 0.569 | | 0.57 | 2.82 | 3.21 | 2.32 | 2.82 | 3.03 | 3.65 | 3.72 | 3.80 | 3.87 |
| *margin* | *6%* | *12%* | *11%* | *12%* | *2%* | *2%* | *7%* | *1%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* |
| Other Current Liabilities | 4.143 | 3.4 | 25.897 | 18.075 | 7.511 | 4.831 | | 5.31 | 5.88 | 6.70 | 4.83 | 5.89 | 6.31 | 7.61 | 7.77 | 7.92 | 8.08 |
| *margin* | *13%* | *10%* | *66%* | *40%* | *26%* | *14%* | *16%* | *14%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* |
| **NWC** | **(4.773)** | **(3.534)** | **17.903** | **(23.321)** | **(8.514)** | **0.422** | | **3.629** | **(1.998)** | **(2.276)** | **(1.170)** | **(1.708)** | **(1.935)** | **(2.545)** | **(2.596)** | **(2.648)** | **(2.701)** |
| **Change in NWC** | | **1.239** | **21.437** | **(41.224)** | **14.807** | **8.936** | | **3.207** | **(5.627)** | **(0.278)** | **1.106** | **(0.538)** | **(0.227)** | **(0.610)** | **(0.051)** | **(0.052)** | **(0.053)** |

## *WACC*

| | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| Net Debt | 235.906 | | | | | | | | | |
| Market Cap | 319.898 | | | | | | | | | |
| D/(D+E) | 42.4% | | | | | | | | | |
| Tax Rate % | 2.3% | | | | | | | | | |
| **Cost of Equity** | **9.45%** | **9.45%** | **9.45%** | **9.43%** | **9.39%** | **9.37%** | **9.35%** | **9.35%** | **9.35%** | **9.35%** |
| Risk Free Rate | 2.4% | | | | | | | | | |
| Beta | 0.8 | | | | | | | | | |
| ERP | 4.49% | | | | | | | | | |
| Size Premium | 3.39% | | | | | | | | | |
| **Cost of Debt** | **2.02%** | **2.02%** | **2.02%** | **1.99%** | **1.93%** | **1.90%** | **1.86%** | **1.86%** | **1.86%** | **1.86%** |
| **WACC** | **6.28%** | **6.28%** | **6.28%** | **6.26%** | **6.21%** | **6.18%** | **6.15%** | **6.15%** | **6.15%** | **6.15%** |

# Green valuation 2 (high case)

## *DCF*

| For the Fiscal Period Ending | Reclassified 12 months | Reclassified 12 months | Restated 12 months | Reclassified 12 months | 12 months Dec-31- | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec-31-2016 | Dec-31-2017 | Dec-31-2018 | Dec-31-2019 | 2020 | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 | Forecast 2026 | Forecast 2027 | Forecast 2028 | Forecast 2029 | Forecast 2030 | |
| *Currency* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | |
| Rental Revenue | 24.404 | 24.946 | 25.434 | 25.524 | 28.858 | 33.535 | 34.326 | 39.110 | 40.080 | 41.776 | 42.611 | 43.463 | 44.333 | 45.219 | 46.124 | |
| Revenue Discount due to Renovation | | | | | | (0.442) | (1.811) | (2.064) | (14.986) | (9.159) | (7.416) | 0.00 | 0.00 | 0.00 | 0.00 | |
| Brown | | | | | | | | | 32.875 | 18.248 | 9.270 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Green FY 24 | | | | | | | | | 7.204 | 7.348 | 7.495 | 7.645 | 7.798 | 7.954 | 8.113 | |
| Green FY 25 | | | | | | | | | | 16.180 | 16.504 | 16.834 | 17.170 | 17.514 | 17.864 | |
| Green FY 26 | | | | | | | | | | | 9.343 | 9.529 | 9.720 | 9.914 | 10.113 | |
| Green FY 27 | | | | | | | | | | | | 9.455 | 9.644 | 9.837 | 10.034 | |
| Other Revenue | 7.653 | 10.163 | 13.902 | 20.195 | 0.385 | 5.182 | 5.304 | 6.043 | 6.164 | 6.288 | 6.413 | 6.542 | 6.672 | 6.806 | 6.942 | |
| **Total Revenue** | **32.057** | **35.109** | **39.336** | **45.719** | **29.243** | **38.274** | **37.819** | **43.089** | **31.258** | **38.904** | **41.609** | **50.005** | **51.005** | **52.025** | **53.066** | |
| *YoY % growth forecasted RR* | | | | | | *32%* | *2.4%* | *13.9%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | |
| *YoY % growth due to green portfolio* | | | | | | | | *0.00%* | *2.73%* | *5.97%* | *0.00%* | *0.00%* | *0.00%* | *0.00%* | *0.00%* | |
| *YoY % growth forecasted OR* | | | | | | | | | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | *2.0%* | |
| | | | | | | *32%* | *2%* | *14%* | | | | | | | | |
| Property Exp. | 8.923 | 8.768 | 9.957 | 10.948 | 9.167 | 10.653 | 10.904 | 12.423 | 12.382 | 12.129 | 11.918 | 11.698 | 11.932 | 12.170 | 12.414 | |
| Property Expense Discount due to Renovation | | | | | | 0.00 | 0.00 | 0.00 | (4.760) | (2.910) | (2.356) | 0.00 | 0.00 | 0.00 | 0.00 | |
| Brown | | | | | | | | | 10.443 | 5.796 | 2.945 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Green FY 24 | | | | | | | | | 1.939 | 1.978 | 2.017 | 2.058 | 2.099 | 2.141 | 2.184 | |
| Green FY 25 | | | | | | | | | | 4.355 | 4.442 | 4.531 | 4.621 | 4.714 | 4.808 | |
| Green FY 26 | | | | | | | | | | | 2.514 | 2.565 | 2.616 | 2.668 | 2.722 | |
| Green FY 27 | | | | | | | | | | | | 2.545 | 2.596 | 2.648 | 2.701 | |
| *% of revenue* | *36.6%* | *35.1%* | *39.1%* | *42.9%* | *31.8%* | *31.8%* | *31.8%* | *31.8%* | *30.9%* | *29.0%* | *28.0%* | *26.9%* | *26.9%* | *26.9%* | *26.9%* | |
| Total Property Exp. | | | | | | *10.653* | *10.904* | *12.423* | *7.622* | *9.219* | *9.562* | *11.698* | *11.932* | *12.170* | *12.414* | |
| Selling General & Admin Exp. | 5.152 | 5.293 | 5.223 | 6.548 | 7.864 | 7.978 | 8.492 | 6.650 | 4.824 | 6.004 | 6.421 | 7.717 | 7.872 | 8.029 | 8.190 | |
| *% of revenue* | *21.1%* | *21.2%* | *20.5%* | *25.7%* | *27.3%* | *20.8%* | *22.5%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | *15.4%* | |
| Other Operating Expense/(Income) | (0.170) | | | | | | | | | | | | | | | |
| **Operating Exp., Total** | **13.905** | **14.061** | **15.180** | **17.496** | **17.031** | **18.631** | **19.396** | **19.073** | **12.446** | **15.223** | **15.984** | **19.415** | **19.803** | **20.199** | **20.603** | |
| *% of revenue* | *43.4%* | *40.0%* | *38.6%* | *38.3%* | *58.2%* | *48.7%* | *51.3%* | *44.3%* | *39.8%* | *39.1%* | *38.4%* | *38.8%* | *38.8%* | *38.8%* | *38.8%* | |
| **Operating Income / EBIT** | **18.152** | **21.048** | **24.156** | **28.223** | **12.212** | **19.643** | **18.424** | **24.016** | **18.812** | **23.681** | **25.625** | **30.590** | **31.202** | **31.826** | **32.463** | |
| *% of revenue* | *56.6%* | *60.0%* | *61.4%* | *61.7%* | *41.8%* | *51.3%* | *48.7%* | *55.7%* | *60.2%* | *60.9%* | *61.6%* | *61.2%* | *61.2%* | *61.2%* | *61.2%* | |
| Tax Rate % | *5.2%* | *4.2%* | *44.2%* | *2.2%* | *0.6%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | *2.3%* | |
| **NOPAT** | **17.211** | **20.169** | **13.477** | **27.609** | **12.140** | **19.182** | **17.991** | **23.452** | **18.371** | **23.125** | **25.023** | **29.872** | **30.469** | **31.079** | **31.700** | |
| Capex | - | 0.100 | 0.700 | 1.800 | 1.366 | 15.311 | 0.800 | 0.800 | 31.792 | 19.372 | 19.227 | 0.800 | 0.800 | 0.800 | 0.800 | |
| Change in NWC | 0.000 | 1.239 | 21.437 | (41.224) | 14.807 | 3.207 | (5.627) | (0.278) | 1.312 | (0.104) | 0.073 | (0.302) | (0.026) | (0.026) | (0.027) | |
| **FCF** | | **18.830** | **(8.660)** | **67.033** | **(4.033)** | **0.664** | **22.818** | **22.930** | **(14.734)** | **3.857** | **5.723** | **29.374** | **29.695** | **30.305** | **30.927** | **789.892** |
| | | | | | | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | |
| % discount factor | | | | | | *94.1%* | *88.5%* | *83.3%* | *78.5%* | *74.3%* | *70.3%* | *66.5%* | *62.8%* | *59.2%* | *55.9%* | |
| **PV FCF** | | | | | | **0.625** | **20.202** | **19.102** | **- 11.571** | **2.866** | **4.022** | **19.544** | **18.640** | **17.947** | **17.280** | |
| **PV TV** | | | | | | **441.334** | | | | | | | | | | |

| | |
|---|---|
| **Enterprise Value** | **549.990** |
| Total Debt | 274.480 |
| Cash | 38.574 |
| Minority interest | 1.410 |
| **Equity** | **312.674** |
| Shares Outstanding | 32.401 |
| **Implied Share Price** | **9.65** |
| Share Price | 9.70 Last 12 month average (27.3.2021-28.3.2022) |
| **Upside/Downside** | **-0.51%** |

g 2.00% long term inflation

| | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
|---|---|---|---|---|---|---|---|---|---|---|
| **WACC** | 6.28% | 6.28% | 6.28% | 6.23% | 6.12% | 6.06% | 5.99% | 5.99% | 5.99% | 5.99% |

## *Net working capital*

| For the Fiscal Period Ending | Reclassified Dec-31-2016 | Dez-31-2017 | Restated Dec-31-2018 | Dez-31-2019 | Dez-31-2020 | Sep-30-2021 | Average | Forecast 2021 | Forecast 2022 | Forecast 2023 | Forecast 2024 | Forecast 2025 | Forecast 2026 | Forecast 2027 | Forecast 2028 | Forecast 2029 | Forecast 2030 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Currency in millions* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* | *CAD* |
| Accounts receivables | 2.671 | 2.493 | 1.813 | 1.735 | 3.517 | 4.811 | | 5.287 | 4.009 | 4.567 | 3.313 | 4.124 | 4.410 | 5.300 | 5.406 | 5.514 | 5.625 |
| Other receivables | 2.237 | 3.988 | 3.174 | 4.630 | 5.375 | 6.681 | | 7.342 | 5.887 | 6.707 | 4.865 | 6.055 | 6.476 | 7.783 | 7.939 | 8.098 | 8.260 |
| Accounts payables | 4.181 | 3.362 | 3.406 | 6.409 | 4.366 | 6.096 | | 6.021 | 5.389 | 6.140 | 3.767 | 4.556 | 4.726 | 5.781 | 5.897 | 6.015 | 6.135 |
| **Selected case:** | | | | | | | | | | | | | | | | | |
| DSO (Account Receivabl | 30.0 | 25.6 | 16.6 | 13.7 | 43.3 | 49.7 | 38.2 | 49.7 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 | 38.2 |
| DSO (Other Recievables | 25.1 | 40.9 | 29.0 | 36.5 | 66.2 | 69.1 | 56.0 | 69.1 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 |
| DPO (Accpunts Payable | 168.7 | 138.0 | 123.1 | 210.7 | 171.5 | 203.5 | 177.9 | 203.5 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 | 177.9 |
| Other Current Assets | 0.618 | 1.373 | 46.934 | 10.718 | 0.175 | 4.276 | | 4.70 | 3.19 | 3.63 | 2.64 | 3.28 | 3.51 | 4.22 | 4.30 | 4.39 | 4.47 |
| *margin* | *2%* | *4%* | *119%* | *23%* | *1%* | *12%* | *8%* | *12%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* | *8%* |
| Accrued Exp. | | 0.431 | 0.321 | 10.429 | 1.114 | 1.637 | | 1.80 | 1.00 | 1.14 | 0.82 | 1.03 | 1.10 | 1.32 | 1.35 | 1.37 | 1.40 |
| *margin* | | *1%* | *1%* | *23%* | *4%* | *5%* | *3%* | *5%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* | *3%* |
| Curr. Income Taxes Payable | | | | | 4.069 | 2.213 | | | | | | | | | | | |
| *margin* | | | | | *14%* | *6%* | *10%* | | | | | | | | | | |
| Unearned Revenue, Curr | 1.975 | 4.195 | 4.394 | 5.491 | 0.521 | 0.569 | | 0.57 | 2.82 | 3.21 | 2.33 | 2.90 | 3.10 | 3.73 | 3.80 | 3.88 | 3.95 |
| *margin* | *6%* | *12%* | *11%* | *12%* | *2%* | *2%* | *7%* | *1%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* | *7%* |
| Other Current Liabilities | 4.143 | 3.4 | 25.897 | 18.075 | 7.511 | 4.831 | | 5.31 | 5.88 | 6.70 | 4.86 | 6.05 | 6.47 | 7.77 | 7.93 | 8.09 | 8.25 |
| *margin* | *13%* | *10%* | *66%* | *40%* | *26%* | *14%* | *16%* | *14%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* | *16%* |
| **NWC** | **(4.773)** | **(3.534)** | **17.903** | **(23.321)** | **(8.514)** | **0.422** | | **3.629** | **(1.998)** | **(2.276)** | **(0.964)** | **(1.068)** | **(0.995)** | **(1.298)** | **(1.323)** | **(1.350)** | **(1.377)** |
| **Change in NWC** | | **1.239** | **21.437** | **(41.224)** | **14.807** | **8.936** | | **3.207** | **(5.627)** | **(0.278)** | **1.312** | **(0.104)** | **0.073** | **(0.302)** | **(0.026)** | **(0.026)** | **(0.027)** |

## *WACC*

| | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| Net Debt | 235.906 | | | | | | | | | |
| Market Cap | 319.898 | | | | | | | | | |
| D/(D+E) | 42.4% | | | | | | | | | |
| Tax Rate % | 2.3% | | | | | | | | | |
| **Cost of Equity** | **9.45%** | **9.45%** | **9.45%** | **9.42%** | **9.34%** | **9.29%** | **9.25%** | **9.25%** | **9.25%** | **9.25%** |
| Risk Free Rate | 2.4% | | | | | | | | | |
| Beta | 0.8 | | | | | | | | | |
| ERP | 4.49% | | | | | | | | | |
| Size Premium | 3.39% | | | | | | | | | |
| **Cost of Debt** | **2.02%** | **2.02%** | **2.02%** | **1.95%** | **1.80%** | **1.71%** | **1.62%** | **1.62%** | **1.62%** | **1.62%** |
| **WACC** | **6.28%** | **6.28%** | **6.28%** | **6.23%** | **6.12%** | **6.06%** | **5.99%** | **5.99%** | **5.99%** | **5.99%** |

# Interviews

## Interview with Expert 1

Included in a separate file.

Interview with Expert 2

Included in a separate file.

## Interview with Expert 3

Included in a separate file.

# Interview – Expert 1

00:00:00.000 --> 00:00:01.550
Expert 1
Yeah, it shows here it's.

00:00:02.620 --> 00:00:03.000
Expert 1
Cording.

00:00:05.210 --> 00:00:08.100
Expert 1
Can transcribing? Yeah. It's even, yeah.

00:00:09.640 --> 00:00:13.600
Expert 1
That helps. Yeah, this is this is this is my work. It's nice. Yeah.

00:00:17.450 --> 00:00:19.040
Expert 1
You need to screen or.

00:00:20.030 --> 00:00:28.140
Tomas HAVELKA
I mean, maybe for some questions I for you the presentation, but OK sure, I can just write it like this because then we get the, yeah.

00:00:28.300 --> 00:00:30.350
Expert 1
Umm yeah.

00:00:35.900 --> 00:00:43.710
Tomas HAVELKA
OK, so basically my my questions are is in bundles and 1st bundle would include.

00:00:46.270 --> 00:00:46.740
Expert 1
2nd.

00:00:50.690 --> 00:00:52.800
Tomas HAVELKA
So would include questions on the value drivers.

00:00:54.050 --> 00:00:56.290
Tomas HAVELKA
And maybe for that I can.

00:00:59.590 --> 00:01:01.230
Tomas HAVELKA
And just open the presentation.

00:01:02.070 --> 00:01:03.360
Tomas HAVELKA
I'll just share it on the.

00:01:05.310 --> 00:01:09.290
Tomas HAVELKA
I just shared the screen so you can see in your computer as well.

00:01:21.240 --> 00:01:24.010
Tomas HAVELKA
Here's the overview of the villagers I used.

00:01:25.690 --> 00:01:27.420
Expert 1
And like.

00:01:28.510 --> 00:01:31.220
Tomas HAVELKA
Maybe like maybe like first question would be like if you can.

00:01:32.490 --> 00:01:36.520
Tomas HAVELKA
Comment on on on the value drivers and if you if it's maybe something.

00:01:37.610 --> 00:02:00.800
Tomas HAVELKA
You had discussion with your clients about or or they actually give you some feedback of if if they actually I don't know how your occupancy or or anything out of these value drivers, if this is also something you witnessed with your clients Umm or have the discussions with or or if you see it in generally in in real estate as well, yeah and yeah. And then maybe also later we would just focus also on the topics.

00:02:01.270 --> 00:02:05.420
Expert 1
Umm, yeah. I mean, yeah, generalities are.

00:02:06.640 --> 00:02:11.350
Expert 1
The topics we usually discuss with our clients are where we do get the feedback.

00:02:11.940 --> 00:02:19.040
Expert 1
UM, usually we don't have a structured discussion and then not talking about figures how much it is. So we don't really.

00:02:19.910 --> 00:02:49.140
Expert 1
I have to position to quantify it, but when we talk about it, of course this is or these are the most important topics. We know that the pressure to be green and to get a green portfolio is coming from several sites. So there are investors asking for it. There are tenants asking for it. The banks are asking for it. And so companies just can't avoid to deal with this topic and.

00:02:49.840 --> 00:02:51.130
Expert 1
What? Maybe.

00:02:52.070 --> 00:03:07.100
Expert 1
Also an important topic is is the the the sales price so because all these value drivers as it says drive the value and that will ultimate goal is then maybe for some companies to have higher occupancy and have a lower back, but this all means that the value of the property goes up there and most of them usually think in these terms and either because they want to have a high valuation in their balance sheet or they want to sell it there. So, this all ends up to the ultimate goal to have a higher value of of the property. But in general, yes, these are also the the topics we are discussing especially of course occupancy and.

00:03:37.700 --> 00:03:44.200
Expert 1
The expenses and yeah, this weighted average cost of capital.

00:03:45.270 --> 00:03:58.780
Expert 1
It's it's there, but I think the topic will still grow a lot more important because from our experience it's not so much about how much are we giving a discount to green asset than to a brown one and it’s rather a decision whether we finance it at all or not because we said this is only brown building does not have no green element or that no ambitions to change that then we would yeah more or less not do it at all. So I think it's more and go and no go decision and might have some effect on cost of debt but not as much.

00:04:28.860 --> 00:04:47.780
Expert 1
That would be two companies that would be very similar and they would be asking for the same product. We can offer them you would, you would actually look into the greenness of their portfolio and most likely choose the one with the yes, yes. Yeah, yeah. Definitely. Yeah. And if there would be just this one company that this brown, then there is nothing else to do.

00:04:48.530 --> 00:04:52.750
Expert 1
Then we would strongly force them to build in the green element, yeah, so.

00:04:53.950 --> 00:05:06.410
Expert 1
We would say, OK, you need to have a certification, you need to work on it, ESG strategy. But we would not just find it it with them, just stay in ground. Brown, yeah, there needs to be some trajectory where they're showing what they will do and and how they are developing it. I mean it's OK if you're brown, but you need to have a a road where you show that you will get green in who you and what's the benefit of a bank for this company for example. It's a go to go green because we as a a bank are getting pressure from the regulator to only finance green assets in order to fulfill all the climate goals which have been set. But you've been union better UN.

00:05:38.240 --> 00:05:41.010
Expert 1
And the yeah. So it's it's also.

00:05:43.210 --> 00:06:04.340
Expert 1
There will be still more incentives for banks to finance green assets now it's only and reporting issue where we need to report how much of our assets are green, which we're financing. But this will become more closely monitored and also it will have consequences on that maybe green assets, but the financing of green assets will require less RWA's will consume less equity from our side and so we get automatically punished for financing brown etcetera because it's more expensive for us. We would need to pass on this higher cost to our clients and this would be also then finally the incentive for the client to go for a green as I think it's not there where it will be. So I think we are right at the beginning.

00:06:36.910 --> 00:06:49.640
Expert 1
But this will also have a more determining effect on the pricing in the future. Umm, so this is an expectation of regulation. Yeah. Yeah. So we already know that it will be coming and this influence will grow and it will have still more effect on our pricing as well. Umm, you seriously. We are only in in the ramping up phase model, OK.

00:07:00.380 --> 00:07:21.790
Tomas HAVELKA
Understand. So basically this was also what the literature many times mentioned that is not not maybe only about the green premium, but about the brown discount, meaning that the companies that don't catch up are just gonna be destroyed because yeah, because of this. Yeah. So yeah, now we are talking about a lot of green yums, but there were definitely be a time when there will be. Yeah.

00:07:23.400 --> 00:07:43.820
Expert 1
We will have an issue and where we will get punished for not moving into the green direction for many sides from investors, from banks, from regulators, so it's still I think now the purpose of the regulator to be to push someone but at some point I think they will.

00:07:44.940 --> 00:07:46.070
Expert 1
Yeah, I have some.

00:07:47.410 --> 00:07:48.700
Expert 1
Punitive measures as well.

00:07:49.730 --> 00:07:50.130
Expert 1
Because.

00:07:51.380 --> 00:07:52.790
Expert 1
Umm OK.

00:07:56.980 --> 00:08:05.930
Tomas HAVELKA

Then maybe there will be this one more thing regarding the cost premium I used for the valuation. This one that's I as I explained.

00:08:06.670 --> 00:08:07.230
Expert 1
Umm.

00:08:07.960 --> 00:08:17.490
Tomas HAVELKA
The information was very limited. So basically you know values only provided they had the market value of the buildings and of course the size of everything. But they don't say.

00:08:18.370 --> 00:08:22.280
Tomas HAVELKA
Much about the costs, they don't. I don't think they even distinguish the line plot.

00:08:22.460 --> 00:08:52.370
Tomas HAVELKA
Umm, so the way I I had to calculate it is only based basically on one paper and then I had this cost premiums which I actually I just took and there is this one website that calculates I average price in the US for a company based on different factors. If you say like it's gonna be office mid-size in average area blah blah blah it's going it's going to calculate the construction cost of this building just an approximation. So I actually also did.

00:08:52.580 --> 00:08:58.330
Tomas HAVELKA
To do this and then took the cost premium and I try to work with that as well.

00:08:59.810 --> 00:09:13.880
Tomas HAVELKA
Just to see if just to get a little bit of a better price of result, but could you maybe I don't know, would you think of any other way. So for example the one, the the way you made with the market value of the building like how much you maybe try to calculate it?

00:09:18.390 --> 00:09:49.420
Expert 1
Honestly, I think there it would be best to talk to the guys from real estate finance there because I think they have me or more insight on the cost structure and how this differs and what I can tell on this topic is that now due to the rising construction costs, a lot of companies about our yeah rethinking their strategy whether to tear the whole building down and build it up from scratch again. But to review, to refurbish and to use more of the existing. Filling material that is already there. So maybe to yeah. Just no. Instead of tearing everything down then just to take out the. Getting a part in the life of the building and only to to stay with the core and shell building like that. The main structure and to take away the facade and then rebuild.

00:10:15.360 --> 00:10:16.330
Expert 1
When when you have.

00:10:17.190 --> 00:10:30.980
Expert 1
Enough flexibility to adapt the the building to a new standard and then that's what what we're see

because you said that for companies it might make more sense to build a new building because this premium is lower than when renovating. This is changing a little bit due to the rising construction cost and also there are other factors. You need to consider that there is growing pressure from communities from neighbors which do not want to have a huge construction site over years next to their building. And they of course appreciate if there is less traffic with tracks going and taking away the building materials. The old one and bringing new one. Yeah. And if you just use reuse a lot of it, it just also reduces noise and traffic. And of course it's good for their carbon footprint because production of cement, of course, is. Yeah, with CO2 emissions. It's it's a huge. It's huge burden there person. But for more details I will talk to real estate finance because they have a better overview and could quantify better what what it means. So do you think they also have some approximation on like if I tell them like it's.

00:11:42.340 --> 00:11:52.280
Expert 1
3 point I don't know 7 Euro Canadians, or maybe I don't know €3 per square foot to retrofit. That would be like uh, probably too much too. Yeah. Yeah they would.

00:11:53.060 --> 00:12:08.050
Expert 1
Yeah, they would be able to give you an indication that it is is true or not exactly because ugly is like approximation. Yeah, and OK approximation. Or it is too far off or too far. No, they should be able to because they have more insight on them. OK. Perfect.

00:12:09.150 --> 00:12:09.470
Expert 1
Yes.

00:12:10.180 --> 00:12:25.080
Tomas HAVELKA
Yeah. Then I'll just continue with another bundle of questions that concerns are sort of the outlook and we discussed that, yeah, if compliance don't switch to green, they might actually just be.

00:12:25.840 --> 00:12:39.940
Tomas HAVELKA
Demolished because of of the regulation and of investors on things, they will be cut off from financing. They (brown REITs) will be cut off from the investment market because no one will buy the assets. Yes, it's there. Brown. Yeah, you could.

00:12:40.010 --> 00:13:00.110
Tomas HAVELKA
You're going. And how did it develop in recent years? So how many of your clients or the OR the realistic companies just you, you saw and if you follow the markets actually made this switches and maybe how how did they resolve it, they actually retrofitted or they constructed new buildings or bought new buildings or if they?

00:13:00.710 --> 00:13:08.450
Tomas HAVELKA
Uh, so how did they do it? And also So what was the plan spending that they started most of the cases and how long it took them and?

00:13:09.970 --> 00:13:12.980
Expert 1
So in general, translate that, yeah.

00:13:13.900 --> 00:13:43.510
Expert 1
Every player in the market is thinking about this, or at least at some point in time have thought about it. As you experience yourself, it's hard to find someone who is not taking this into account. Yeah, so this, especially those that would say in the last two to four years. Yeah, some companies started earlier. Some are still in the process of setting something up. But if I'm talking to client, then he has never heard about the ESG said it doesn't concern me. Then I would have the huge problem or he would. He would definitely have everything. So hearing about the client who's not dealing with it just would be very, very strange.

00:13:56.800 --> 00:13:57.040
Expert 1
Yeah.

00:13:58.290 --> 00:14:28.180
Expert 1
And therefore it depends on when companies started, how they would be affected. But in general you can say everyone who is building a new building of course needs to take this into consideration. Yeah. So you can't build a building on a brown basis, that's just not markets standard. And it's also legally not possible. Yeah, because you have to prove certain certain conditions are met, some kind of the word dye. Like all the utilities. You also need, so I think it's just the market pushes client to do so and also the regulatory side. And is it also so by for example when they buy a building, so if they buy a building that is already constructed for years and it's brown, they can still buy it, right? They can still buy it. They will then of course think about higher discount because it's not green. So the cell of the building will not get the value as it had when it was green, but of course you can still buy it and companies would do so if they have a strategy for it, so they won't buy any brand building. And yeah, leave it as it is maybe for some time until they do some remodeling and maybe do another concept, but usually would have something in mind when buying a brown is it and not just the OK, let's leave it as it is. It's it's OK. OK, I think that's and that's a lot of companies still have problem buildings on their portfolio. And yeah, they need to do something about it. It's not possible to change everything in one year, so you need to plan your CapEx also accordingly. And it also depends whether you have to possibility the technical possibility to do something. Yeah, you can't renovate the building when it's fully operating. You need to maybe wait until certain lease agreements are expiring that you are physically able to to access the building to do all the renovating. Yeah, and usually it's not done with just changing some minor things. Usually you have to really dig into your perfect little improve the energy efficiency for example and not only about that, you would also maybe for all the buildings which have their weak energy efficiency. You would do the uh, we would improve energy efficiency, but it would also change the concept. For example. Yeah. So like this old offices like we have here with a lot of single offices. It has improved here also because there was still more rooms in the past, but it's still not a modern concept, so it's I think you would combine for all the buildings the green aspect also with the new way of work.

00:16:47.060 --> 00:16:51.600
Tomas HAVELKA
I seriously, when you said with the with the lease terms.

00:16:52.320 --> 00:17:22.870
Tomas HAVELKA
This was actually one of the questions I wrote, so how would it work in realities if the building is, let's say, either fully occupied, is it it? Would it be possible to actually have like transport attendants to some location just for a few months so they can reach you off with it and then they come back? Or or if the company, if the building is occupied by 70% today like shift those guys to one part to another part, renovate this part when they were and then sort of shift them around.

00:17:22.990 --> 00:17:34.550
Tomas HAVELKA
Yeah, to eat. Are these things possible or is it rather triggering the leasing term contract that they actually cannot really do anything until the lease expires? It's always I think.

00:17:35.580 --> 00:17:37.480
Expert 1
You would need to count on your tenant being cooperative and I think he has the right to stay where he is, otherwise he can't move him and taking him to another building would be quite expensive. So maybe one option would be to move him into the building from one place to the other and then you can do the renovating part by part, but with a fully led building. I think it's very difficult to do this because, yeah, just renting another building for them so you can renovate your own one. I think just the pay off. Well, search. Yeah. Not getting any money. So even maybe you would need to do the renovation of your building step by step according to the expiry of the lease agreement and maybe you can, yeah, find some arrangements with your client. But it always operation from from the tenant.

00:18:31.930 --> 00:18:36.270
Expert 1
And coming back to the topic of renovation and construction, so do you see?

00:18:37.000 --> 00:18:43.210
Expert 1
Actually your clients coming to to you and asking for for financing structurally renovate?

00:18:43.860 --> 00:18:53.750
Tomas HAVELKA
Or or for example, if they have breeding ground buildings and their portfolio, would they? Are they trying to renovate them or are they just selling them and buying or developing new ones that are green?

00:18:55.670 --> 00:19:22.820
Expert 1
I think it's depending on the the potential of the building itself. Yeah, if you have a brown building in the middle of Vienna, might think this huge potential to turn it into green building and to relate it at a higher price. And so I think it's not the question about what is your strategy in disrespect, but what is the quality of the asset is if you have a brown building somewhere in the outskirts of Vienna and you might not see the potential for it. Then you might be willing to sell it brown as it is to another investor who might have some story for it who might use it in another way or yeah, do some.

00:19:38.280 --> 00:19:38.570
Expert 1
Yeah.

00:19:39.940 --> 00:19:45.930
Expert 1
Just change the use of the building for example and take it for something different. This is I think, more dependent on.

00:19:47.700 --> 00:19:56.030
Expert 1
Yeah, the quality of the location and then what you can do with it and whether you have see some potential for it. And then this might differ of course from investor to investor.

00:19:56.740 --> 00:19:57.070
Expert 1
Yes.

00:20:06.390 --> 00:20:16.920
Tomas HAVELKA
Yeah. So as I was showing you the differences between asset classes, so basically it's mostly about offices that have this pressure to turn their assets into green.

00:20:17.520 --> 00:20:33.750
Tomas HAVELKA
Umm. Is it something? Could you comment on the the as well? So if you do see this pressure mostly on office realistic companies are also now their asset classes and then which ones and maybe just comment on how what's the difference in regards to sustainability between last class?

00:20:34.990 --> 00:21:01.780
Expert 1
I mean it's it's true that we see the topic especially for office building, because companies also want to present themselves in a in a green way and office is always very visible also to the outside because people are coming in visiting, but also for for retail, for example, it's it's an important topic that clients or our tenants about thinking about in which building they are.

00:21:02.140 --> 00:21:04.150
Expert 1
UM, it's.

00:21:05.730 --> 00:21:10.930
Tomas HAVELKA
Also, something they they need to consider in terms of energy efficiency. How much do they pay?

00:21:11.230 --> 00:21:30.080
Expert 1
Umm for UM for energy expenses, especially if you have a retail scheme of course need a lot of energy heating, so this is definitely something you need to to to look also. Yeah, but what we have of course seen a lot this the efforts in in the office industry. That's, that's where we see also a lot of progress that a lot of companies have taken their ESG rate things and and have. Yeah really developed quite far in in this respect also because now it's mixed as a set with this new way of work. So they need to do something about it anyways in order to be more attractive on the market to change the concept especially for all the buildings and then they are combining it always with a new green component which they're having.

00:22:06.720 --> 00:22:22.830
Expert 1
Umm here anyways and we talked about residential before, so clients usually are very insensitive to the topic, are not willing to pay more for a green building across. Everybody wants to have it and they want to pay less for.Yeah. Do you have higher energy efficiency? That's, that's clear. But I think it's not a business case as with office tenants, for example, or retail tenants, we think that's a different story. And usually you have longer lasting tenors, these contracts or maybe even indefinite. These terms with residential tenants, so yeah, they, they just don't care because they. Yeah, you you can't get them out of the building more or less and you cannot run away that that easily. So I think that's that's very different between residential estate and commercial real estate and.

00:23:10.570 --> 00:23:15.010
Expert 1
For logistics, I think, yeah, I think this is also an important topic, because usually in the past.Yeah, the the construction of the logistics building is quite easy. It's done fast and you can I think we we are in in after the IT has been billed as think you can quite easily do the the renovation because it's easy accessible usually logistics company can be more flexible on how they're using the asset, and I think you can do a renovation quite easily compared to an office building where you need to move a lot of people away and you know, just expelling it more or less goods which you would need to move there. So I think that's that's also different. But there's also coming up. Here we have seen a boom in the last years in the construction of logistics, so these new buildings anyway, green and the other ones just are not used anymore because too much supply for new.

00:24:17.580 --> 00:24:43.710
Expert 1
Umm US it's that all. Those just don't get renovated, but just are left over and used in a different way. But are these already? Do the ones are they are no good locations, which is very important for all those things. It it depends. Yeah. I think this has also shifted in in the past years. There have been some locations very distant somewhere which are not interested in anymore because.

00:24:44.310 --> 00:24:44.980
Expert 1
UM.

00:24:46.620 --> 00:25:00.730
Expert 1
Logistics companies want to move closer to the city center, so still not in the city center, but nevertheless closer to have this last mile quite short and to be able to do this with smaller trucks. So the big trucks are going to the distribution center and another smaller trucks which also in the future will or most of them already are like electrically operated. So you can do one day within a certain distance with one charging of the car. You know you don't want to be 200 kilometers outside of a big city center where you're already done with the.

00:25:31.080 --> 00:25:33.410
Expert 1
Power engine. Once you enter the city.

00:25:33.480 --> 00:25:42.060
Expert 1

OK, personal times, which is also part of the green, I guess in in certifications for logistics, I guess this is one of the requirement.

00:25:42.710 --> 00:25:47.010
Expert 1
So that you can use electric cars. Yeah, yeah, absolutely, yeah.

00:25:49.100 --> 00:26:06.690
Tomas HAVELKA
And and maybe coming back to the outlook and but also the best in when COVID-19 happened, did it actually accelerate it this change to change to green and the maybe office but also overall in real estate?

00:26:07.410 --> 00:26:10.260
Expert 1
Yeah. Yeah, it was definitely.

00:26:11.380 --> 00:26:41.570
Expert 1
Agreed. We thinking going on because they were thinking, OK, what is the future of of real estate, especially for office? How much do we need? Is it necessary to go to the office every day? Do we need to commute, commute every day? So it has definitely brought a new angle to this and and accelerated the development and and also as there is a different use concept now for for office you do not need to have 100% of space you had before because a lot of people have working from home, you need to do something about the concept and then it makes sense also to do this screen component and yeah rising and energy prices, of course, also add up to the effect that a lot of companies are thinking of. OK, how can they return it? Dively generate power by using solar panels. I don't know what alternative forms there can be in order to be more green and also to save energy by being more energy efficient.

00:27:23.950 --> 00:27:24.720
Expert 1
They're perfect.

00:27:37.940 --> 00:27:39.600
Expert 1
Yeah. So these questions really.

00:27:41.450 --> 00:27:41.920
Expert 1
Yes.

00:27:47.460 --> 00:27:48.260
Expert 1
Umm.

00:27:52.670 --> 00:28:22.180
Tomas HAVELKA
You know, you was in the home. We talk a lot like I would now try to talk a little bit of the process of the retrofitting itself. And we're already discussing like would be hard to shift the tenants, for example, and the and the tenant agreement could be a problem. Have you had any experience with with clients where they were actually doing this renovation of the building? And if yes, could you

maybe, I don't know, tell what was what would like the process things they had to go through and which were maybe the problems and?

00:28:22.940 --> 00:28:24.390
Tomas HAVELKA
So how did went?

00:28:26.030 --> 00:28:36.460
Expert 1
Honestly, I don't have a concrete example, and maybe that's also something listed finance could, yeah answer you better than I can. Yeah, so.

00:28:37.990 --> 00:28:47.160
Expert 1
Yeah, we we with my client that didn't talk about any special project in this respect. So I don't know exactly what the hiccups were, where the problems were in the process.

00:28:48.300 --> 00:28:51.630
Expert 1
Honestly, I come to come to answer that overseas.

00:28:52.680 --> 00:28:53.200
Expert 1
And.

00:28:54.360 --> 00:28:58.090
Expert 1
If there are tenants who have some contract and then.

00:28:59.650 --> 00:29:11.320
Expert 1
Let's say they would agree on moving to a different floor of the building so their floors get gets renovated and they come back to it, but they still have this leasing contract, let's say a valid for one or two more years.

00:29:12.920 --> 00:29:44.230
Expert 1
Would it be possible for the for the landlord to actually increase the rent based on all the renovation? Or no? I don't think so, so there are no clauses clause or the there isn't. It's not common to have a clause cloud field which would say that if we renovate we can try to have more. No, I'm I'm not aware of that. Yeah, so maybe this is coming up now. When more companies about thinking ran awaiting and turning their assets into green ones. But I've never heard about this being incorporated in any.

00:29:44.610 --> 00:30:01.680
Expert 1
This is Wesley Greement there. So you would also just need to wait until the lease agreement expires and then you would be able to negotiate a new price because it's saying, OK, this is now a green building, this also benefits you across structure. So yeah, I can charge more.

00:30:04.530 --> 00:30:32.400
Tomas HAVELKA

And when we talk about the leases, there's actually there's difference between net and gross list. And I think in the next one is where the tenant actually pays everything. So he pays rent, but he also pays for the for the right utilities, yeah, themselves. And then you have gross leases worth the tenant only pays rent and the company pays the property expensive themselves. And therefore they exactly, therefore they may be charge higher rent.

00:30:33.870 --> 00:30:35.920
Tomas HAVELKA
Because they paid the expenses themselves.

00:30:37.890 --> 00:30:38.900
Expert 1
Yeah, yeah.

00:30:42.450 --> 00:30:59.300
Expert 1
Where the way we know it is that usually that the operating cost like you delete these are borne by the tenant by the the medications. So usually it's also the tenant which is concluding the utilities agreement with the utility company and so this is individual agreements for the delivery of of power. Guess what? Whatever they need? Yeah. And there are some cases where this is done on the building basis. So everything is arranged for by the landlord and he's just distributing the the costs to the individual tenant. I haven't heard about arrangements where the landlord charges a higher rent but pays utilities itself without passing on the cost, so taking the price risk, because then he would be taking the price rise in utility costs which doesn’t give the tenant motivation to be more energy efficient and only causes financial hardship to the landlord. So I I haven't heard about that. So just about what is passing on the whole responsibility to the tenants and they are doing their stuff or he's coordinating it and then also distributing because the tenant is.

00:32:02.830 --> 00:32:18.940
Expert 1
Because you know values doesn't say it exactly in the annual report, but they have appropriately expense, which includes mostly utilities and it is 25% of the revenue. So I would assume they actually have a gross lease, meaning that they paid the leases themselves, which in this case actually.

00:32:20.800 --> 00:32:21.630
Expert 1
Like if they.

00:32:22.720 --> 00:32:41.010
Tomas HAVELKA
There was a paper saying that if the company is a gross lease and they actually do all these virtual fitting, there is not so much revenue they can increase it because for tenant there is not that much of a benefit because most of the benefit comes from the decrease in decrease in property expenses which many times a tenant paid itself.

00:32:41.200 --> 00:33:12.230
Tomas HAVELKA
Uh, so I was just wondering like, because I couldn't find any statistics or anything that what is the proportion of clients that they, the utilities themselves and where is the landlord payment? But it's great that you said it's mostly the tenants paying in themselves because it also makes sense that directly or indirectly, but they are paying for it through the red. But I mean directly because then

there are also motivated to spend less, consume less of energy for example because that's they pay for it, if they have some fixed range.

00:33:12.430 --> 00:33:27.300
Expert 1
When this is included, but if they have, I don't know lights on 24/7, it doesn't cost them much more. I mean that's also maybe which you need to clarify them with real estate file itself because they are deeper into arrangements also agreements but.

00:33:27.900 --> 00:33:31.610
Expert 1
From my knowledge, I haven't heard about such.

00:33:33.190 --> 00:33:56.000
Tomas HAVELKA
Yeah, such arrangements in the red ligament, I would assume because I also don't know much about this, but I would assume since Canadian based company maybe in US it's different, so set up. Maybe that's why they actually paid the yeah, but they are active in France and Germany is it. So I think they would do as it this market standard there. But but I don't know and OK.

00:33:56.850 --> 00:34:19.550
Tomas HAVELKA
From what I read, in general it seems that there are two contracts on like that. None of it is like much more used. Umm, but it was just general texts articles so I guess yeah, probably in Europe. But I think overall it just makes much more sense for landlord to best discuss some tenant because yeah, why? Why would he take the risk of exactly rising utility costs exactly.

00:34:21.540 --> 00:34:24.570
Expert 1
I don't think that's markets standard then we.

00:34:31.490 --> 00:34:33.780
Expert 1
And then regarding the.

00:34:35.310 --> 00:34:55.040
Tomas HAVELKA
Your certification overall, like I I most of the articles I used, they were from USA and therefore I used in my hypothetical green valuation lead certifications by assume that they're going to make it green through LEAP certification. So they're going to get their assets certified by LEAP.

00:34:55.800 --> 00:35:10.350
Tomas HAVELKA
Uh, is it? And I know that this is mostly American base, but also some European companies use LEED instead of BREEAM. What is your experience with your clients like is it more lead focus or being focused on?

00:35:11.250 --> 00:35:13.340
Tomas HAVELKA
Which certificates are the most common ones?

00:35:14.070 --> 00:35:15.500
Expert 1
Yeah, it's it's more BREEAM.

00:35:17.730 --> 00:35:20.480
Expert 1
As far as I've seen you, UM.

00:35:21.850 --> 00:35:22.220
Expert 1
What?

00:35:23.170 --> 00:35:26.100
Tomas HAVELKA
What the differences are or what the?

00:35:27.760 --> 00:35:58.530
Expert 1
Pros and cons are I I can't tell. Honestly. Yeah, I think it's also something you would need to discuss with real estate finance. I think they're having a more deeper look course in this artificats that because they always are of course requesting this from the client and they look through it more in detail, which we usually don't do it. I think it's more mostly about only the things they have to fulfill and the entire process. But but in the end it shows almost the same thing. Yeah, I mean like you have more experience with the.

00:35:58.800 --> 00:36:02.620
Expert 1
That was only the question I want to see. I just see that more.

00:36:03.720 --> 00:36:33.780
Expert 1
Project if BREAM certification then lead. But I don't know too much about the specifics, how they differ and whether one is better than the other. I would assume that it's like with all rating agencies they have a different methodology and if you know how they work for you as a company, it's always wise to decide where can I get a better rating because I'm better at that where they have a higher focus on than the other one for example.

00:36:34.280 --> 00:36:37.430
Expert 1
You can just try to to optimize the result.

00:36:38.590 --> 00:37:00.960
Tomas HAVELKA
And and regarding the levels of rating, so if they are just certified or they are silver, gold or platinum, is this also something that clients enforce, like would you say in general they try to have as high rating or as possible or is it just the motivation to be certified so required the bare minimum just so they can portray themselves as green but not spend too much money on it.

00:37:02.400 --> 00:37:31.150
Expert 1
That's it. I think has shifted a lot within the last years. So it started off with you need to have a certification, but in the last years, this is definitely shifted to getting the best. So platinum already is

a more or less the the standard. If you're coming with the gold certification, it's small is already that you are not doing the best you could have. For example. I think this perception has has changed a lot and everyone is trying to go for the best certification and is it possible? Is it mostly because of the pressure from outside or is it more like because they know that this is going to give them more benefits?

00:37:41.620 --> 00:37:49.410
Expert 1
Yeah, this will give them a more benefits because they're market is asking for you there. So I think it's the one conditions, the other you know.

00:37:51.220 --> 00:37:51.550
Expert 1
OK.

00:37:52.680 --> 00:37:53.420
Expert 1
And.

00:37:54.670 --> 00:37:55.990
Expert 1
Break up regarding.

00:37:56.960 --> 00:38:23.150
Tomas HAVELKA
Geographical interest in certification, how would you compare like maybe different countries and then maybe also Western and Eastern Europe and and maybe also focus on Germany and France and these are the two ones that are in the values profolio. Yeah. So in general what I can say is that Western Europe is more advanced than the is she topic than Eastern Europe?

00:38:24.960 --> 00:38:40.170
Expert 1
So I think especially France is well developed in this respect. The front runner, yeah, they are definitely one of the front runners. They also there banks have a very good experience in in east rate things in advisory, so we can also see that the client level at that they are well advanced in.

00:38:47.170 --> 00:38:49.480
Expert 1
So in financing cities that there is.

00:38:50.180 --> 00:38:55.480
Expert 1
Very often every component there and they're definitely using some years ahead.

00:38:56.330 --> 00:38:59.160
Expert 1
In France, as well in Germany ESG is quite big, but the more you go to the east, usually the less focused there is it's it's coming up as well, but it hasn't been in the focus as much as Western European players.

Expert 1

I can't tell why there is such a gap in looking at this topic. I don't know whether this has to do with regulatory pressures, which might be different in in certain regions. I mean, as a lot of countries in Eastern Europe are also part of the European Union so it should definitely be a level playing field. But it seems that it's not, maybe because some countries don't execute these directives as hard as others do. I don't know yet, but it's hard to tell you what I said. Big difference in it.

00:39:59.680 --> 00:40:01.580
Expert 1
And then Germany is.

00:40:02.680 --> 00:40:06.630
Expert 1
Still like doing well, but let's say friends it's friends.

00:40:06.730 --> 00:40:09.310
Expert 1
You one step ahead, I would say.

00:40:21.470 --> 00:40:23.650
Expert 1
Yeah. And then maybe actually just would be.

00:40:25.140 --> 00:40:40.820
Tomas HAVELKA
Actually, more show more questions. One would be that if you like you, you're the scenarios in in the green valuation I made. So the one where you can see the screen, the wire, the one would that say like you're going to just invest everything in the beginning.

00:40:41.500 --> 00:40:47.900
Tomas HAVELKA
And then change it rather unrealistic one in one year. OK. And OK, having it like 1/4.

00:40:49.970 --> 00:40:50.720
Tomas HAVELKA
Which you.

00:40:52.380 --> 00:41:02.830
Tomas HAVELKA
Do does this scenario to reflect maybe a real life strategy or would how would companies do it exactly in in in reality?

00:41:03.670 --> 00:41:16.060
Expert 1
Yeah. I mean they would, yeah, try to flatten out the CapEx requirement and you know they're not do overburdened there that costs and also having a look at their expiry profile. Yeah. So knowing, OK, when do lease agreements expire? When can another one hand physically access the building to do so and when do we have a possibility to raise the the lease agreement again there. So I think that's also something very important. If you have a portfolio with an average at least 10 out of 10 years it it might get difficult to do this on in in R4 years. If you have a shorter weighted average lease term, then it it's it's easier on on the technical side on, yeah, you would always need to have a look at how much of that per new company can that just because you're getting it back from the market. Yeah, but you need to finance to transition up front anyway so.

00:42:06.600 --> 00:42:08.370
Expert 1
So I think it's, yeah.

00:42:09.480 --> 00:42:10.540
Expert 1
A function of.

00:42:11.480 --> 00:42:18.080
Expert 1
There there's at least structure you're having and how much of of a dead person you can take. Umm then.

00:42:19.120 --> 00:42:29.700
Tomas HAVELKA
With the day in reality, or if there's a really fully problem office suite like, you know why this would they actually plan to just do a refurbishing like this or would they?

00:42:30.760 --> 00:42:38.110
Tomas HAVELKA
Just so acids and by green assets. Or would they do something that concerns both? Like what would make the most sense?

00:42:38.940 --> 00:42:49.690
Tomas HAVELKA
Because now, for as you said like I mean even about this case, I think the the Walt is in average Walt is less than three years, Umm, so it is possible to anyway but.

00:42:50.490 --> 00:42:52.240
Expert 1
I guess normally it would be.

00:42:52.960 --> 00:42:59.280
Expert 1
To like if they would be really proud of, they really need to get green, they would be probably easier for them to buy buildings that are already certified. Then to actually retrofit yesterday? maybe yeah, get at least some percentage of their portfolio. Yeah, I mean that would be the the faster way to do it. And the question is of what the current market prices and does it pay off to do.

00:43:18.810 --> 00:43:19.440
Expert 1
And.

00:43:21.270 --> 00:43:35.630
Expert 1
To build new green buildings or think currently is very expensive due to the the rising construction cost. So it may make make sense to do something about your existing portfolio. I need to have some strategy in place and we can't.

00:43:36.730 --> 00:43:51.240
Expert 1
Change your portfolio as quick with with buying new ones. Yeah, because you still have the old

portfolio and you need to to do something about it. So just adding new ones, adding new green buildings I think is is not an option. Yeah, you would think every.

00:43:52.390 --> 00:44:07.820
Expert 1
Read would definitely try to turn its brown portfolio into green one, depending on on the structure. As I said, yeah, faster or slower depending how it can be done.

00:44:12.570 --> 00:44:15.030
Tomas HAVELKA
And I think the last question would be just a general.

00:44:17.790 --> 00:44:23.100
Tomas HAVELKA
If there is anything else that comes in your mind or any recommendation what to investigate or.

00:44:24.520 --> 00:44:31.940
Expert 1
Anything that comes German? Yeah. I mean, what we pinteresting to see is how this whole value drivers.

00:44:33.100 --> 00:44:38.900
Expert 1
Would definitely. Yeah. If there is a quantification of what it means in terms of of asset value.

00:44:40.540 --> 00:44:52.990
Expert 1
Been looking at transaction data. Could you tell the price difference between or the the yields for example which are used for the valuation? What is the difference on on the hill side?

00:44:54.820 --> 00:45:08.550
Expert 1
The test you have also some transaction data maybe or valuation data showing. What is the difference between a queen and the brownies and that they actually a lot of papers investigated and with rental premium it's the most common.

00:45:10.610 --> 00:45:12.960
Expert 1
I mean not the value driver, but the most common.

00:45:13.710 --> 00:45:35.690
Tomas HAVELKA
WHO sector they, they they the the papers investigate. And yeah, they compared the values of green and brown buildings again with mostly the food or regressions when they control for all the other factors of the buildings. Umm. OK. And of course they have higher higher value for the sales are of these buildings. You can sell it with the premium.

00:45:36.820 --> 00:45:49.890
Tomas HAVELKA
But I didn't include my valuation because in the DC evaluation there is nowhere where we can put it. We can do this and maybe valuation where you can compare time the market value if if you would can improve the.

00:45:50.560 --> 00:46:08.390
Tomas HAVELKA
Market value current market value with for example. I don't know if there are overall 6% higher you can improve that and say that overall your portfolio in values gonna grow in 6%, but that's already have been done with a lot of papers. So they already showed the percentage. So that's why I didn't focus on it, but it's definitely there.

00:46:09.140 --> 00:46:11.570
Expert 1
And and then maybe if if.

00:46:12.570 --> 00:46:28.380
Expert 1
If this would be something that I can also like send to you in our department also REF. I would be happy to also include this. Yeah, interesting to to see exactly. Definitely. It's an interesting topic, especially looking deeper into.

00:46:29.330 --> 00:46:37.660
Expert 1
This topic UH, which is always in the discussion with our clients. And then just yeah, seeing also what literature is saying and yeah.

00:46:39.060 --> 00:46:39.670
Expert 1
Christine.

00:46:40.390 --> 00:46:41.440
Expert 1
Interesting topic can.

00:46:42.430 --> 00:46:43.830
Expert 1
So like it's.

00:46:44.790 --> 00:46:47.480
Expert 1
It's it's. It was actually a lot of fun doing it, but.

00:46:48.290 --> 00:47:04.120
Expert 1
The papers you know, like they say all the always the same thing. And yeah, you have to look up for the specific numbers and then the rational and then it gets very complicated when you think of the lease terms and and the type of buildings and and the regulations so.

00:47:05.050 --> 00:47:05.290
Expert 1
Yeah.

00:47:07.070 --> 00:47:19.130
Expert 1
But no, in the end, it's still. It's still a, it's still A1 case company and it's still evaluation. When I did the

approaches, maybe I should have excluded that paper. Maybe I should have added that paper and the result would be a little bit different.

00:47:20.210 --> 00:47:49.680
Expert 1
But yeah, I mean it's an approximation, right? It's not the absolute truth, but I think it give you can give you an indication with a little which direction it's going. Yeah, for individual person who doesn't work for Innova values, I think the value would be so summary of the literature basically, yeah. I'm not sure. Yeah. Yeah, I think it would be very useful to also to talk to to Pena, Minor Shiva Yasemin or whatever and to be estate fans of course because they have.

00:47:49.820 --> 00:47:54.310
Expert 1
Yeah, more in the specifics of certification and.

00:47:56.900 --> 00:48:15.510
Tomas HAVELKA
And how clients are doing the same in real life? Yeah, because we're more on a higher level and looking at the folios that, that, that project themselves that much for sure. For sure. Yeah. Like my plan was to do it with Jasmin to get more of the system ability part. And then with Arnold thoughtfully to get more into the numbers into the valuation itself.

00:48:15.770 --> 00:48:23.600
Expert 1
Because like there's no, I mean, I'm just let me know if it doesn't answer. Maybe you just give him a call or if he doesn't pick up, then I can also call.

00:48:27.800 --> 00:48:41.530
Tomas HAVELKA
Yeah, I'll. I'll try to also transform like all the prices I have €2.00 and to for meters square, so we can maybe have see. And so we would be easier for him to, yeah, compare the the numbers I have with something he has in his mind.

00:48:42.570 --> 00:48:48.750
Expert 1
But no. Ideally I would like to do interviews with them next week. Umm, OK, great.

# Interview – Expert 2

00:00:00.000 --> 00:00:24.410
Tomas HAVELKA
And then just just to be sure, like I made these questions like everything that's sort of count came out of my mind, but I would like to have this interview just as a conversation. So I don't even expect to ask all the questions and I'm super happy if you just talk as much as possible about the things you know. And yeah, just have this really more as a discussion as questions and.

00:00:05.820 --> 00:00:06.130
Expert 2
Mm-hmm.

00:00:11.070 --> 00:00:11.380
Expert 2
Mm-hmm.

00:00:24.370 --> 00:00:24.620
Expert 2
Mm-hmm.

00:00:25.290 --> 00:00:45.570
Tomas HAVELKA
Let's see and many, many questions I have written down. I think I was also doing this with my one of my colleagues and I would like to also do this with real estate financing guys. And I just put all the questions together so, so many times some questions are more applicable for you and some are more applicable for risoli finding. So no worries if there is an issue.

00:00:37.900 --> 00:00:38.250
Expert 2
Yep.

00:00:42.300 --> 00:00:42.540
Expert 2
Yeah.

00:00:45.970 --> 00:00:46.740
Expert 2
Alright.

00:00:48.990 --> 00:00:49.900
Tomas HAVELKA
Yep, so.

00:00:49.680 --> 00:00:58.750
Expert 2
And and just out of curiosity, maybe it is actually in on your first slide, but I overlooked it. What exactly are you studying?

00:00:59.640 --> 00:00:59.940
Tomas HAVELKA
Bank.

00:01:00.010 --> 00:01:00.530
Tomas HAVELKA
I can find it.

00:01:00.790 --> 00:01:05.940
Expert 2
Don't care banking, finance. Umm yeah, I I have the feeling a lot of people study that here.

00:01:02.910 --> 00:01:03.600
Tomas HAVELKA
But yours.

00:01:06.220 --> 00:01:20.700
Tomas HAVELKA
Yeah, actually I just feel like I have a lot of classmates that work at RBI think it's also 2 bits. To some extent that it's a, it's in English and then RBI is also very English friendly. So I think this is also connected.

00:01:19.950 --> 00:01:24.260
Expert 2
Yeah. Umm yeah, I I see. Umm, alright.

00:01:26.000 --> 00:01:28.830
Expert 2
So I don't know where do we start.

00:01:27.540 --> 00:01:28.090
Tomas HAVELKA
Yeah. So.

00:01:29.370 --> 00:01:53.710
Tomas HAVELKA
So basically I mean just just maybe from your experience with real estate finance clients you have, is this when they where is this? I mean of course the topic that, that, that they they talk about with you like if it is actually worth for them to get these certifications and maybe how many clients do actually ask about this and what do you talk to them?

00:01:54.880 --> 00:02:17.510
Expert 2
Umm, yeah. So maybe also to give you some some context and some background about about also what I do because I mean when the sustainable finance team, so we talk with corporate customers, including real estate companies about different types of sustainable financing options, but not all of them.

00:02:18.970 --> 00:02:27.330
Expert 2
So first of all, not all of them are real estate companies. They're definitely some that have approached us and especially within the past years.

00:02:28.510 --> 00:02:41.640
Expert 2
They've been a few and, but I mean, they're the motivation is like coming from from both sides. So either the relationship managers within the bank approach them and ask them whether they may be interested in any of that. And there may be.

00:02:42.780 --> 00:03:01.250
Expert 2
One would have more of a discussion about what is the potential benefit out of it, and then on the other hand, maybe we don't even have that discussion because they approach us and they already tell us that they do want to have, I don't know, some sort of green bond for example, and therefore.

00:03:02.000 --> 00:03:08.200
Expert 2
Then we we basically skip the entire benefit section, right? And but I think.

00:03:09.380 --> 00:03:13.910
Expert 2
What what would be of benefit or or why they do it?

00:03:16.330 --> 00:03:22.640
Expert 2
And yeah, but maybe that's also it's it's not entirely about the certification.

00:03:23.390 --> 00:03:25.990
Expert 2
Aspects. Because I mean if we do.

00:03:28.730 --> 00:03:51.480
Expert 2
Typically, sustainable finance financing format or or let's start differently like it's difficult, sustainable financing format for such a real estate company would be a green bond. I think this is what has happened like over the past years very extensively. It is one of the industries or sectors where I would say it's actually really boomed like this type of financing and.

00:03:52.770 --> 00:04:15.380
Expert 2
And there they would usually then invest or need money for them to be able to invest into green buildings. I think this is very much the focus and there are different approaches can be taking. So either they show us that it's a green building based on a specific certificate.

00:04:16.630 --> 00:04:45.960
Expert 2
Or they do so by stating they will invest in renewable energy aspects. For example, this does not necessarily have something to do with the green building certificates, because this can be dispatched from each other, right? And or specific refurbishments, renovations and so forth. And and the benefit for them to do such a green bond would be that they would.

00:04:46.740 --> 00:05:06.310
Expert 2
Get into an investor market that may be entirely new because there are green investors or certain

funds. You know that really just look into green projects, into green financings and therefore companies that are operating one way or the other green.

00:05:07.450 --> 00:05:22.420
Expert 2
And which may be very different investors than like the conventional investor. So, so therefore there may be new income flows coming in from this side. But I think there is no clear.

00:05:23.580 --> 00:05:36.270
Expert 2
Number you know of how much benefit it is at the very beginning because it is also depending based on on the demand within the sector on on such a financing and.

00:05:37.540 --> 00:06:00.310
Expert 2
Yeah, I mean, I mean in the past, I think there were several basis points that they could gain from getting such a green bond. But at some point within the real estate industry it, it was basically more or less just flooded with green bonds because especially for the real estate companies, it's just so easy basically because each financing that they need is basically an investment into one or the other real estate.

00:06:00.470 --> 00:06:30.240
Expert 2
Um, right, that they would construct or refurbish, and to a certain degree and and so therefore I think currently there is not so much to gain, but then there are intrinsic motivations obviously as well because they may want to increase their reputation in general. You know, for their stakeholders and to yeah, maybe also just to be a better company, you know, working, working out different green aspects.

00:06:28.760 --> 00:06:37.370
Tomas HAVELKA
Check with you if there was also the shift on project financing. There was also this shift from project financing more to more to green bonds right in real estate.

00:06:38.790 --> 00:06:40.640
Tomas HAVELKA
Especially interest rate was lower.

00:06:42.830 --> 00:06:44.040
Expert 2
Umm you mean?

00:06:45.150 --> 00:06:53.700
Expert 2
I'm I mean the project financing is the green bond usually because this is use of proceeds. So this is project specific.

00:06:54.840 --> 00:07:02.710
Tomas HAVELKA
OK. But they were not taking loans for individual projects. They were rather took. They took a bond and then used the bond proceeds to finance the project, right?

00:07:03.100 --> 00:07:03.370
Expert 2
Yeah.

00:07:04.200 --> 00:07:14.490
Expert 2
Yeah. So and and so basically you, you have like a big chunk of capital inflow and this capital inflow you can use for different projects that meet specific criteria.

00:07:14.880 --> 00:07:17.830
Expert 2
Umm. So yeah and.

00:07:19.060 --> 00:07:30.970
Expert 2
And what is coming up now is more the sustainability linked aspects and here also more and more real estate companies at least have interest.

00:07:32.490 --> 00:07:39.540
Expert 2
And I mean, this is like entirely like general purpose driven. So it's not project specific. So they can use it for whatever.

00:07:40.780 --> 00:08:01.690
Expert 2
However, they need to meet certain criteria as well, but as a company in general so generally improving their sustainability standing and I think this then where many real estate companies really struggle. And that's just historically I would say always like from sustainability viewpoint, the focus.

00:08:03.560 --> 00:08:18.780
Expert 2
Was on on the different projects on the different buildings and real estate that they have and how to make that green and therefore there was this huge boom with the green bonds where it's like very project oriented obviously however though.

00:08:19.960 --> 00:08:36.690
Expert 2
Many realistic companies aren't really good into publishing and and disclosing collecting data on how they are themselves sustainable and what they do in terms of the different ESG aspects and.

00:08:37.460 --> 00:08:53.900
Expert 2
Yeah. And therefore they're really bad in that area. And then it's really difficult to set specific criteria and and targets that they could achieve until a certain year on a yearly basis, basically to do a sustainability linked financing, which is then.

00:08:54.710 --> 00:09:03.800
Expert 2
Yeah. Because if if you don't do anything, that area, if you haven't set any targets internally, it's it's really tough then to link specific financing to it.

00:09:05.020 --> 00:09:17.240
Tomas HAVELKA
Of course it is. This for example. Also the level of green portfolio. So the percentage of green portfolio or is it more specific? So I don't know a level of energy consumption and what they're usage and so on and so forth.

00:09:18.000 --> 00:09:18.940
Expert 2
It could be both.

00:09:20.120 --> 00:09:21.730
Expert 2
So you you could set it.

00:09:23.090 --> 00:09:28.800
Expert 2
To increase the share of green buildings within your entire portfolio.

00:09:30.550 --> 00:09:31.160
Expert 2
But.

00:09:32.400 --> 00:09:34.180
Expert 2
I I still think that this.

00:09:32.780 --> 00:09:34.870
Tomas HAVELKA
And is this something where the real estate companies do?

00:09:35.790 --> 00:09:36.090
Expert 2
Pardon.

00:09:35.960 --> 00:09:47.010
Tomas HAVELKA
With specifically, is this something that the realistic company do? So when they have this green bond sustainability think green bond, do they actually link it to the percentage of their green portfolio?

00:09:47.410 --> 00:09:48.420
Expert 2
Yeah, I think they do.

00:09:49.570 --> 00:09:52.390
Expert 2
Or even to to the percentage of green buildings.

00:10:06.060 --> 00:10:06.390
Tomas HAVELKA
Umm.

00:10:06.450 --> 00:10:18.930
Expert 2
The energy consumption or increase amount of renewables used within their facilities, depending obviously like what type of facilities they have and or whether like the tenants would set the contracts right, but.

00:10:06.610 --> 00:10:06.880
Tomas HAVELKA
It's.

00:10:20.040 --> 00:10:21.060
Expert 2
Yeah, something like that.

00:10:22.300 --> 00:10:30.190
Expert 2
Yeah, I think there's still like a lot about the portfolio though and the amount of certified buildings for you, Sir, for example and to increase that.

00:10:22.760 --> 00:10:23.110
Tomas HAVELKA
And.

00:10:31.710 --> 00:10:49.070
Tomas HAVELKA
OK, perfect. And if you take for example, you issue a green bond and then they would say they will use it to increase their greenness of the portfolio, would they rather construct new ones or buy green like sell brown bite green or would they extra renovate their own portfolio?

00:10:49.820 --> 00:11:04.260
Expert 2
That's very different, actually. I talked with a friend with a colleague of mine, and she's actually working with most of the green bond related or green loan related areas, but she didn't have time today.

00:11:05.940 --> 00:11:35.330
Expert 2
And I asked her the same question because I think that was also one of the questions that you had. And. Yeah, but we couldn't agree. What we see more or less because often if you have, like, a green bond, for example, then you would include all of the categories. Then you would basically identify as an eligible category new buildings, but also refurbishments of existing buildings and or acquisitions that maybe take that could take place.

00:11:35.470 --> 00:11:49.420
Expert 2
And everything else then basically what they use it for really depends or has to be seen within the the next and and upcoming years, and usually probably then it's it's a mix but.

00:11:50.410 --> 00:12:00.000
Expert 2
At at least, we haven't seen a trend. You know that it's more new buildings or more renovations of existing buildings or so, so not sure.

00:11:59.250 --> 00:11:59.550
Tomas HAVELKA
Umm.

00:12:00.850 --> 00:12:13.370
Tomas HAVELKA
Of course. Of course. Yeah, I was. I was told this same answer with my other colleague. The only he said that maybe the construction cost could influence this in the future, that it would be more expensive to construct. Therefore they would just renovate.

00:12:09.900 --> 00:12:10.200
Expert 2
Umm.

00:12:13.130 --> 00:12:13.400
Expert 2
Yeah.

00:12:14.710 --> 00:12:15.420
Tomas HAVELKA
Triggers so.

00:12:16.740 --> 00:12:39.110
Tomas HAVELKA
OK, perfect. And then I had some questions regarding sort of the outlook sort of the future of well the future of of green greens are sustainability in, in, in real estate wherever maybe I will start with more of a backward looking question. So how was the sustainability topic developed in recent years in the real estate industry and then you can talk with in general or your clients or whatever?

00:12:27.540 --> 00:12:27.900
Expert 2
Mm-hmm.

00:12:38.540 --> 00:12:39.100
Expert 2
Yeah.

00:12:41.180 --> 00:12:48.350
Expert 2
Yeah. Yeah, I I think I already scratched upon that a little bit that in the past like there was a very strong focus.

00:12:49.640 --> 00:13:02.150
Expert 2
On on the project in general, and that that has been supported also by our clients and also by our financing with the green bond aspect of green loans which are very project oriented.

00:13:04.450 --> 00:13:05.120
Expert 2
But.

00:13:06.460 --> 00:13:14.070
Expert 2

I think within the real estate industry, probably the topic of sustainability has always to certain degree has been there.

00:13:14.150 --> 00:13:25.080
Expert 2
Umm, I think if if you just think back and think about the asbestos scandal, you know, I I think that was probably like a wake up call at some point.

00:13:24.970 --> 00:13:26.100
Tomas HAVELKA
As bestows scandal.

00:13:26.580 --> 00:13:34.050
Expert 2
Umm, I don't know. Probably that was in the 80s or something where where you find as best.

00:13:31.370 --> 00:13:32.200
Tomas HAVELKA
This, this, this.

00:13:35.140 --> 00:13:46.080
Expert 2
Within the different buildings, which is like highly toxic and then from there on, you know, like you either had to renovate to, to get it out and like not build it into new buildings.

00:13:38.670 --> 00:13:38.850
Tomas HAVELKA
Yes.

00:13:47.740 --> 00:13:48.290
Expert 2
And.

00:13:49.160 --> 00:13:50.970
Expert 2
And I think that was probably.

00:13:51.260 --> 00:14:13.300
Expert 2
It's shortly to certain degree, sort of like a wake up call for for a certain players within the industry to to take a better look into what you actually build and what types of materials you use. And I think also biodiversity has always been to a certain degree on the radar because I mean Greenpeace and all these.

00:14:13.420 --> 00:14:14.250
Expert 2
Uh.

00:14:15.810 --> 00:14:29.080
Expert 2
Groups has always been there, you know, claiming that the real estate giants are, yeah, interrupting the ecosystems too much and and so forth. But I think it really got a boom.

00:14:30.430 --> 00:14:43.820
Expert 2
Definitely with with the financing and like sustainability getting mainstream more and more within the past years. As I already mentioned in the past, I would definitely say it was very much project focus. I was working at the.

00:14:44.280 --> 00:14:52.130
Expert 2
Umm, an easier rating agency before I came to the bank and and I talked with a colleague of mine as well there.

00:14:52.920 --> 00:15:11.120
Expert 2
And as far as we do remember, because I didn't work in the real estate sector, but as far as we remember, all the ESG ratings of real estate companies were always really bad because they had such a strong focus on the projects, but not on their own sustainability topics. And I think within.

00:15:12.120 --> 00:15:22.730
Expert 2
Already within the past two years, probably there has been already a slight shift because they become aware due to the different types of financing, such as the sustainability linked.

00:15:23.390 --> 00:15:43.680
Expert 2
Financings, whether it's bonds or loans, I mean these sustainability link financings, there are basically two types. So you can either choose KPIs on on a company level or you can link it to the ESG rating of a company. And since most of these companies have really bad ESG ratings.

00:15:44.830 --> 00:15:54.120
Expert 2
They they started to and and with that also they didn't have a sufficient KPI and all they start working on getting their sustainability efforts.

00:15:55.160 --> 00:16:05.850
Expert 2
Up more or less in the in the past few years and would be for example, really did something quite something in in that regard within the past years, for example, as an Austrian player.

00:16:07.710 --> 00:16:25.720
Expert 2
But definitely with with future or already upcoming regulations that are coming our way in the sustainability sphere, there's definitely much more to come. I I would say, I mean with the you taxonomy.

00:16:26.920 --> 00:16:54.730
Expert 2
There is pretty sure an increase interest by investors as well that the companies are making or are getting a greener portfolio. But I mean the UX only has a very strong focus on EU markets. So many of the see markets for example, or if you go to other countries to other regions entirely, you know probably there isn't much of a factor necessarily.

00:16:56.060 --> 00:16:56.540
Expert 2
But.

00:16:57.720 --> 00:17:04.210
Expert 2
So do you take someone? Not me, I think will definitely make it greener. And I think this is definitely something.

00:17:04.960 --> 00:17:35.540
Expert 2
Overall, where where the future, hopefully we'll we'll go to that. We are moving in towards greener buildings and but also we as a bank, I mean I I don't know how much you hear of of all the different endeavors that we're taking as a bank in terms of sustainability and that we are also sending or start sending out different questionnaires to the companies as well including the real estate companies to ask about their sustainability measures that they've.

00:17:35.620 --> 00:17:43.030
Expert 2
Been taken or the strategies the different data they collect on, on social and environmental aspects?

00:17:44.030 --> 00:17:57.300
Expert 2
Just because we have to report it as well as a bank and therefore I think the pressure is getting higher for the real estate companies to do more and yeah, to really scale it up on a bigger level

00:18:02.930 --> 00:18:08.360
Expert 2
So definitely I think it it will all accelerate more, whereas though in.

00:18:09.110 --> 00:18:15.180
Expert 2
Within the European markets, I I guess there will be a stronger shift than, for example in CEE.

00:18:16.150 --> 00:18:16.510
Expert 2
So.

00:18:17.020 --> 00:18:31.550
Tomas HAVELKA
So you would think that for example, for the future there would be rather of a green premium, there would be this problem discount, meaning that companies who would not be able to adapt. So for example transfer their portfolio to green, they would just, I don't know just.

00:18:31.100 --> 00:18:32.370
Expert 2
Have to pay higher.

00:18:32.760 --> 00:18:35.350
Tomas HAVELKA
Exactly. And that some point probably diminished because.

00:18:33.430 --> 00:18:33.660
Expert 2
No.

00:18:35.810 --> 00:18:36.130
Expert 2
Yeah.

00:18:36.990 --> 00:18:37.400
Tomas HAVELKA
OK.

00:18:37.000 --> 00:18:37.220
Expert 2
Yeah.

00:18:38.180 --> 00:18:40.820
Tomas HAVELKA
And and and regarding some.

00:18:40.350 --> 00:18:51.010
Expert 2
Well, where so I'm. I'm sorry for interrupting. I'm not entirely sure whether they have to pay more or whether it is really just that the others will get a premium. Yeah, yeah, yeah. You know, like. And so it does not necessarily mean just because you're incentivized one. The one area that you basically punish, the other ones, right. So I'm not entirely sure, but yeah.

00:18:55.250 --> 00:18:56.020
Tomas HAVELKA
I see. I see.

00:19:06.890 --> 00:19:27.110
Tomas HAVELKA
And for example, with maybe some other regulations you mentioned the EU taxonomy, but also maybe with country specific regulations or whatever regarding green greeness of buildings or just sustainability overall within there be maybe some fines in the future for such companies or or or maybe how is the regulation overall regarding this?

00:19:28.040 --> 00:19:34.620
Expert 2
I mean, OK, so I'm. I'm not the regulatory expert. So I don't know about.

00:19:35.660 --> 00:19:45.930
Expert 2
Finds per SE, I know that they need to disclose more because, uh, the CSRD is coming up. Definitely that for sure. And I think most of the real estate companies just.

00:19:47.070 --> 00:19:57.920
Expert 2
If you consider a how much volume they have under assets, you know I I think they will all be affected more or less by the CSRD and therefore they have to disclose on the different ESG aspects.

00:19:58.260 --> 00:20:04.970
Expert 2
Umm, I think that's at the latest in 2024. I think they have to report on fiscal year 2023.

00:20:05.390 --> 00:20:15.320
Expert 2
Umm, so there is something coming up, but I mean this is also based in on the EU, so it also has like an EU focus and.

00:20:16.530 --> 00:20:18.480
Expert 2
Yeah. And on national level.

00:20:19.860 --> 00:20:24.890
Expert 2
I'm I'm not entirely sure on on on a national level. I just know that.

00:20:26.070 --> 00:20:27.250
Expert 2
There are different.

00:20:29.370 --> 00:20:44.680
Expert 2
Yeah, I don't know whether it's in a development, but for for example, in Germany they think about, but that's also for residential buildings, not commercial buildings, but they're, for example, the landlords have to pay for the energy.

00:20:45.790 --> 00:20:57.410
Expert 2
Umm for the energy costs of of their tenants, if they rent out buildings, you know where they haven't done anything. Any energy efficiency measures within the past years.

00:20:57.790 --> 00:21:27.380
Expert 2
Umm. Basically, to incentivize them to renovate also old buildings to make it greener, to make it more energy efficient and so forth. But that's still under discussion and this would then not necessarily penalize the real estate companies you know, but then maybe the landlords depending whether the real estate companies have sold their assets or not, you know or they rented out themselves. And as I said that I think that's only for residents only. So yeah.

00:21:27.800 --> 00:21:35.290
Expert 2
I I don't know. It's. Is there anything that you have in mind in terms of punishments on in national legislation?

00:21:35.950 --> 00:21:57.340
Tomas HAVELKA
Actually, regarding regulations or legislations, I haven't haven't really studied this topic just so far. So, so anything that you mentioned is great. And also if you just mentioned this, you said let's see asrm or or taxonomy, this is something I briefly look into, but we're just also like to see if these are the biggest topics that you also deal with. And then I would the research on them a little bit more.

00:21:38.690 --> 00:21:38.930
Expert 2
Yeah.

00:21:41.480 --> 00:21:41.820
Expert 2
OK.

00:21:47.830 --> 00:21:48.110
Expert 2
Yeah.

00:21:50.130 --> 00:21:50.570
Expert 2
Yep.

00:21:57.620 --> 00:21:58.140
Expert 2
Yeah.

00:22:00.060 --> 00:22:02.640
Tomas HAVELKA
And maybe another. Yeah, you mentioned residential.

00:22:03.180 --> 00:22:24.790
Tomas HAVELKA
Uh asset class. So are you also I mean aware of like the differences between asset classes and the sustainability within the real estate. So comparing offices to residential but also maybe retail and industrial or logistics and what is the difference or where and which level are these asset classes are already at in regards to sustainability?

00:22:26.020 --> 00:22:55.430
Expert 2
Actually, I don't think I can answer or give me much insight in that because often I mean even with the green bonds or the green loans that we're giving, it's still very much at a on a high level you know so. So it's not very specific specifically going into detail, whether it's for residential or retail buildings and so forth. Because often the companies have like a portfolio with all sorts of different classes.

00:22:55.810 --> 00:22:56.240
Expert 2
Umm.

00:22:57.170 --> 00:22:59.020
Expert 2
The only thing that I've heard is that.

00:23:00.670 --> 00:23:28.670
Expert 2
For residential buildings, usually the real estate companies would not get a certification because um for the tenants it is not very attractive to pay more. You know, just because the building has a certification and therefore the real estate companies usually would only go for certifications if it's

like for commercial buildings or yeah, that's not necessarily for residential ones, but more details. I actually do not have.

00:23:29.250 --> 00:23:49.480
Tomas HAVELKA
Yeah, the words numbers, of course and and have you have you seen some, I mean I don't know like transition or some change due to COVID. So for example if the if the company is realized that because of COVID they would need to change something and then then they linked into two sustainability or or was this not really a factor?

00:23:45.220 --> 00:23:45.580
Expert 2
Umm.

00:23:51.090 --> 00:24:22.320
Expert 2
Umm, I also talked with a colleague of mine about that, but she agreed with me that we actually do not see a strong impact on generally the real estate sector due to COVID, at least in terms of the lending business that we have and from the client side actually or you know whether it is, I don't know didn't more hospitals would be funded or something but no. So we haven't seen any specific shifts in in that regard or also.

00:24:22.410 --> 00:24:25.840
Expert 2
Shift to more greener buildings or something, but.

00:24:28.320 --> 00:24:30.530
Expert 2
Yeah, I think, yeah.

00:24:31.700 --> 00:24:41.870
Expert 2
Yeah, I think in the future generally green, it's more attractive to investors you know, because why would you invest into a brown building if you could have a green building as well?

00:24:43.210 --> 00:24:52.550
Expert 2
Just like from from an investor's viewpoint, but nothing of of specific interest due to covet, at least not that we have seen.

00:24:53.360 --> 00:25:22.110
Tomas HAVELKA
OK, OK. And then the the way the OR like how how green buildings are sustainability within those days viewed publicly or just within the country? How does different regions differ so for example difference between countries in Europe and maybe also if you know also how, how is if this topic is also big in the US and or other other regions, but mostly with the focus on you're going to say?

00:25:22.190 --> 00:25:31.100
Tomas HAVELKA
And especially maybe if you can comment if you know specifically on Germany and France because that's where you know values. The company I'm researching is active.

00:25:29.730 --> 00:25:30.140
Expert 2
Mm-hmm.

00:25:33.830 --> 00:25:51.180
Expert 2
Yeah. So I actually on also here, I I don't know too much because I mean most of the clients where we go into meetings into our like the, I mean the head office clients and sometimes we're helping out colleagues from the network banks but.

00:25:51.260 --> 00:25:58.390
Expert 2
Umm, more or less like the certifications for example are more or less the same. I think there's like a very specific one.

00:25:59.570 --> 00:26:01.600
Expert 2
Also in France, but.

00:26:02.590 --> 00:26:12.960
Expert 2
Yeah. No, no idea about the the levels or you know what? What is more common or what is of more greater interest to to investors because then.

00:26:13.700 --> 00:26:36.430
Expert 2
Yeah, but about the topic, maybe you have to talk with and to CCMO or something, you know, like who well, actually selling the entire thing to the different investors and what what would be done of greater interest to them. The only thing that I could imagine is since friends fields at least fields like that, that in sustainability matters, they're always at the forefront.

00:26:36.980 --> 00:26:52.420
Expert 2
Umm. Then maybe there the amount of of green buildings is higher. For example you know like across the board then, then on somewhere else. But that's like very speculative, like no idea whether whether that's true or not. So yeah.

00:26:53.250 --> 00:27:03.010
Tomas HAVELKA
And if you for example you mentioned you deal with clients from the head office, so this would also include to some extent Germany and then a lot of CE clients. Is there a difference like the East and West basically?

00:27:04.940 --> 00:27:14.690
Tomas HAVELKA
On the perception and also of how much like maybe Germany started doing this some years ago and see just just started now or something like that or is it actually not the big different?

00:27:05.250 --> 00:27:05.560
Expert 2
At.

00:27:14.050 --> 00:27:14.960
Expert 2
I I think there's.

00:27:16.160 --> 00:27:45.690
Expert 2
I mean generally see CEE is always a little bit slower than than the Western European countries at at least it feels like it. Not entirely sure though, whether it's just a perception, especially if we're talking about the real estate industry over there. It's actually, you know, like if you would look at the data, whether it's actually true and also I mean we haven't heard of all the developments that have taken place in the network banks because like it.

00:27:45.800 --> 00:28:04.640
Expert 2
CE clients then they may be served, you know, by colleagues of ours, like within the country themselves. So we may not have heard what they have done and therefore, you know, like my impression maybe falls entirely as well. So.

00:28:04.170 --> 00:28:04.750
Tomas HAVELKA
Yes, yes.

00:28:06.500 --> 00:28:07.010
Tomas HAVELKA
OK.

00:28:08.300 --> 00:28:13.570
Tomas HAVELKA
And and if we look more into certifications, is it is it pretty?

00:28:13.080 --> 00:28:33.530
Expert 2
Oh, I'm. I'm sorry for for interrupting. Just another thought of mine though. But if we would look like at the green bonds though, and like the first green bonds within the real estate industry, or where most of them have taken place, I think that's definitely like the euro bond, which is then like the European Western market, so.

00:28:34.710 --> 00:28:34.920
Expert 2
Yeah.

00:28:35.740 --> 00:28:38.370
Tomas HAVELKA
So you mean it was firstly more common than?

00:28:38.860 --> 00:28:40.500
Expert 2
I think so, yeah.

00:28:39.050 --> 00:28:40.790
Tomas HAVELKA
With the morning.

00:28:41.570 --> 00:28:48.660
Tomas HAVELKA
But now also there have been many issues of green bones in Eastern Europe or Central Eastern Europe, right?

00:28:49.400 --> 00:29:03.680
Expert 2
I think they're coming up. Definitely. Yeah. Yeah, yeah, yeah. I'm ohh. I see. I think they've been. They have taken place as I as I said I'm I'm not so much focused on on the green loans and bonds but what I know is that there are many green.

00:28:49.450 --> 00:28:50.150
Tomas HAVELKA
Or it's still going?

00:28:50.770 --> 00:28:51.490
Tomas HAVELKA
They're coming up.

00:29:05.120 --> 00:29:21.930
Expert 2
It shows us that that for sure and I'm pretty and since I have had talks as well and I've heard from my colleague who's working then with clients from this E region. So I'm pretty sure that they're also bond issuances in in that region definitely.

00:29:23.870 --> 00:29:39.980
Tomas HAVELKA
OK. And yeah, so if we switch to certification and specific certifications, I was in my thesis, I was using lead because this was something that came up most for most of the papers which were US based. But I also checked that lead is also.

00:29:33.160 --> 00:29:33.440
Expert 2
Umm.

00:29:40.190 --> 00:29:50.820
Tomas HAVELKA
Um, many European real estate companies use lead. My question would be like is this also case in in the clients you're dealing with or do you see mostly dream?

00:29:44.080 --> 00:29:44.280
Expert 2
Yeah.

00:29:52.270 --> 00:30:01.840
Tomas HAVELKA
Certificates which are more common for Europe and and also maybe you have these different levels, right, so certified silver, gold, platinum or it's called differently I guess for different things.

00:30:03.200 --> 00:30:04.450
Tomas HAVELKA
Is is it like?

00:30:05.470 --> 00:30:15.320
Tomas HAVELKA
Most of the clients are just trying to pursue the lowest ones just so they can mark themselves green or are they actually pursuing the highest level because they want to be as green as possible?

00:30:10.090 --> 00:30:10.390
Expert 2
Umm.

00:30:15.850 --> 00:30:16.440
Expert 2
Umm.

00:30:17.300 --> 00:30:30.020
Expert 2
So generally I think like LEAD is still among the most common ones. Basically more or less regardless of the markets from from what we have seen so far, brim is still very much or very common as well. And there's also age certification.

00:30:36.900 --> 00:30:41.730
Expert 2
But I don't necessarily actually know how common it is, but I know.

00:30:42.440 --> 00:30:57.780
Expert 2
That it's out there. Um, so I I've seen that as well and um from the yeah, regarding the the ambitiousness levels. I mean, if we were talking to our clients, usually they.

00:30:58.850 --> 00:31:16.580
Expert 2
Uh, they do want some sort of financing as well. And then we also have a certain standard that we ask for, so certain requirements. And that's definitely not like the lowest one and also but generally from the market perception and from the market standard, you would not go for the lowest one.

00:31:17.720 --> 00:31:43.210
Expert 2
So it's it may not also be like the highest, because I think for lead the highest is like platinum, but then you would go for gold for example, you know and and also over the years from what we have seen ourselves in terms of the certifications to years ago or not two years ago 2018 when we published like RBI.

00:31:28.750 --> 00:31:29.000
Tomas HAVELKA
Yeah.

00:31:43.430 --> 00:31:46.390
Expert 2
So IM first green framework.

00:31:47.870 --> 00:31:52.690
Expert 2
We expect that our clients, for example, to have I think LEAD gold and BREEAM I don't know what is

rim very good or something. It's as you said they have like different levels and names for it and by now, because the market has evolved already. We, for example expect a BREEAM excellent, which is higher than the very good one. And that's just because you know it's now common practice within the market. It is what we see from other issuances as well. And therefore we adjust as well. So you would definitely not go for the lowers. You may not go for the highest either. I'm pretty sure they are very ambitious companies as well. But then these are rather rare, I would say. You know who may aim for the very high levels, but yeah, maybe you go for the second highest, then so and then. It's definitely common, standard and.

00:32:47.430 --> 00:32:54.460
Tomas HAVELKA
Umm, I see and they would look into mostly costs for the companies. So if it just they want to don't want to spend too much.

00:32:55.360 --> 00:33:02.130
Expert 2
Yeah, I think that's definitely something. I think there are many more green building certifications, but then?

00:33:04.330 --> 00:33:32.510
Expert 2
But but then you would definitely advise them to go for one of the big ones like they will lead dream or also edge certifications and then it's maybe more about the cost. But then depending what type of building certifications they have used already in the past or with what they have already have experience with. So they may take long based on that and then it may not necessarily be the cheapest of all you know, but since they have only worked with lead and they would continue with that for example. So that may be a factor as well.

00:33:33.510 --> 00:34:00.560
Tomas HAVELKA
And and have you also stumbled upon these healthy building certificates? I think it's well. For example, I I I'm not myself an expert. I just remember I I when I was reading the market reports, this was mentioned as sort of the new hype. So this healthy buildings which are also concentrating on I think the hygiene and it was more connected to COVID-19 and and personal space and stuff like this is this is also something that you have stumbled upon or.

00:34:01.000 --> 00:34:01.920
Tomas HAVELKA
Or not really.

00:34:01.850 --> 00:34:25.440
Expert 2
Are you? I myself not, but not sure whether my colleagues, for example, they had that coming up in the discussions with the clients because that may well be the case, but it's definitely not something entirely common that that we've seen so far or that we have used and you know as as one of the categories, I also don't think that.

00:34:25.520 --> 00:34:35.580
Expert 2
Umm, we would consider this a sufficient, you know, like certification strategy, whatever you know to to base the financing on top of that so.

00:34:35.670 --> 00:34:37.330
Tomas HAVELKA
I see. I see. OK.

00:34:37.830 --> 00:34:39.790
Expert 2
At least not that I know of, you know, like.

00:34:44.000 --> 00:34:45.730
Expert 2
What did you say? What is it called?

00:34:47.280 --> 00:34:51.140
Tomas HAVELKA
Well, so WEHLE, that's how it's.

00:34:50.260 --> 00:34:50.610
Expert 2
OK.

00:34:51.860 --> 00:34:52.790
Expert 2
OK, like well.

00:34:53.830 --> 00:34:56.840
Tomas HAVELKA
Yeah, exactly. Exactly. But it's a shortcut of something.

00:34:57.170 --> 00:34:57.530
Expert 2
OK.

00:34:57.560 --> 00:34:58.110
Tomas HAVELKA
Uh.

00:34:59.000 --> 00:35:00.350
Tomas HAVELKA
Let me check just real quick.

00:35:01.770 --> 00:35:17.370
Tomas HAVELKA
Yeah, because it's it's, it's not a green certification. It's I think it's healthy certification. And I remember in some of the market reports that I read, this was sort of the emerging topic, at least it seemed like, but I didn't look more into it because it's a little bit of a different topic than what I'm researching.

00:35:06.140 --> 00:35:06.930
Expert 2
Yeah.

00:35:18.880 --> 00:35:27.890
Tomas HAVELKA

Uh, yeah, I think could be. Could be also interesting for the future and I hope I don't know exactly what are the requirements to be well certified.

00:35:23.030 --> 00:35:23.620
Expert 2
Umm.

00:35:31.660 --> 00:35:32.260
Tomas HAVELKA
Ohh.

00:35:36.440 --> 00:35:37.910
Expert 2
CID also US.

00:35:37.000 --> 00:35:37.710
Tomas HAVELKA
And I have some.

00:35:39.070 --> 00:35:40.070
Expert 2
Certification.

00:35:39.490 --> 00:35:40.080
Tomas HAVELKA
I think it's.

00:35:40.890 --> 00:35:41.820
Tomas HAVELKA
I think so, yes.

00:35:42.610 --> 00:35:48.140
Tomas HAVELKA
I don't know if it is also in Europe, but maybe something similar. I'm actually I don't know exactly.

00:35:48.790 --> 00:35:52.170
Expert 2
I think I definitely have seen the logo as well.

00:35:53.050 --> 00:35:53.310
Tomas HAVELKA
Mm-hmm.

00:35:53.080 --> 00:35:55.590
Expert 2
Already. So yeah, but.

00:35:57.520 --> 00:36:01.920
Tomas HAVELKA
Because I think there's also concerns again on the Office office buildings.

00:36:02.640 --> 00:36:09.580
Expert 2
The thing though is even I can sorry for interrupting, but I could imagine that even if this came up.

00:36:10.330 --> 00:36:34.300
Expert 2
Since it has like a social focus on it, it would not be like green bond eligible because like within a green bond you're only cover environmental aspects. And I mean you could issue a sustainable bond where you would also cover investments for social aspects and there you could also for example use the well building standard however though.

00:36:37.650 --> 00:36:56.600
Expert 2
At the very beginning, it was not easy BR eligible, so the European Central Bank would not issue such a program. I think this has changed now, but I still think that many investors are more focusing on the environmental aspects and therefore would rather go for a green.

00:36:57.350 --> 00:37:05.930
Expert 2
Um bond, but not entirely sure. That's again something um where you may have to ask DCM. You know what is actually.

00:37:06.020 --> 00:37:23.770
Expert 2
Umm, the taste of of current investors in in this regard, but just wanted to highlight that the well building standard because it covers a health and safety topic is more like a social aspect than than environmental aspect. And so this may be a differentiating factor as well.

00:37:19.610 --> 00:37:20.490
Tomas HAVELKA
Umm, it's just.

00:37:24.680 --> 00:37:31.510
Tomas HAVELKA
For shortness this. Yeah, you actually write that. Remember that day there were focusing on also. So yeah, social, social part.

00:37:32.210 --> 00:37:35.550
Tomas HAVELKA
That's why I also didn't look into it that much because it's it's a little bit something.

00:37:33.540 --> 00:37:33.770
Expert 2
Yep.

00:37:36.620 --> 00:37:40.970
Tomas HAVELKA
Else, but I remember that it was, uh, mentioned quite a lot and there's a new thing.

00:37:40.500 --> 00:37:40.880
Expert 2
Yep.

00:37:42.010 --> 00:37:55.240
Tomas HAVELKA
Umm I have some questions on the leasing uh contracts and I don't know if you I have sent it to you,

do you are you like, do you have an idea in this or is this something that is just outside of what you're dealing with?

00:37:56.710 --> 00:38:03.360
Tomas HAVELKA
Like for example, if what tenants are actually paying for the utilities themselves, on Windows, the company doing.

00:38:01.660 --> 00:38:31.110
Expert 2
Umm yeah, no idea about that. I also talked to a with my colleague about that. Whether she has like more insights into this due to client talks. But but usually this doesn't necessarily come up because it is not really necessary to talk, you know, like in terms of the financing, how how much is going to the tenants or how much do they have to pay or who's paying the utilities and so forth. So therefore no idea.

00:38:16.420 --> 00:38:16.890
Tomas HAVELKA
Of course.

00:38:31.900 --> 00:38:38.550
Tomas HAVELKA
Umm yeah. Also I think these are the questions I would like to ask. The real estate financing guys. I think this they work with it a little bit more.

00:38:36.240 --> 00:38:36.570
Expert 2
Umm.

00:38:39.400 --> 00:38:39.960
Tomas HAVELKA
Umm.

00:38:53.960 --> 00:39:22.430
Tomas HAVELKA
Yeah. Actually I think there would be maybe only one more questions and if there is anything else, I mean you would like to you, it would make sense for you to investigate from what I'm what I'm doing or any any comments on even for example the scenarios I made in the valuation so transforming it one quarter by quarter or or just all in at once or if you can think of something else just basically anything would be a concluding question basically.

00:39:25.590 --> 00:39:27.580
Expert 2
No, I I'm looking at my notes.

00:39:29.010 --> 00:39:59.640
Expert 2
What I've put down at least one word and what I wanted to talk with you about, but I think I've mentioned it all. I think you could definitely, but that's not really about your assessment or or your approach. How how you've done it, but in, in your discussion and outlook, I think you could definitely bring in regulation. However, though you focus very much on the US market. So therefore like the entire U taxonomies SRD is not so much of importance.

00:40:00.020 --> 00:40:05.100
Expert 2
At least it's it's somewhat out of scope because that's not really like the literature that you've.

00:40:07.020 --> 00:40:08.590
Expert 2
Taking a closer look into.

00:40:07.400 --> 00:40:13.810
Tomas HAVELKA
But it's connected to the case study, so I think you European legislative or regulation would definitely make sense.

00:40:13.380 --> 00:40:22.270
Expert 2
Yeah. So and yeah, and the only other thing is that I was wondering whether it would make sense to you to.

00:40:22.340 --> 00:40:22.910
Expert 2
Umm.

00:40:23.700 --> 00:40:28.220
Expert 2
To talk to what's his name. Patrick Val.

00:40:30.390 --> 00:40:41.600
Expert 2
A colleague of mine mentioned him whether this could be beneficial and of interest to you, and I'm trying to look up like in in which.

00:40:43.140 --> 00:40:51.870
Expert 2
Department exactly. He's working in. I just know he's he's a real estate person and he's actually.

00:40:53.170 --> 00:40:54.000
Expert 2
Trying to.

00:40:54.840 --> 00:41:07.590
Expert 2
Figure out like the different or he's working with collateral. And so he's like an expert with certificates and you know that he's looking at the certificates of different buildings and.

00:41:08.540 --> 00:41:16.730
Expert 2
And tries to assess how much of the building is how much worth depending on the certificates or depending on the different.

00:41:18.190 --> 00:41:20.740
Expert 2
Whatever measures that have taken place.

00:41:21.260 --> 00:41:22.680
Expert 2
Um and.

00:41:21.640 --> 00:41:21.960
Tomas HAVELKA
Perfect.

00:41:23.980 --> 00:41:26.330
Expert 2
Yeah, but I cannot find him in.

00:41:27.470 --> 00:41:28.980
Expert 2
In the IBM notes.

00:41:30.980 --> 00:41:40.990
Tomas HAVELKA
I I I just checked him out on MS Teams and I see him. So yeah, I think if I would just drop him a message if with the presentation and maybe a quick summary and if.

00:41:40.400 --> 00:41:40.810
Expert 2
Yeah.

00:41:41.940 --> 00:41:43.940
Tomas HAVELKA
Has any ideas so I would be a good to go.

00:41:43.440 --> 00:41:58.660
Expert 2
Yeah, because, Umm, I was wondering, for example, you're in entire questions relating maybe more to the value drivers you know and how much does something cost and how much basically to quantifying?

00:41:59.340 --> 00:42:01.850
Expert 2
All these things you know and um.

00:42:02.910 --> 00:42:20.180
Expert 2
And putting like a cost label to it, maybe he he could be off help there, but that's also just like a suggestion, you know, no idea either. Whether he can answer you your questions eventually, but maybe worth taking a shot and reaching out to him.

00:42:09.000 --> 00:42:09.910
Tomas HAVELKA
Definitely the problem.

00:42:21.690 --> 00:42:33.700
Tomas HAVELKA
Yeah, my plan is to on Monday, I would like to have this interview with Arnold CZABAUN, who is

from real estate financing, and I think they would have some, I we would dig deeper into the into the numbers with him.

00:42:29.240 --> 00:42:29.570
Expert 2
OK.

00:42:33.250 --> 00:42:33.450
Expert 2
Yeah.

00:42:34.140 --> 00:42:34.890
Expert 2
OK.

00:42:34.640 --> 00:43:05.050
Tomas HAVELKA
And if maybe if that's not enough, I would also try talk to Patrick Valver. At least that's fine, but but this was also very helpful because I would also like to have parts when I in in my in my literature part, when would it would be the interieure in interview part in the literature part. But I would also like to focus on on comments like you have with the client saying that they would. They are mostly focusing on green bonds and now maybe in the future it would be system sustainability linked and also for example U.S. banks we.

00:42:38.540 --> 00:42:38.910
Expert 2
Sure.

00:42:39.920 --> 00:42:40.450
Expert 2
Yep.

00:43:05.190 --> 00:43:12.220
Tomas HAVELKA
Are sort of forced to push the green as an appliance and just topics like this so so this is also very very helpful for me.

00:43:07.350 --> 00:43:07.580
Expert 2
Yeah.

00:43:10.300 --> 00:43:10.530
Expert 2
Yep.

00:43:12.740 --> 00:43:42.450
Expert 2
And so that's. And that's for sure something or trend development that we see and where we just ran because overall and so that's for sure because we also have data on this, this signability linked market whether it's bonds or loans, you know it's on the uprise and and I think like the the real estate companies also want to get on the train on that and yeah, so as I've had.

00:43:19.210 --> 00:43:19.780
Tomas HAVELKA
Exactly.

00:43:42.560 --> 00:43:46.180
Expert 2
Uh, if if you talks with a few companies on on this where?

00:43:46.890 --> 00:44:01.050
Expert 2
Their sustainability reporting is is rather limited though unfortunately. So yeah so and if if you have any follow up questions or so you know just let me know if you can reach out to me so.

00:43:54.510 --> 00:43:54.920
Tomas HAVELKA
OK.

00:44:01.960 --> 00:44:03.610
Expert 2
Maybe I can help. We'll see.

00:44:02.210 --> 00:44:02.680
Tomas HAVELKA
Yeah.

00:44:04.170 --> 00:44:09.320
Tomas HAVELKA
Perfect. We'll do. We'll do and then thank you very much for the interview and for taking your time really apply.

00:44:08.910 --> 00:44:29.600
Expert 2
Yeah. No, you're very welcome. Ohh. And if you have finalized your entire thesis, I would be very happy to see what the outcome is. And by the way, I really like that you have such a presentation. And so I think the presentation actually looks really good. And I wonder why not every person actually.

00:44:30.390 --> 00:44:32.260
Expert 2
Create such a presentation out of there.

00:44:33.320 --> 00:44:34.570
Tomas HAVELKA
I wondering the same idea.

00:44:33.420 --> 00:44:47.710
Expert 2
This is because of because I think it is rather helpful also to get an overview of your yeah for yourself, you know, like what may be missing or what aspects are lacking. You know, just having it condensed into a few slides so.

00:44:48.920 --> 00:44:49.180
Expert 2
No.

00:44:49.100 --> 00:44:58.860
Tomas HAVELKA
For sure, I think at when their physis is ready. I would also do a updated presentation because I would probably show it to my team at least and then I'm happy to send it to you as well if you're interested.

00:44:55.750 --> 00:44:56.030
Expert 2
Umm.

00:44:59.140 --> 00:45:02.090
Expert 2
Yeah, very much so. I would be much appreciated.

00:45:02.940 --> 00:45:03.950
Tomas HAVELKA
Perfect lesson.

00:45:03.730 --> 00:45:07.220
Expert 2
Alright, thank you very much. Then and have a good one.

00:45:07.840 --> 00:45:09.800
Tomas HAVELKA
Well, thank you and have a nice rest of the day.

00:45:10.590 --> 00:45:11.060
Expert 2
Bye.

00:45:11.730 --> 00:45:12.110
Tomas HAVELKA
I.

# Interview – Expert 3

00:00:00.000 --> 00:00:00.490
Tomas HAVELKA
OK, awesome.

00:00:02.380 --> 00:00:09.270
Tomas HAVELKA
So maybe my first question would be and it's totally fine if if if you don't know because it's very, very specific.

00:00:10.490 --> 00:00:12.220
Tomas HAVELKA
When I was doing the valuation.

00:00:14.490 --> 00:00:24.600
Tomas HAVELKA
I think these are here the value drivers of occupancy property expense and this VAC I'm sort of confident with the result because they are based on.

00:00:25.440 --> 00:00:44.900
Tomas HAVELKA
Let's say I mean this is based on maybe 10 different papers. This is based on also five to 10 papers. This is based on two papers each, but that's I think the papers actually have pretty good qualities. The journals have pretty good quality, so I'm actually sort of satisfied with this result. However, with the CapEx, this is a little bit tricky because.

00:00:45.790 --> 00:01:15.800
Tomas HAVELKA
Many times there were paper showing that there is cost premium and there were comparing, let's say brown building and four green building and they then they said that building a green building was 4% more expensive than building a brown building. But in my evaluation I don't have the cost of building the buildings the the company has is in portfolio so I was not really able to use this you know 4% cost premium to actually apply it and put it into a specific number. And I only found one.

00:01:15.890 --> 00:01:24.550
Tomas HAVELKA
Paper that actually showed, like how much does it cost to build green or to renovate green per square foot?

00:01:25.680 --> 00:01:39.400
Tomas HAVELKA
So I then use this sort of to for my CapEx, but to be honest I am I have no idea if this is something that actually makes sense and my question would be maybe based on your experience with with.

00:01:40.260 --> 00:02:05.620
Tomas HAVELKA
With the projects you have undergone, if it's actually just from the first side, if the numbers actually make sense. So I also tried to transfer it to euros, So what it actually makes sense that when you renovate a building, so we already have a ground building office building, let's say 12 story. I think they're portfolio is more or less 12 story office buildings, I think the.

00:02:07.180 --> 00:02:13.070
Tomas HAVELKA
It would be around 100 square foot, 100,000 square foot GLA.

00:02:14.090 --> 00:02:14.270
Expert 3
And.

00:02:16.040 --> 00:02:24.450
Tomas HAVELKA
Would it actually makes sense that you would have it's I think it was, yeah, €56 per square meter for for renovating it. Or is this too low?

00:02:25.600 --> 00:02:33.680
Expert 3
This is, uh, rather tricky question. I've being honest. I'm I think I'm not able to answer that.

00:02:29.020 --> 00:02:29.380
Tomas HAVELKA
Mm-hmm.

00:02:35.520 --> 00:02:45.350
Expert 3
It it very much depends on the building itself. You you know what? What does it need to be refurbished? Is it?

00:02:46.550 --> 00:02:52.110
Expert 3
Is it how? Let's put it like this. How Brown is the is the building.

00:02:52.680 --> 00:02:53.020
Tomas HAVELKA
Umm.

00:02:53.620 --> 00:03:10.320
Expert 3
If if you know what I mean, does it mean that? Does it mean I have to demolish it at all and make it green? So this would be would be 10, not would be 10 at hotel in new project of course. Where is it somehow?

00:02:55.580 --> 00:02:56.270
Tomas HAVELKA
Of course, yeah.

00:03:10.430 --> 00:03:11.170
Expert 3
Um.

00:03:11.730 --> 00:03:42.840
Expert 3
Uh. Possible to to to yeah, to refurbish it. Um, this is this is difficult to say, though I think I'm not quite sure if it's if if if we are able to say OK it needs, I don't know a certain amount to put it into green it it really depends on the building itself and how was it constructed and how old it is. Of

course you know if if you probably put the a brown building which was built in the in the I don't know in the 70s or 80s into green.

00:03:43.160 --> 00:03:47.350
Expert 3
Is probably, I don't know, less expensive than if you put the.

00:03:48.490 --> 00:03:56.960
Expert 3
Building into Green, which was built during, I don't know which is 100 years old, you know, and it probably also has a.

00:03:53.800 --> 00:03:54.460
Tomas HAVELKA
Of course not.

00:03:57.850 --> 00:03:58.610
Expert 3
Umm.

00:04:00.470 --> 00:04:07.600
Expert 3
How's it called in English? It's a, you know, is if if it's in the think my shots, you know. I'm sorry. I have to.

00:04:07.790 --> 00:04:12.720
Tomas HAVELKA
Like some some pub protection from the government. Mm-hmm. Yeah, yeah, got you.

00:04:10.080 --> 00:04:12.330
Expert 3
Yes, yes. You know. Yeah, yeah.

00:04:13.810 --> 00:04:44.580
Expert 3
So if you have something like this, it's it's. Yeah, some monument protection. Yeah. So if if if you have something like this, then it's probably even more expensive, you know, or it's it's very likely to be more expensive. So because everything is more expensive if if it comes to a yeah. If there is some monument protection on it. So it's it's really it's really hard to say. I can just tell you that we had a project recently. You know the probably the item project.

00:04:45.800 --> 00:05:03.800
Expert 3
And this was one of the very first buildings we are we are financing where the office does actually it's 4 project and the office part is is is done as a refurbishment. So they are doing.

00:05:05.390 --> 00:05:06.000
Expert 3
They are.

00:05:09.050 --> 00:05:11.510
Expert 3
Yeah, the the.

00:05:14.050 --> 00:05:43.890
Expert 3
The the call it, they call it like upcycling so so they use the old building and and do this upcycling process, refurbishing process and what they do actually is they leave the core structure of the of the building, so distributed town down to just to the core structure to just to the concrete and and when this is done they decide to refurbishing and.

00:05:23.400 --> 00:05:23.710
Tomas HAVELKA
Umm.

00:05:44.000 --> 00:05:53.650
Expert 3
And from that on they did the build the new office space into the building. So they save a lot of a lot of tons of concrete.

00:05:54.270 --> 00:06:02.860
Expert 3
Uh, and of on a lot of tons of CO2, they're saving there so.

00:06:04.700 --> 00:06:16.030
Expert 3
Yeah, but this is as as I mentioned before. So they do it like this. So. So the strip it down to the to the core structure, to the, to the concrete skeleton, but.

00:06:16.110 --> 00:06:20.870
Expert 3
The with other buildings, maybe it is, you can use the building.

00:06:22.570 --> 00:06:51.240
Expert 3
You can use you. You don't have to do this. It's maybe next enough if you if you just do a proper renovation or if you just, I don't know change the heating or the OR the cooling or something that this to to make it green and and again with with other buildings it's maybe even that is not enough because the the concrete is I don't know what there is something in it which need to be I don't know does not make it green and you have to to to break it down.

00:06:51.320 --> 00:06:53.670
Expert 3
Uh. Entirely so yeah.

00:06:53.860 --> 00:07:25.470
Tomas HAVELKA
Rich, rich. Because the I mean the problem here is that the company only publishes basic data on their portfolio of the buildings that they have in their portfolio. Therefore, it's really hard to see like what kind of ventilation system they have and so on and so forth. So I just used it really in an average. So like this would be coming from a sample of hundreds of different buildings and in average this would be the cost per square meter. And I I I totally understand that if you work on building by building basis is very different to do it in average.

00:07:01.030 --> 00:07:01.390
Expert 3
Yeah.

00:07:10.750 --> 00:07:11.020
Expert 3
Yeah.

00:07:25.770 --> 00:07:32.840
Tomas HAVELKA
I was just. I was just not really able to think of a better way than just to use these figures from this one paper.

00:07:31.800 --> 00:07:32.120
Expert 3
Well.

00:07:34.060 --> 00:07:43.320
Tomas HAVELKA
And I don't know. I was just. I was just thinking maybe actually I think I have also numbers per entire because this also seemed a little bit low to me, so for example.

00:07:44.190 --> 00:07:51.960
Tomas HAVELKA
To to renovate the entire portfolio, but they only have 13 or 12 buildings, so it's actually very small company.

00:07:53.650 --> 00:08:02.160
Tomas HAVELKA
What's 12 mid range office buildings they would actually would cost them like eight, €8 million?

00:08:03.090 --> 00:08:16.560
Tomas HAVELKA
Is this actually? Does this makes sense? Just maybe from the perspective of the clients you've worked and what board the cost with them when they were renovating, would this be? Would this make sense or would it be higher, probably higher than lower, right?

00:08:18.400 --> 00:08:23.310
Expert 3
Uh, so you're saying it? It took them 8 millions to to to make it greener or?

00:08:23.390 --> 00:08:24.130
Tomas HAVELKA
Yes, exactly.

00:08:24.850 --> 00:08:25.500
Tomas HAVELKA
12 buildings.

00:08:27.180 --> 00:08:35.550
Tomas HAVELKA
And I of course, if you had no idea, that's totally fine. Just maybe approximating from the the cost that your clients used to have.

00:08:33.870 --> 00:08:39.940
Expert 3
So the so 888 million pet per for for in total for 12 buildings, right?

00:08:42.510 --> 00:08:43.260
Expert 3
So.

00:08:46.160 --> 00:08:49.370
Tomas HAVELKA
And this is based on the €56 per square meter.

00:08:52.250 --> 00:08:58.900
Expert 3
So that 600,000, let's say €700,000 per building to make it green.

00:08:58.330 --> 00:08:58.600
Tomas HAVELKA
Umm.

00:09:00.700 --> 00:09:02.620
Expert 3
I mean this seems.

00:09:04.770 --> 00:09:07.570
Expert 3
Hmm. And and how much? How much?

00:09:09.730 --> 00:09:12.380
Expert 3
What? What's the area in in average?

00:09:13.290 --> 00:09:13.920
Expert 3
Per building.

00:09:15.780 --> 00:09:19.030
Tomas HAVELKA
In the 100 square meters, which would be?

00:09:20.030 --> 00:09:22.250
Expert 3
100,000 square meters square foot.

00:09:21.870 --> 00:09:23.540
Tomas HAVELKA
Sorry, sorry. Square foot, square foot.

00:09:24.630 --> 00:09:25.210
Tomas HAVELKA
Uh.

00:09:31.220 --> 00:09:33.310
Expert 3
So about 10,000, let's say.

00:09:33.730 --> 00:09:34.040
Tomas HAVELKA
Mm-hmm.

00:09:35.400 --> 00:09:37.450
Expert 3
So let's just let's.

00:09:41.770 --> 00:09:47.400
Expert 3
So that €70 as you OK, you said 56, yeah. OK.

00:09:47.140 --> 00:09:54.700
Tomas HAVELKA
Because uh, yes. Because for I think for the cause, I also included the cost of certification itself.

00:09:55.940 --> 00:09:56.610
Tomas HAVELKA
But that was.

00:09:57.480 --> 00:10:00.330
Tomas HAVELKA
I mean, not maybe 100,000 maximum.

00:10:02.780 --> 00:10:03.190
Expert 3
I mean.

00:10:04.400 --> 00:10:07.810
Expert 3
And what's what's the evaluation here you said so it's?

00:10:08.710 --> 00:10:13.500
Expert 3
500 What sorry country? That's 530 million.

00:10:14.770 --> 00:10:15.340
Tomas HAVELKA
Which which?

00:10:15.820 --> 00:10:18.540
Tomas HAVELKA
Ohh what? What do you mean now? Exactly which?

00:10:17.980 --> 00:10:21.250
Expert 3
The the the total value of the of the portfolio.

00:10:23.120 --> 00:10:24.710
Tomas HAVELKA
The total value in.

00:10:25.500 --> 00:10:26.510
Tomas HAVELKA
Monetary terms, you mean?

00:10:27.000 --> 00:10:27.480
Expert 3
Yeah.

00:10:28.600 --> 00:10:29.530
Tomas HAVELKA
Ohm.

00:10:31.860 --> 00:10:39.010
Expert 3
So I would, I would ask different differently. What's that? What's the total value per square meter for the total portfolio?

00:10:33.390 --> 00:10:34.060
Tomas HAVELKA
Yeah.

00:10:40.470 --> 00:10:41.740
Tomas HAVELKA
I know what you're asking actually.

00:10:40.700 --> 00:10:42.690
Expert 3
After after after after renovation.

00:10:43.570 --> 00:10:48.830
Expert 3
After I did, it was done to green enterprise value 670.

00:10:47.900 --> 00:10:49.270
Tomas HAVELKA
Umm I I was actually.

00:10:50.190 --> 00:10:50.680
Expert 3
2.

00:10:50.500 --> 00:10:55.940
Tomas HAVELKA
Yeah. Yeah. But that's, yeah, but this is valuation of the company. So it's not only the portfolio.

00:10:56.140 --> 00:10:56.720
Expert 3
OK.

00:10:57.090 --> 00:10:59.820
Tomas HAVELKA
So this is the value. This is enterprise value basically.

00:11:00.320 --> 00:11:00.830
Expert 3
OK.

00:11:01.330 --> 00:11:13.240
Tomas HAVELKA
And not a portfolio value. I actually was not like for this valuation. You didn't really need to calculate portfolio value. So I didn't do it, but I can do it and maybe would it what what would be our logic.

00:11:08.070 --> 00:11:08.380
Expert 3
Yeah.

00:11:11.550 --> 00:11:35.740
Expert 3
And the question would be in in my perspective you, you know said you you, you I think your average case is €56 per square meter. The question would be my perspective, what's the 56 in, in percentage out of the total value per square meter? I mean, I mean the total value per square meter must be something like, I don't know, 3004 thousand €5000 per square meter.

00:11:36.400 --> 00:11:36.720
Tomas HAVELKA
Umm.

00:11:36.780 --> 00:11:50.490
Expert 3
And and if you say So what we now calculated, so €70 or €56 out of this, I don't know, €4000 per square meter or I don't know, seems quite.

00:11:52.130 --> 00:12:03.300
Expert 3
Rather low in my in my opinion, I'm not not quite sure if if if if you say if you just need €70 per square meter to put to to to make it green.

00:11:55.430 --> 00:11:58.000
Tomas HAVELKA
I agree, I agree. I also would say it's long.

00:12:05.340 --> 00:12:07.980
Expert 3
And the question would also be what what?

00:12:08.060 --> 00:12:18.670
Expert 3
Umm, what was the value before per square meter? And then you add this 56 so let's say 70 to it per square meter. And what's the value afterwards?

00:12:19.120 --> 00:12:19.420
Tomas HAVELKA
Umm.

00:12:20.930 --> 00:12:21.720
Expert 3
So.

00:12:23.170 --> 00:12:29.080
Tomas HAVELKA
Which I think may I think when I was trying to do this, I don't think if it's if they have their.

00:12:30.040 --> 00:12:30.770
Tomas HAVELKA
Value.

00:12:31.400 --> 00:12:36.600
Tomas HAVELKA
Property value actually published or value per square meter. I think this was actually the problem.

00:12:33.280 --> 00:12:33.740
Expert 3
And Umm.

00:12:34.640 --> 00:12:34.900
Expert 3
No.

00:12:37.180 --> 00:12:37.520
Expert 3
Mm-hmm.

00:12:37.410 --> 00:12:40.510
Tomas HAVELKA
But I can recheck if this is the case.

00:12:42.900 --> 00:12:47.580
Expert 3
But you said at the beginning you did the valuation based on the on the.

00:12:47.660 --> 00:12:52.010
Expert 3
The on the vacancies and you increase the rents and something like this?

00:12:53.080 --> 00:12:59.580
Tomas HAVELKA
Yes, but you like. I have data on occupancy for example. As you can see here, but I didn't have.

00:12:56.930 --> 00:12:57.310
Expert 3
Yeah.

00:13:01.190 --> 00:13:03.790
Tomas HAVELKA
Data on the like the property value itself.

00:13:05.920 --> 00:13:09.640
Expert 3
But if you if you have, if you have your occupancies and if you have the.

00:13:11.020 --> 00:13:16.140
Expert 3
The occupancy and if you have the rent per square meter and and the area.

00:13:16.910 --> 00:13:20.220
Expert 3
Uh, you can calculate the the property values.

00:13:21.200 --> 00:13:26.330
Tomas HAVELKA
So you would take the entire rent divided by total square feet.

00:13:26.650 --> 00:13:28.500
Expert 3
The multiplied with the square feet.

00:13:27.980 --> 00:13:31.020
Tomas HAVELKA
Multiplied by the so this times this.

00:13:29.580 --> 00:13:30.010
Expert 3
From.

00:13:31.720 --> 00:13:36.130
Expert 3
This times this, yes. And then you you deducted the the the wait and see.

00:13:31.890 --> 00:13:32.400
Tomas HAVELKA
And then.

00:13:36.750 --> 00:13:37.120
Tomas HAVELKA
Yes.

00:13:37.610 --> 00:13:39.370
Expert 3
And then you detect some costs.

00:13:41.600 --> 00:13:42.930
Tomas HAVELKA
Like property expense costs.

00:13:41.890 --> 00:13:45.300
Expert 3
For, for, for yeah, OpEx and and and CapEx.

00:13:44.720 --> 00:13:45.180
Tomas HAVELKA
Hmm.

00:13:46.080 --> 00:13:47.140
Expert 3
And.

00:13:47.220 --> 00:13:47.490
Expert 3
This.

00:13:48.640 --> 00:13:52.880
Expert 3
Then you multiply it with a certain yield.

00:13:53.550 --> 00:13:59.450
Expert 3
Uh, which is? Yeah. In Germany. Depends also on the asset class.

00:14:00.170 --> 00:14:22.810
Expert 3
But uh, for office, I would say it's. I don't know if also depends on the this little of Munich, Stuttgart I was would say between yeah, 3 and 5% something something like there and and yeah and then you come to a value for for for the property. Yeah so that's that's how we do it on the on the radar.

00:14:04.030 --> 00:14:05.320
Tomas HAVELKA
Like 3-4 percent.

00:14:11.600 --> 00:14:11.790
Tomas HAVELKA
Yeah.

00:14:18.940 --> 00:14:19.640
Tomas HAVELKA
Umm OK.

00:14:20.540 --> 00:14:21.080
Tomas HAVELKA
Understand.

00:14:25.870 --> 00:14:26.460
Expert 3
Yeah.

00:14:26.540 --> 00:14:27.080
Expert 3
Uh.

00:14:28.580 --> 00:14:31.710
Expert 3
Let's say uh, it's it's it's it's um.

00:14:32.920 --> 00:15:01.910
Expert 3
It's a approach we follow. We follow here in the bank, so it's it's not a very complicated approach. I I don't know if you have also talks with our colleagues from CMCC who are doing the evaluations. I mean we we often prepare other valuations here in, in real estate and then send the our proposals to the colleagues of CMCC and they are finalizing the valuations.

00:15:02.890 --> 00:15:03.460
Expert 3
Umm.

00:15:03.050 --> 00:15:04.520
Tomas HAVELKA
Is it the risk risk guys?

00:15:05.150 --> 00:15:10.180
Expert 3
It's it's, it's not the risk guys, it's it's the department.

00:15:05.940 --> 00:15:06.580
Tomas HAVELKA
MC.

00:15:12.250 --> 00:15:16.270
Expert 3
I don't know if you had something to do, for example, with with Patrick will.

00:15:16.980 --> 00:15:23.870
Tomas HAVELKA
Oh, that's the collateral. Ohh yes. Yes. Actually, I got this contact with recommended to me as well for this thesis.

00:15:22.260 --> 00:15:22.560
Expert 3
Yeah.

00:15:23.540 --> 00:15:25.420
Expert 3
Yeah. Yeah, so.

00:15:24.710 --> 00:15:26.790
Tomas HAVELKA
But I never, never talk to him. But I already know his name.

00:15:27.170 --> 00:15:28.600
Expert 3
Yeah. So.

00:15:31.460 --> 00:15:38.870
Expert 3
He he's one of the of the colleagues there doing the doing, doing our internal evaluations, yeah.

00:15:39.430 --> 00:15:40.160
Tomas HAVELKA
Umm.

00:15:39.930 --> 00:15:44.490
Expert 3
So so probably you you can contact him and.

00:15:46.400 --> 00:15:49.820
Expert 3
If you have questions about the the evaluations.

00:15:50.770 --> 00:16:21.280
Tomas HAVELKA
No, but I I think actually this this helps a lot because I have from literature I have this cost premium value, this cost premium information that construction or also renovation cost of green building compared to brown building is I think in average 4 or 5% more. So if I would actually calculate the property value as as if if it is brown and then would would like this 5% ad at not add up and then actually this would be the CapEx.

00:16:18.830 --> 00:16:19.060
Expert 3
Well.

00:16:22.510 --> 00:16:26.480
Tomas HAVELKA
Do you know what I mean? So basically what you explained and then would I can also check.

00:16:22.580 --> 00:16:22.800
Expert 3
Yeah.

00:16:23.540 --> 00:16:23.680
Expert 3
Yeah.

00:16:27.290 --> 00:16:30.060
Tomas HAVELKA
The other WILLE church here and there. I have much more papers.

00:16:30.450 --> 00:16:44.160
Expert 3
No, I mean what we also have in in our project calculations we do is you know for we we also have some OpEx and CapEx there in our project calculations where we have a look how do the.

00:16:44.240 --> 00:17:13.270
Expert 3
And how do the the cash flows generated by the project? How does they or is it possible by the cash flows generated by the project to repay the loan within the 13 period of time? Yeah. So that's that's

the major, major topic we do in our project calculations and we of course have the also some OpEx and some CapEx and and these OpEx and CapEx are coming from.

00:16:57.540 --> 00:16:57.930
Tomas HAVELKA
Mm-hmm.

00:17:14.890 --> 00:17:20.390
Expert 3
Yeah. Either we have some some technical technical valuations.

00:17:21.630 --> 00:17:33.820
Expert 3
Where where the optics and CapEx are shown. So we take it from there or or if you don't have some technical valuation, some so some technical utility chance, sorry.

00:17:38.690 --> 00:17:54.500
Expert 3
We we we take some assumptions for for OpEx and CapEx and if it's newer buildings of course we assume that OpEx and CapEx are are much lower for at least the jpegs are much lower for newer buildings of course then for older buildings, yeah.

00:17:52.940 --> 00:17:53.270
Tomas HAVELKA
Mm-hmm.

00:17:54.690 --> 00:17:57.470
Tomas HAVELKA
But in this sense, CapEx will be just maintenance basically, right?

00:17:58.820 --> 00:18:15.690
Expert 3
Uh, no. Yes, probably, yeah. In in the in the first years probably, yeah. It's it's. Yeah. But if if of course, if the building gets older and older the the the costs increases normally.

00:18:06.100 --> 00:18:07.220
Tomas HAVELKA
Yeah, yeah, yeah. OK.

00:18:08.160 --> 00:18:08.550
Tomas HAVELKA
Click me.

00:18:15.790 --> 00:18:16.340
Expert 3
Uh.

00:18:16.150 --> 00:18:16.650
Tomas HAVELKA
Of course.

00:18:16.560 --> 00:18:31.790
Expert 3

And as you have to keep, keep them in, in, in shape. Yeah. And. And we assume that for for newer buildings the CapEx are in the first five years zero and then the increase to 2.5%.

00:18:34.150 --> 00:18:35.310
Expert 3
From the from the.

00:18:35.390 --> 00:18:36.520
Expert 3
The.

00:18:38.910 --> 00:18:48.520
Expert 3
From the cash flow from, from the from the net rental income and then it increases further to 5%. So that's our assumption what we do.

00:18:45.270 --> 00:18:45.640
Tomas HAVELKA
Umm.

00:18:50.480 --> 00:19:01.870
Expert 3
In our project calculation to say OK, it needs in the long run 5% out of the net rental income to to keep the building in shape, yeah.

00:19:02.110 --> 00:19:02.820
Tomas HAVELKA
Mm-hmm.

00:19:02.930 --> 00:19:07.320
Expert 3
So this is maybe matches the 5% you mentioned before.

00:19:07.830 --> 00:19:11.590
Expert 3
Ohh yeah.

00:19:11.850 --> 00:19:12.840
Tomas HAVELKA
Because premium now.

00:19:13.150 --> 00:19:13.390
Expert 3
Yeah.

00:19:14.300 --> 00:19:14.750
Expert 3
So.

00:19:14.410 --> 00:19:14.750
Tomas HAVELKA
Mm-hmm.

00:19:15.700 --> 00:19:32.700
Tomas HAVELKA
Would it be actually maybe possible if if if there is no problem like for example a finished project that that you would just that you can send me the calculation just so I can see how you calculated like I would never. I would not use it anywhere. It would be just to see the calculation. Is this OK or or.

00:19:33.550 --> 00:19:34.580
Expert 3
I mean I can.

00:19:35.680 --> 00:19:41.510
Expert 3
I can send you a for example, a project calculation of.

00:19:42.580 --> 00:19:45.670
Expert 3
The project I mentioned before, it's called Art Trunk with tea.

00:19:49.210 --> 00:19:51.280
Expert 3
It can quickly also show you.

00:19:54.070 --> 00:19:55.070
Tomas HAVELKA
There would be. There would be amazed.

00:20:02.420 --> 00:20:04.420
Expert 3
Just take over the screen for a minute.

00:20:04.610 --> 00:20:05.420
Tomas HAVELKA
Sure, go for it.

00:20:16.260 --> 00:20:20.510
Expert 3
So. So that's for example, one of the of the projects are.

00:20:20.960 --> 00:20:21.450
Expert 3
Yeah.

00:20:24.170 --> 00:20:52.240
Expert 3
So this is actually this this project I mentioned also before this is this this office building it's called Francis. So we the project calculations are always structured the same. We have the costs, the total investment costs here which are necessary to to, to, yeah, to erect the building or to buy the building in this in this case it's it's construction project. So that we have we have construction costs here and.

00:20:52.440 --> 00:20:57.030
Expert 3
They are all the other costs and then we have the loan here and here is.

00:20:57.160 --> 00:21:28.250
Expert 3
Um is the income side. So what's are the the net rental income which is generated on the on the yearly basis and then we go down here and then we simulate what's what are the different approaches for what, what are the the weaknesses or the occupancies so to say whether the occupancies over the years or in the long run we we go for 94% occupancy rates. So we say OK for office in the long run.

00:21:28.330 --> 00:21:48.080
Expert 3
There's always 6% we can see and in the beginning of the years, OK, it's it will not be will not be full. So it takes roughly one year to to to reach the 94%. So that's what we are simulating here and and that's where the and then we have the net rental income.

00:21:48.980 --> 00:21:58.140
Expert 3
Natalie rental income, already considering the weaknesses, and that's what I also said before. Then we have topics and OpEx.

00:21:50.890 --> 00:21:51.120
Tomas HAVELKA
Umm.

00:21:59.280 --> 00:22:10.030
Expert 3
Which is not totally correct, but because normally you say topics come out of the free cash flow, so if you if it if we.

00:22:10.110 --> 00:22:10.700
Expert 3
Umm.

00:22:14.180 --> 00:22:34.090
Expert 3
Yeah. Normally we, we we should show the the the the CapEx here. So after the free cash flow, but we have we are saying OK this is a more conservative approach. So we already want it up here and say OK it must be possible that the CapEx must also be be be paid already.

00:22:35.770 --> 00:22:56.480
Expert 3
Up here. So yeah, it's it's just a more conservative approach, but if you would do it or maybe if you find it in, in some little literature or some somewhere, normally the the, the, the CapEx are needs to be paid from the free cash flow. So which would be done down here somewhere, yeah. So just to yeah, but nevertheless.

00:23:00.040 --> 00:23:26.560
Expert 3
As I said before, OK, look, we say this is for example and you building. So that's why we said in the

first five years there is no CapEx necessary because we say it's a new building. There's no real costs which are necessary to keep the building in shape. Then we have 2.5% for the for the next five years and in the long run we have five years, sorry, 5% for all the yeah.

00:23:26.650 --> 00:23:32.750
Expert 3
In, in the long run and the same with OpEx in the OpEx, OK, we start with 5% from the from the?

00:23:27.880 --> 00:23:28.250
Tomas HAVELKA
Mm-hmm.

00:23:33.570 --> 00:23:45.290
Expert 3
From the start and then we have 5% for OpEx costs in the long run, yeah. And then we have some uh depreciation and then we have the interest and so forth and and yeah and that's the.

00:23:46.720 --> 00:23:52.710
Expert 3
If you deduct this all this will be the cash flow which which will which we can use for.

00:23:54.500 --> 00:24:24.660
Expert 3
Or repayment debt repayment. Yeah. So yeah. So yeah, this we considering here or. Yeah. And and after some periods of time in this case it takes 32 years to repay the total loan and that's what we are simulating here. So we are looking at how much does it take to repay the loan within a certain period of time because you know in our credit policy or in directives we have some per set.

00:23:54.960 --> 00:23:56.310
Tomas HAVELKA
That the repayment.

00:24:24.730 --> 00:24:25.260
Expert 3
Because.

00:24:25.350 --> 00:24:26.550
Expert 3
A.

00:24:28.130 --> 00:24:41.340
Expert 3
It's it's the the that we have the so called targeted full payout and it differs between the asset classes for office it's 30 years you can also.

00:24:42.030 --> 00:25:04.400
Expert 3
See it here credit policy data for example for office. As I said, it's 30 years for shopping centers is 28 for residential, for lease it 35 years. So within this time the project should be repayable. So that's what we are. That's what we are simulating here. Yeah.

00:24:54.880 --> 00:24:55.180
Tomas HAVELKA
Umm.

00:25:00.200 --> 00:25:00.550
Tomas HAVELKA
Umm.

00:25:04.770 --> 00:25:08.140
Tomas HAVELKA
Gotcha. And we also have the calculations for the value of the building.

00:25:09.130 --> 00:25:12.200
Tomas HAVELKA
Or would it be just the simple the rent divided by yield?

00:25:09.380 --> 00:25:10.630
Expert 3
Yes, but it's it's.

00:25:12.660 --> 00:25:16.550
Expert 3
Yeah, if if it would simply, yes. So that's what we do here.

00:25:14.440 --> 00:25:14.790
Tomas HAVELKA
So.

00:25:18.340 --> 00:25:19.630
Expert 3
So we take the.

00:25:20.480 --> 00:25:32.370
Expert 3
It's it's not just the rent, it's just it's as I said before, I have you deduct the costs so it's the EBITDA divided by the yield. Yeah. So that's very roughly the, the the value we do it.

00:25:23.300 --> 00:25:24.140
Tomas HAVELKA
Every time.

00:25:26.170 --> 00:25:27.300
Tomas HAVELKA
Yeah. Yes.

00:25:28.590 --> 00:25:28.790
Tomas HAVELKA
Umm.

00:25:33.070 --> 00:25:39.420
Expert 3
A bit more properly in the in the real evaluations, but at the end it's it's.

00:25:39.270 --> 00:25:40.700
Tomas HAVELKA
The difference is super small red.

00:25:40.670 --> 00:26:00.620
Expert 3
The difference is not not very big. Yeah, so. But but we do it in the we do in the in the in the real evaluation we do it more on that a long long run perspective. So so we do not take like every year. So we do it here. So we just take one simulation one calculation.

00:25:43.160 --> 00:25:43.600
Tomas HAVELKA
Hmm.

00:26:02.740 --> 00:26:05.730
Expert 3
So I think.

00:26:06.640 --> 00:26:23.020
Expert 3
I'm I'm not quite sure, but I'm somewhere above 300,000,000 so this is you know, as you see quite low, but we also have some higher Wences here which make the the net rental income in the first year quite small as you see here. But.

00:26:21.990 --> 00:26:22.740
Tomas HAVELKA
Umm.

00:26:24.080 --> 00:26:24.810
Tomas HAVELKA
Of course, yeah.

00:26:24.440 --> 00:26:37.050
Expert 3
Yeah. Yeah, so so we, we we we simulate in the in the relation like a a standard year like a A yeah and normally not the not the starting year yeah.

00:26:25.540 --> 00:26:25.930
Tomas HAVELKA
See.

00:26:37.410 --> 00:26:37.710
Tomas HAVELKA
Umm.

00:26:39.250 --> 00:26:52.980
Tomas HAVELKA
Understood you. Yeah. OK, perfect. That's that's this is this is definitely helpful. And yeah, I'll try to value the properties and then add this five maybe 10% to it and then calculate CapEx from that. I think that makes a lot of sense.

00:26:52.500 --> 00:26:53.580
Expert 3
Yeah, yeah.

00:26:53.940 --> 00:27:02.790
Tomas HAVELKA
Umm, maybe we still have some time. I would actually also like to ask you about the process. So as we were, you were saying you have this comment when I was explaining you the valuation.

00:27:03.210 --> 00:27:15.620
Tomas HAVELKA
Umm. So if the company actually tries to renovate, will it? So first they have some tenant agreements, right? And would it be for example possible for them if they have let's say?

00:27:16.800 --> 00:27:46.390
Tomas HAVELKA
70% occupancy in one building and then they would be renovating this 30% that is not occupied and then they would, I don't know switch to like switch the tenants to the already renovated part and then renovated the part when the tenants were before and like sort of switched tenants around the building. So they can renovate. So sort of part by part would this be something possible or would it be more like that would just wait until the tenants leases are are are expired and then just renovate the entire building.

00:27:37.230 --> 00:27:37.450
Expert 3
Yeah.

00:27:47.010 --> 00:28:03.020
Expert 3
It's again depending on the building itself. You know I I think both is possible and both we have seen as as I've seen said before, coming back to this example here in of this Altan, you know there they moved all the the tenants out.

00:27:54.080 --> 00:27:54.370
Tomas HAVELKA
OK.

00:28:03.600 --> 00:28:04.800
Tomas HAVELKA
Yeah, exactly this.

00:28:04.110 --> 00:28:33.990
Expert 3
Because because because it was necessary to to, to strip the whole building just to its (E. And then so you you can't work there, you know, because everything is open. There is just a concrete left and you can't work there. But if it's if it's possible to make some minor renovations, for example, I don't know. Just as also said before, maybe just, I don't know, the heating or the cooling or maybe you, you just have to, I don't know.

00:28:10.540 --> 00:28:10.870
Tomas HAVELKA
Umm.).

00:28:16.530 --> 00:28:17.500
Tomas HAVELKA
Yeah, of course.

00:28:34.080 --> 00:28:42.210
Expert 3
I yeah, shift something, then it's of course possible to do it floor by floor. We also have seen this. This is also possible.

00:28:44.310 --> 00:28:49.100
Expert 3
But again, it depends on how much is necessary to make it really green.

00:28:49.620 --> 00:28:53.090
Tomas HAVELKA
Umm. Understood. Understood. And.

00:28:50.820 --> 00:28:51.090
Expert 3
No.

00:28:53.380 --> 00:28:58.010
Expert 3
And but but this was also mentioned if you do this. If you do it floor by floor.

00:28:59.380 --> 00:28:59.920
Expert 3
And.

00:29:00.960 --> 00:29:04.150
Expert 3
You probably, I mean, I mean.

00:29:04.520 --> 00:29:15.020
Expert 3
Yeah, it it. It also depends on the on the tenants. If it's only 7070% occupied then it's it's.

00:29:17.150 --> 00:29:42.610
Expert 3
It's it's easier to do that because you don't have some of the tenants out. You know if it's it's for example 100% occupied, you have to provide some other areas to or some other containers or something like this where where the tenants can go for the for the renovation time. So this would be of course more more difficult and and of course it takes also more time you know.

00:29:43.440 --> 00:29:51.120
Expert 3
And you also have to consider this if you if you do it floor by floor, the whole run in the ration maybe takes, I don't know.

00:29:52.230 --> 00:29:55.990
Expert 3
I don't first thing any number. Two years. Yeah, but if you do it.

00:29:55.290 --> 00:29:55.570
Tomas HAVELKA
Umm.

00:29:56.070 --> 00:29:56.640
Expert 3
Yeah.

00:29:58.910 --> 00:30:01.400
Expert 3
If you move all the tenants out and do it, do it.

00:30:09.910 --> 00:30:10.870
Tomas HAVELKA
Umm, of course.

00:30:10.980 --> 00:30:11.830
Expert 3
Umm.

00:30:12.690 --> 00:30:14.260
Expert 3
Doing that you also have to consider.

00:30:16.540 --> 00:30:37.930
Expert 3
It takes more time and probably if you if you do it floor by floor, you also have to provide to the tenant some some lease deductions, yeah, because they probably have some some noises from the construction or something like this and and yeah, so.

00:30:38.790 --> 00:30:41.540
Expert 3
You also have to consider something like this to to.

00:30:43.070 --> 00:30:47.500
Expert 3
Yeah. To provide provide them. Yeah, some some deductions on the lesion.

00:30:48.340 --> 00:31:00.380
Tomas HAVELKA
Is this something that is written in the lease contract that if there would be possible renovation, either you we will move but then we will, I don't know, cut off your your lease or something like this?

00:30:59.320 --> 00:31:06.900
Expert 3
I think this is normally not in a in a. In a normal lease agreement, so maybe maybe if you.

00:31:07.580 --> 00:31:32.250
Expert 3
Maybe you put it in there. If I don't know. For example you you plan to do a renovation within the next two years and you already know this, and you're telling the customer. Look, if you you're

coming now, but we are planning to do this in two years. You may be already do this. Put this into into the lease agreement, but if you don't know it.

00:31:14.990 --> 00:31:15.370
Tomas HAVELKA
Umm.

00:31:32.950 --> 00:31:44.360
Expert 3
Right now where you don't plan it to do it within the next years, I I don't think that there as a I I've actually never seen that this that that you put some something like this into a lease agreement. Just just to have it there. Whenever there would be the possibility. I mean, if it comes you always can can of course talk you to your tenants and then you just talk to them and say look we are planning to do this. We have to find a solution. How could this solution work for you? We have thought about doing this and that. And how does this work for you? So you always talk to your to your tenants.

00:32:12.630 --> 00:32:13.520
Tomas HAVELKA
And Umm.

00:32:15.450 --> 00:32:16.470
Tomas HAVELKA
Of course, of course.

00:32:16.320 --> 00:32:24.000
Expert 3
Yeah. And then you and then you probably make an extra agreement or a an an amendment to the to the.

00:32:24.070 --> 00:32:26.450
Expert 3
The lease agreement, yeah.

00:32:26.790 --> 00:32:29.900
Tomas HAVELKA
Umm. Understood. OK. OK. Makes sense. Yeah.

00:32:28.770 --> 00:32:29.060
Expert 3
So.

00:32:31.230 --> 00:32:31.810
Tomas HAVELKA
Umm.

00:32:32.910 --> 00:32:34.620
Tomas HAVELKA
OK and.

00:32:35.550 --> 00:32:35.890
Tomas HAVELKA
Umm.

00:32:37.090 --> 00:32:48.220
Tomas HAVELKA
Is this actually something that you see when you work on the projects with the with your customers that they actually are renovating their buildings just so they would be green, so they could be certified?

00:32:49.870 --> 00:32:51.380
Tomas HAVELKA
Because it's the common practice.

00:32:51.860 --> 00:32:52.490
Expert 3
I mean.

00:32:53.480 --> 00:32:56.550
Expert 3
Yes and no. Yeah, again, it's.

00:32:59.310 --> 00:33:10.000
Expert 3
That the whole, the whole green topic is is is something and I think this is also important to mention that why are developers doing that?

00:33:10.650 --> 00:33:11.040
Tomas HAVELKA
Mm-hmm.

00:33:10.660 --> 00:33:17.170
Expert 3
Because it's, uh, it's mostly driven because it's a, it's a marketing topic.

00:33:17.790 --> 00:33:19.030
Tomas HAVELKA
Yeah, for sure.

00:33:18.430 --> 00:33:28.180
Expert 3
Because you know if if you if you if you sell a brown building in these days, it's probably much more difficult to do this than to grant us than to than to select green building.

00:33:36.220 --> 00:33:36.610
Tomas HAVELKA
Mm-hmm.

00:33:36.540 --> 00:34:06.230
Expert 3
So we talked to developers already and also asked similar questions to them and they told us, you know, if if if the investors would not ask for a certification, we would not do it. So it's it's a it's agree or it's a as I said the marketing tool developers using to say OK look developers, I have a green building here and the investors.

00:33:53.570 --> 00:33:53.910
Tomas HAVELKA
Umm.

00:34:07.390 --> 00:34:19.150
Expert 3
Yeah. Then, then then, then buy it. So yeah, so the the developers invest. I don't know what, what the certificate cost, I don't know, ten €15,000. So they invested.

00:34:10.290 --> 00:34:10.680
Tomas HAVELKA
Mm-hmm.

00:34:18.810 --> 00:34:20.730
Tomas HAVELKA
Yeah, he's actually a few few thousands.

00:34:21.040 --> 00:34:22.550
Expert 3
Yeah. So.

00:34:23.330 --> 00:34:29.100
Expert 3
So the investors this money and say OK, it's it's it's marketing and then it's easier to sell.

00:34:28.020 --> 00:34:28.310
Tomas HAVELKA
Umm.

00:34:30.000 --> 00:34:30.720
Expert 3
So.

00:34:30.300 --> 00:34:34.670
Tomas HAVELKA
But many times they also have to renovate the building so they would actually get the green certificate right.

00:34:35.090 --> 00:34:48.160
Expert 3
Yes, yes. So, so we we are seeing both. Yeah, it it's it and it's again it depends what the what the the owner of the building plans.

00:34:36.290 --> 00:34:37.050
Tomas HAVELKA
Or Umm.

00:34:48.830 --> 00:34:55.620
Expert 3
To do with the building after the renovation, if he if he wants to keep it in his own portfolio.

00:34:57.220 --> 00:34:59.450
Expert 3
And does not plan to sell it.

00:35:01.090 --> 00:35:02.800
Expert 3
That the owner might be also.

00:35:04.480 --> 00:35:21.420
Expert 3
Satisfied to have a brown building in this portfolio because she says, OK, this is my building. I don't care if it's green or brown. Yeah, but if you plans to sell, if it's if it plans to sell it, then it probably says, OK, it's it's invest is I don't know, ten €15,000 and and have the certification for it, and then it's then it's written on paper that it's green. Yeah, but yeah, so.

00:35:29.280 --> 00:35:29.690
Tomas HAVELKA
Mm-hmm.

00:35:32.120 --> 00:35:33.940
Expert 3
Again, yeah.

00:35:34.620 --> 00:35:35.230
Expert 3
Yeah.

00:35:37.090 --> 00:35:37.990
Tomas HAVELKA
Understood. Understood.

00:35:37.790 --> 00:35:38.020
Expert 3
Yeah.

00:35:40.490 --> 00:36:07.740
Tomas HAVELKA
And another question would be actually concerning leases. So there is this, I think there that you can categorize leases into two groups in very generally it would be the grossly's and and net leases at least that's what I what I was reading about. And then the idea was that gross lease is where the the landlord. So for example in my case the innovalis read. So this this company and valuing would actually pay its own utilities.

00:36:08.300 --> 00:36:12.660
Tomas HAVELKA
And I think Natalie would be then where in the tenant actually pays the utilities?

00:36:14.420 --> 00:36:29.910
Tomas HAVELKA
Do you like what is the proportion of of of these leases? Do you know like when you work with your clients, is it mostly that the tenants are paying the utilities for themselves or is it actually the landlord who pays duties for the tenants?

00:36:32.370 --> 00:36:36.710
Tomas HAVELKA
So you know how the lease contracts are structured in most of the cases?

00:36:37.590 --> 00:36:38.340
Expert 3
I I mean.

00:36:40.110 --> 00:36:42.530
Expert 3
That the the two the two.

00:36:42.600 --> 00:36:49.950
Expert 3
Is 2 things. First of all, there is what? What we. So what we are doing is.

00:36:50.020 --> 00:36:50.380
Expert 3
It's.

00:36:52.870 --> 00:37:15.790
Expert 3
Umm well, let's say it say differently. So if you calculate the lease you have, you have the net lease of course. So the net lease is is is that amount which which stays with the with the landlord, yeah. So and then you have the then you have the way T.

00:37:00.620 --> 00:37:00.980
Tomas HAVELKA
Umm.

00:37:16.550 --> 00:37:47.590
Expert 3
So the text on the leads which which the landlord has to deliver to to the tax authorities, and then you have the, then you have the utilities and the utilities are normally those costs which which the landlord uses also to to to pay. Again, I don't know the fixed costs or that the the whatever is necessary to, for, for, for the building so and and normally.

00:37:16.950 --> 00:37:17.290
Tomas HAVELKA
Umm.

00:37:18.400 --> 00:37:18.730
Tomas HAVELKA
Yes.

00:37:47.720 --> 00:38:09.490
Expert 3
In the in the lease agreement you have, you have this three categories. Let's say you have the the net renting come you have the the utilities you have to pay T and all those summed up are the the is is the gross list yeah so so the gross leases is is paid of course by the tenant and.

00:38:10.550 --> 00:38:14.440
Expert 3
And the the way T and the utilities are.

00:38:15.180 --> 00:38:17.850
Expert 3
Are for for the landlord or trust?

00:38:19.300 --> 00:38:24.090
Expert 3
Going through, you know, going through it it it gets it from the.

00:38:25.140 --> 00:38:31.910
Expert 3
From the tenants but puts but has to pay costs. On the other hand, so this is just a a.

00:38:33.570 --> 00:38:34.810
Expert 3
In trauma visit 2:00, o'clock.

00:38:35.990 --> 00:38:37.590
Expert 3
I don't know.

00:38:37.230 --> 00:38:38.110
Tomas HAVELKA
Like the middleware.

00:38:38.970 --> 00:38:39.710
Expert 3
No.

00:38:40.790 --> 00:38:52.210
Expert 3
Yeah, you, you know, you. You get it from the one hand and then you you the discourse don't stay with the with the landlord. They are just flowing through the project, but they're not.

00:38:53.770 --> 00:38:56.630
Expert 3
Remaining in the project. So they're just, yeah.

00:38:57.320 --> 00:39:00.100
Expert 3
A floating through, so to say. You know what I mean.

00:39:01.170 --> 00:39:11.610
Tomas HAVELKA
Actually, I'm not exactly sure because so is this. Do you mean like the utilities? If landlord pays to utilities, therefore he would actually charge higher rent.

00:39:12.100 --> 00:39:12.560
Expert 3
Yes.

00:39:13.330 --> 00:39:17.660
Tomas HAVELKA
OK. And then if he doesn't, then he will actually charge lower rent?

00:39:18.910 --> 00:39:22.140
Tomas HAVELKA
But then the then it basically utilities for himself.

00:39:23.100 --> 00:39:26.250
Tomas HAVELKA
Like for example, most of the people who live in residential.

00:39:27.120 --> 00:39:27.930
Tomas HAVELKA
Properties do.

00:39:28.960 --> 00:39:35.760
Tomas HAVELKA
Like you have a landlord where you pay the rent, but then you also have the utility company where you pay for your gas consumption, for example.

00:39:36.580 --> 00:39:41.130
Expert 3
I mean, this is in residential, it's it's, it's maybe a bit a little bit different differently.

00:39:41.210 --> 00:39:41.520
Expert 3
Well.

00:39:44.770 --> 00:39:46.580
Expert 3
If yes.

00:39:46.000 --> 00:39:48.030
Tomas HAVELKA
But how is it in the Office office then?

00:39:48.100 --> 00:40:05.800
Expert 3
If, if if it's. If you rent a, if you rent a flat, you you have to pay the rent and you have to pay for your own heating for your own electricity, for your own. I don't know what water and so on. So this is what you have to pay.

00:39:58.530 --> 00:39:59.300
Tomas HAVELKA
Exactly this.

00:40:02.600 --> 00:40:03.050
Tomas HAVELKA
Water.

00:40:06.420 --> 00:40:06.730
Tomas HAVELKA
Mm-hmm.

00:40:07.140 --> 00:40:30.080
Expert 3
And this of course also in if it if it comes to office building this, you know, electricity, this also water and so on this also must be paid by someone. And normally this this costs are transferred to the tenant. So that's what I meant to the to the with the utilities But it's not charged by the by the by the company. So the electricity company or the the what? The supply company, but it's charged by the landlord because the landlord pay pay, the landlord pays it in the whole amount because the landlord gets all the electricity.

00:40:42.800 --> 00:40:43.870
Tomas HAVELKA
I see. I see.

00:40:52.190 --> 00:41:21.840
Expert 3
I don't know from 1 from 1 supplier and then he he charges in in it through to the to the to the tenant and that's what I meant before it it's it's floating through or it's passing through. Maybe it's a better, better work? It's passing through the because he doesn't keep this. This costs you know he he he charges the costs to the tenant the tenant pays the water supply the electricity but the the landlord again pays those costs directly to the companies.

00:41:05.190 --> 00:41:05.650
Tomas HAVELKA
Umm.

00:41:22.040 --> 00:41:22.960
Expert 3
Where he gets the.

00:41:23.790 --> 00:41:24.820
Tomas HAVELKA
I see. I see.

00:41:23.820 --> 00:41:27.060
Expert 3
Uh, so electricity company and so on. So.

00:41:26.650 --> 00:41:27.030
Tomas HAVELKA
I see.

00:41:28.040 --> 00:41:28.690
Expert 3
Umm.

00:41:29.690 --> 00:41:35.840
Tomas HAVELKA

But then therefore it then he would be actually increasing and decreasing rent based on the tenants consumption of utilities, right?

00:41:36.300 --> 00:41:38.690
Expert 3
Uh, he would do this like once in a year.

00:41:40.040 --> 00:41:54.570
Expert 3
Uh, once in the year it it, it doesn't do that on the on the monthly basis, he does that like once in a year like you also you also get your your months or your your NFL electricity.

00:41:55.570 --> 00:42:02.140
Expert 3
It calculation from from your supplier once a year and it depends on how much you you.

00:41:58.430 --> 00:41:59.150
Tomas HAVELKA
Exactly, yeah.

00:42:03.220 --> 00:42:03.540
Expert 3
I'm.

00:42:05.680 --> 00:42:22.810
Expert 3
How much you have used then it maybe increases or decreases and it works similar with with with uh in our office, but sometimes it's often also connected to the to the, to the index. You know it's indexed and the costs steadily increases.

00:42:20.740 --> 00:42:20.970
Tomas HAVELKA
Umm.

00:42:22.890 --> 00:42:33.810
Expert 3
The suddenly increases with the with the index. Yeah, that's also we have in in our project calculation. I've shown you before. We have also some some index in the.

00:42:27.010 --> 00:42:27.300
Tomas HAVELKA
Umm.

00:42:34.490 --> 00:42:35.620
Expert 3
In the.

00:42:36.990 --> 00:42:50.650
Expert 3
The calculation, meaning that the the costs of the lease increases over the years at the certain percentage. So every year the the tenant has to pay a certain higher amount for for the for the lease, yeah.

00:42:51.440 --> 00:42:51.750
Tomas HAVELKA
Umm.

00:42:51.610 --> 00:43:02.980
Expert 3
So and again, as I said before, you have you have the net lease, you have the utilities, you have the BREIT, so the text and this all these three sums up to the.

00:43:04.010 --> 00:43:05.360
Expert 3
To the.

00:43:05.350 --> 00:43:06.090
Tomas HAVELKA
Crossleys.

00:43:06.270 --> 00:43:14.600
Expert 3
With the gross leases, yeah. And we actually in the bank, we only calculate on the net lease. So the gross lease is not interesting for us.

00:43:07.680 --> 00:43:08.390
Tomas HAVELKA
Understood. Yeah.

00:43:15.460 --> 00:43:15.840
Tomas HAVELKA
Mm-hmm.

00:43:15.970 --> 00:43:37.120
Expert 3
Because the VAT and the utilities as mentioned before, they're just going through, they are not, they're not sticking with the with the landlord because he also has to pay his his cost from, from, from from that. But the the costs which which the landlord can keep or yeah I are the the is the nettles.

00:43:24.700 --> 00:43:25.500
Tomas HAVELKA
Umm.

00:43:37.850 --> 00:43:45.320
Expert 3
So for us as a bank, only the net lease is interesting. All the other costs are not interesting for us because they're just going through, yeah.

00:43:37.930 --> 00:43:38.690
Tomas HAVELKA
Understood. Mm-hmm.

00:43:41.460 --> 00:43:41.990
Tomas HAVELKA
Of course.

00:43:45.450 --> 00:43:46.130
Tomas HAVELKA
Mm-hmm.

00:43:47.420 --> 00:43:48.330
Tomas HAVELKA
Which which you.

00:43:52.280 --> 00:43:58.570
Tomas HAVELKA
Do you still have a few minutes or is it are you? Are you OK? Perfect. Because I'm just going through the questions and I there are still a few.

00:43:54.290 --> 00:43:55.140
Expert 3
Yep, Yep.

00:43:59.380 --> 00:44:00.350
Tomas HAVELKA
They have um.

00:44:04.910 --> 00:44:06.060
Tomas HAVELKA
Just one second.

00:44:09.150 --> 00:44:12.600
Expert 3
And normally, maybe just to to sum up this topic with the.

00:44:14.060 --> 00:44:35.250
Expert 3
We still leases we as a bank normally asked the customer to provide us with the so so called tenancy list, which is where we can see all the tenants within the building and see how much is the the net lease, how much is the the area they have rented, how much is the are, yeah, the other costs.

00:44:23.130 --> 00:44:23.450
Tomas HAVELKA
Umm.

00:44:36.430 --> 00:44:54.700
Expert 3
But this is it before for us. What? What we keep in our project calculation and I've shown you before there were where I said here we have the net the the shown the net the the so the net leasable income. So then what what's the amount?

00:44:56.290 --> 00:45:09.680
Expert 3
The project generates so the cash flow which is generated and this is just based on the on the net lease, yeah, it's there is no the not other costs in it and and the the OpEx which which.

00:45:11.210 --> 00:45:26.940
Expert 3

Which are shown in the project calculation are actually those costs which which the customer has to which are not. These are costs which are not transferable to the to the tenants.

00:45:27.710 --> 00:45:28.140
Tomas HAVELKA
Mm-hmm.

00:45:28.410 --> 00:45:40.810
Expert 3
So these are costs which which arise within the within the sphere of the of the landlords of the, of the of the Bora, for example.

00:45:40.310 --> 00:45:42.270
Tomas HAVELKA
So like SGNA for example.

00:45:43.300 --> 00:45:44.880
Expert 3
SGNA.

00:45:44.480 --> 00:45:47.270
Tomas HAVELKA
Like a the the administrative costs.

00:45:48.420 --> 00:45:49.090
Expert 3
So is it again?

00:45:49.530 --> 00:45:53.110
Tomas HAVELKA
Like the administrative cost, for example, or paying the employees and.

00:45:50.860 --> 00:46:06.470
Expert 3
Yes, yes, yes, yes, yes, yes, exactly, yes. So some administrative, yes, as you said, yeah, exactly. So these are the, the, the, the costs which are, yeah, stuck with the the landlord. So this costs.

00:45:55.290 --> 00:45:55.570
Tomas HAVELKA
Umm.

00:45:59.160 --> 00:46:00.330
Tomas HAVELKA
Of course, makes sense.

00:46:08.430 --> 00:46:12.230
Expert 3
As shown in our project calculation and yeah.

00:46:13.440 --> 00:46:13.710
Tomas HAVELKA
Umm.

00:46:16.740 --> 00:46:36.160
Tomas HAVELKA
OK. Um, maybe one question would be regarding the. So the process you remember the two scenarios I showed you like either they would transfer everything, they would go part by part would, I don't know, would there be any other scenario you can think of how to maybe do it that would be more realistic even more than the 1/4 of the portfolio?

00:46:25.110 --> 00:46:25.450
Expert 3
Umm.

00:46:38.460 --> 00:46:38.970
Expert 3
I mean.

00:46:40.930 --> 00:46:58.220
Expert 3
It's it's. Is it before. I think the it's it's more realistic to have the part which which transfers the the portfolio over time into a green portfolio. I think it's not realistic to do it within one year and.

00:46:54.240 --> 00:46:54.480
Tomas HAVELKA
Umm.

00:47:02.040 --> 00:47:11.540
Expert 3
I mean and and you also have to consider. I don't know if you if you have done that. And as I said before, you also have to consider when you do this over time.

00:47:12.840 --> 00:47:19.880
Expert 3
And that's why I also ask about the the occupancies during the time you you might have to to consider.

00:47:20.920 --> 00:47:32.950
Expert 3
Loan maybe lower occupants is because maybe some tenants say, OK, they they don't want to do this, so they maybe move out because of the of the renovation or.

00:47:35.090 --> 00:47:42.760
Expert 3
You have to reduce the you have to reduce the the yeah the least so so the the tenants are paying.

00:47:43.260 --> 00:47:43.610
Tomas HAVELKA
Umm.

00:47:43.510 --> 00:47:47.420
Expert 3
So because you have to, you know, this is have before.

00:47:48.920 --> 00:47:53.890
Expert 3

It's, there are some noises from the construction or something like this, the tenants  maybe cannot work in a normal environment so so you in order to not lose them you probably have to lower their their leases. Yeah. So during the during the construction period or the renovation period.

00:48:06.840 --> 00:48:08.440
Tomas HAVELKA
Umm, they're the rent.

00:48:14.000 --> 00:48:20.100
Expert 3
There might be and that's what you have to consider a lower income than than afterwards, yeah.

00:48:21.250 --> 00:48:22.080
Tomas HAVELKA
Gotcha. Gotcha.

00:48:23.930 --> 00:48:33.600
Expert 3
But I think if you if you if you do it. But this approach if you say OK takes like the portfolio and you you renovate the whole portfolio within.

00:48:24.200 --> 00:48:24.500
Tomas HAVELKA
Umm.

00:48:36.460 --> 00:48:38.800
Expert 3
I'm maybe Even so so you said.

00:48:38.900 --> 00:48:42.390
Expert 3
A well for you, right? Yeah.

00:48:40.810 --> 00:49:04.830
Tomas HAVELKA
There would take four years exactly. But but you had the this good, good comment that if there would be just renovating, let's say floor by floor would probably take longer than just one year, right for each part, because in the literature it was written that renovating and building from Brown to green in average it takes around one year or like half a year to one year. And if but then that's probably like they just change the entire building at once.

00:48:59.770 --> 00:49:00.340
Expert 3
Yeah.

00:49:05.630 --> 00:49:10.340
Tomas HAVELKA
If you would go step by step, would as you said it would probably or definitely take more time.

00:49:05.690 --> 00:49:06.080
Expert 3
Yeah.

00:49:10.860 --> 00:49:13.040
Expert 3
Yeah, I mean you, you can of course do.

00:49:13.120 --> 00:49:13.730
Expert 3
The.

00:49:15.500 --> 00:49:16.210
Expert 3
To.

00:49:18.120 --> 00:49:23.370
Expert 3
More projects or or at the same time of course, but but.

00:49:23.470 --> 00:49:29.160
Expert 3
Um, doing all at once, I would say just for My Portfolio perspective.

00:49:30.260 --> 00:49:33.290
Expert 3
It's it's also difficult to handle, you know.

00:49:33.370 --> 00:49:50.720
Expert 3
Umm, just for all. Also from managing perspective, refurbishing 12 projects at once is quite burdensome. Yeah, and it takes a lot of manpower to do so. Yeah, and and maybe also increase costs.

00:49:33.930 --> 00:49:34.280
Tomas HAVELKA
Mm-hmm.

00:49:50.840 --> 00:49:53.800
Expert 3
Uh. Uh, so?

00:49:55.070 --> 00:50:02.410
Expert 3
I would say doing this within maybe two or three years would be would be a good approach from from my perspective.

00:50:01.380 --> 00:50:03.150
Tomas HAVELKA
Hmm. OK OK, perfect.

00:50:04.900 --> 00:50:28.800
Tomas HAVELKA
And actually this just came into my mind because I actually have access to this arics database. You know where you have. Yeah. And I think it's only at least. Yeah, the last time I used it, it was only was Eastern European or sea countries. And I don't have any. For example, it would be hard for me to find the yield on Germany or France or specific cities.

00:50:10.670 --> 00:50:11.590
Expert 3
Yeah, yeah.

00:50:29.440 --> 00:50:29.830
Expert 3
Umm.

00:50:29.940 --> 00:50:44.160
Tomas HAVELKA
And if I would be wanting to calculating this CapEx using the calculating the property of the build of the value of the properties from rent divided by you would, where can I get the you information? Because I guess Eric's would.

00:50:44.220 --> 00:50:47.020
Expert 3
Should you should find it in their Eric set the pace.

00:50:47.610 --> 00:50:53.110
Tomas HAVELKA
I think I only have access to CEE because Germany and France is not there.

00:50:55.590 --> 00:50:57.820
Expert 3
Trimming it and France is not there.

00:50:57.770 --> 00:51:00.140
Tomas HAVELKA
But it could be that I have a different access as you.

00:51:02.840 --> 00:51:07.160
Expert 3
No, I don't think so. I think it's the same database we have.

00:51:08.500 --> 00:51:09.610
Expert 3
Umm.

00:51:13.490 --> 00:51:25.190
Tomas HAVELKA
Because I think Eric's database offers these yields. For example, for Germany and France. But for me I just cannot look into them because I have only partial access to Eastern European countries.

00:51:32.030 --> 00:51:36.280
Expert 3
Not quite sure right now to be honest, I.

00:51:35.930 --> 00:51:41.050
Tomas HAVELKA
But it was it was few months ago when I actually looked it up last time so I could have changed.

00:51:38.850 --> 00:51:39.410
Expert 3
Yeah.

00:51:42.820 --> 00:51:46.490
Expert 3
Well, I think they should be there like for longer period to just to have a.

00:51:48.160 --> 00:51:50.210
Expert 3
To see how it develops over time.

00:51:51.590 --> 00:51:52.240
Expert 3
Umm.

00:51:53.470 --> 00:51:56.020
Expert 3
Let me have a quick look and just.

00:51:58.780 --> 00:52:05.110
Expert 3
I mean, you also did, I think the sentence also some some months ago and well.

00:52:07.580 --> 00:52:09.940
Tomas HAVELKA
Yes, yes, I did. I I did, yeah.

00:52:07.750 --> 00:52:10.060
Expert 3
Overview about some yeah.

00:52:10.580 --> 00:52:17.530
Tomas HAVELKA
But it's only includes seeing it does. I didn't have access to Germany or or other countries, only Austria actually from Western Europe.

00:52:15.020 --> 00:52:16.530
Expert 3
OK, OK.

00:52:18.360 --> 00:52:25.370
Expert 3
Maybe it's OK, maybe it's done not. I thought it's in there, but if you already did it, maybe it's not in there.

00:52:25.940 --> 00:52:28.010
Tomas HAVELKA
Yeah, it's, it's, it's unfortunately it's not.

00:52:29.840 --> 00:52:39.580
Tomas HAVELKA

Because I saw that you had this 3.5 yield for the project to actually use showing was this also from the database or was this from the client or just?

00:52:30.090 --> 00:52:30.430
Expert 3
I mean.

00:52:35.430 --> 00:52:35.750
Expert 3
Yeah.

00:52:39.410 --> 00:53:01.280
Expert 3
I mean this is this is just in our experience we have here in that we on the market in Vienna. So we know how the heels develop over years and you also have some other reports, I don't know if it's Austria, it's in the Eric's database I think so yeah. So you can also look it up there.

00:52:45.820 --> 00:52:46.140
Tomas HAVELKA
I see.

00:52:57.880 --> 00:52:59.370
Tomas HAVELKA
It is. It is Australia's.

00:53:02.450 --> 00:53:04.590
Expert 3
But there are other other.

00:53:05.830 --> 00:53:09.220
Expert 3
Companies doing market research, of course.

00:53:09.300 --> 00:53:09.610
Expert 3
Umm.

00:53:10.710 --> 00:53:11.340
Expert 3
Umm.

00:53:13.150 --> 00:53:18.330
Expert 3
But then CBRE, there is in Austria, there is it's called ECHL.

00:53:19.770 --> 00:53:23.190
Tomas HAVELKA
Oh yes, I I think I know. Yeah, they have this map, right?

00:53:19.920 --> 00:53:20.280
Expert 3
Or.

00:53:21.710 --> 00:53:22.610
Expert 3
So they are doing.

00:53:23.640 --> 00:53:28.570
Expert 3
Yeah, yeah. Have a map and did doing a I think it's.

00:53:25.640 --> 00:53:26.210
Tomas HAVELKA
Yeah.

00:53:30.310 --> 00:53:36.730
Expert 3
Twice a year to do an office report where you where you can see the yields and the development of the yields.

00:53:37.950 --> 00:54:07.180
Expert 3
But nevertheless, I think you you should. You should also be able to Google it you you probably find some some market research, maybe even from CBRE. Maybe it's not in this indirect set the base, but if you if you Google it yields in in the bigger cities of like Berlin or Munich or just as we said before, I think you should or Paris, you should find the you should find research material and then yields yields there. Yeah, so.

00:53:43.500 --> 00:53:43.780
Tomas HAVELKA
OK.

00:54:06.760 --> 00:54:07.080
Tomas HAVELKA
Mm-hmm.

00:54:08.260 --> 00:54:14.470
Expert 3
Is she sure? And if you don't find it in the way, I mean, being being honest, I'm not.

00:54:08.780 --> 00:54:09.050
Tomas HAVELKA
OK.

00:54:16.850 --> 00:54:30.540
Expert 3
I I'm I'm coming at all. Also set it the last time I'm coming from from real estate finance, Austria departments before the before we merged. So my experience is is more on the Austrian market.

00:54:32.150 --> 00:54:38.810
Expert 3
So I'm also learning on the international markets, so I'm not that expert right now.

00:54:36.420 --> 00:54:36.670
Tomas HAVELKA
Mm-hmm.

00:54:39.470 --> 00:54:50.740
Expert 3
On the international markets, also learning there, but I can if if you don't find it on anywhere, just just yeah, let me know where we can ask also some colleagues.

00:54:52.640 --> 00:54:54.990
Expert 3
Who did the project in in in?

00:54:56.610 --> 00:55:07.350
Expert 3
And we actually in in Germany and we actually have one project in France. But I'm think in in Paris actually. But I think it's not an office project.

00:55:07.910 --> 00:55:08.740
Tomas HAVELKA
OK, OK.

00:55:09.150 --> 00:55:14.060
Expert 3
But nevertheless it you can also have trust in idea, I can.

00:55:15.380 --> 00:55:23.130
Expert 3
So if you don't find it, I could look it up. What? What yield? We used there just to give you a feeling. How, how, how it could look like, yeah.

00:55:20.150 --> 00:55:20.390
Tomas HAVELKA
Mm-hmm.

00:55:23.020 --> 00:55:28.350
Tomas HAVELKA
OK. Yeah, I'll, I'll, I'll try to Google. And if I don't find it out, I'll get back to you regarding this.

00:55:25.940 --> 00:55:26.160
Expert 3
Yeah.

00:55:27.770 --> 00:55:33.060
Expert 3
Of it. But it's interesting that the Germany and France is not in the Ericsson, so I didn't know that.

00:55:32.990 --> 00:56:02.890
Tomas HAVELKA
Yeah, it was also like I remember the very first time, I think I I texted Robert OCHODNICKY from the risk and he sent it German cities to me, but it was maybe a year ago and then maybe a few months ago, I asked him again and he said he doesn't have access anymore. And I said I don't have access either. And then I think we the texted to Andreas Dodge or somebody and he didn't, he didn't also have access, but they were trying to get the access. I don't know, it was a little bit complicated with this and I also was a like it didn't make any sense to me that you.

00:55:38.650 --> 00:55:39.040
Expert 3
Yeah.

00:55:52.870 --> 00:55:53.150
Expert 3
Yeah.

00:56:02.970 --> 00:56:09.130
Tomas HAVELKA
Have access to some countries but not the others, but I think that's how it is currently.

00:56:09.560 --> 00:56:09.850
Expert 3
The.

00:56:12.250 --> 00:56:33.840
Tomas HAVELKA
But yeah, actually I think this is this is this is the questions I I wanted to ask you specifically and it really helps a lot and it was super nice to get more a lot in detail regarding the calculations and the also the feedback you gave me would definitely I would implement it in my in my models. So thank you very much and also for your time.

00:56:18.580 --> 00:56:18.900
Expert 3
OK.

00:56:32.630 --> 00:56:38.080
Expert 3
Rich, you're well. You're very, very welcome. If you still have some questions, just let me know.

00:56:38.610 --> 00:56:39.650
Tomas HAVELKA
Awesome will do.

00:56:39.920 --> 00:56:54.520
Expert 3
And yeah, and let me know if you if you don't find anything, but I'm I'm. I'm quite sure you'll find anything. But if you don't, just let me know. I'm. I'll can provide some. Some yields on the on the cities unit. Yeah.

00:56:54.840 --> 00:56:56.330
Tomas HAVELKA
Perfect. Thank you very much. Awesome.

00:56:56.220 --> 00:57:01.690
Expert 3
You're welcome. And yeah, a lot of success with Realties. Yeah. When, when, when, when is the deadline?

00:56:59.900 --> 00:57:00.660
Tomas HAVELKA
Thank you. Thank you.

00:57:02.520 --> 00:57:13.180
Tomas HAVELKA
Uh, it's actually, I mean, it's sort of up to me. So whenever I finish it, I handed in and then I have to present it maybe a few weeks afterwards, but would like to do it by the end of the summer, the latest.

00:57:05.290 --> 00:57:05.500
Expert 3
Yeah.

00:57:07.150 --> 00:57:07.370
Expert 3
Yeah.

00:57:09.680 --> 00:57:09.910
Expert 3
Yeah.

00:57:12.300 --> 00:57:14.390
Expert 3
Yeah. OK. See you. Yeah. Yeah.

00:57:14.030 --> 00:57:20.970
Tomas HAVELKA
Yeah. Yeah. When it is done, I'm happy to maybe give you some update how how it went. You're interested? Umm, awesome. Perfect.

00:57:17.530 --> 00:57:19.950
Expert 3
Yeah, yeah. Would be very interesting. Yep. Yep.

00:57:20.630 --> 00:57:21.500
Expert 3
OK, great.

00:57:22.040 --> 00:57:25.200
Tomas HAVELKA
Yeah. Thanks a lot. Thank you very much and have a rest nice rest of the day.

00:57:23.090 --> 00:57:23.570
Expert 3
Thank you.

00:57:25.570 --> 00:57:27.780
Expert 3
Yeah, you too. Thank you. Bye bye.

00:57:27.060 --> 00:57:27.780
Tomas HAVELKA
OK, that's all.