GÖTEBORGS UNIVERSITET

DEPARTMENT OF BUSINESS ADMINISTRATION

Alternative business models for Swedish real estate developers

Analysis of alternative business models applied by real estate developers in Sweden to manage macroeconomic challenges

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Abstract

The current macroeconomic climate, with rising inflation and interest rate, is posing a significant challenge for real estate development firms in Sweden. The cost of developing properties is increasing and it is becoming increasingly difficult for many potential buyers to meet the high requirements for down payments associated with the traditional model of home ownership. In turn, this study aims to investigate the applicability and attractiveness of alternative business models for Swedish real estate development firms, to manage the current macroeconomic challenges. Two alternative business models, co-ownership and rent-to-own, were compared against the traditional model of home-ownership and evaluated against the potential profitability and risk associated with each model. The capital structure companies' use for financing projects that are sold using the different models was also analyzed. These comparisons were made based on both interviews with companies applying these models today, and through a case study with a real estate development company operating in Sweden, that has never in the past applied any of these alternative models. In the end, it was found that although the alternative models are less profitable than the traditional model, and increasingly risky as they are volatile to the effects of the interest rate, they do allow the real estate companies to reach a wider customer base. As the models lower the requirements for down payment, they enable a larger group of people to buy real estate. Although the models may be less suitable to use at scale to sell entire properties, the models could offer attractive options for selling residential units that had previously remained unsold.

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Glossary

Note: The first time each word/phrase is used in the report it will be marked in italic.

Business model - A company's plan for making profit and defines how an organization creates, delivers, and captures value.

Conventional model - Upfront purchase of the property with a 15% down payment.

Co-ownership - The tenant purchases only part of the property upfront and then buys the rest at a later date. The buyer needs to pay a monthly fee until they have bought the full property.

Rent-to-own (RTO) - The tenant rents the property with an option to buy it within a set number of years.

Degree of leverage - The amount of debt the company has, in relation to equity, in its capital structure to finance its operations and growth.

G10 economies - A group of 11 industrialized nations with similar economic interests.

CPIF - Consumer Price Index with Fixed interest rate.

Policy rate - The interest rate set by the central bank to achieve inflation targets.

Housing index - Index measuring changes in transaction prices of housing units purchased.

1. Introduction

As societal demands and the economic landscape have changed, interest in alternative models of home ownership has increased. This report aims to explore these alternative *business models* by comparing the *conventional model* of home ownership, with two distinct alternatives: *co-ownership* and *rent-to-own (RTO)* arrangements. The current macroeconomic climate poses significant challenges for the Swedish real estate developers, and this report aims to highlight different business models that these companies can use to manage macroeconomic challenges. By analyzing the challenges and opportunities inherent in the co-ownership and rent-to-own models, this report seeks to offer insights into the attractiveness and applicability of these models and how developers can adapt their strategies to navigate these shifting macroeconomic environments.

The analysis is divided into two main parts. First, a comprehensive investigation of how companies are currently using these alternative models was conducted. The study aimed to provide an outline of the potential profitability and risk associated with each model, and the *degree of leverage* companies use when financing projects sold using the different models. Second, a detailed case study focused on a local real estate developer in Sweden, that is not currently engaged in any of these alternative models, was also conducted. The purpose of the case study was to evaluate the applicability and attractiveness of these models within the contextual framework of a Swedish real estate developer.

In order to achieve the purpose of the report the following research questions, and corresponding sub-questions, will be answered.

- How can alternative business models be used as a tool for real estate developers' to manage macroeconomic challenges and economic distress?
    - What is the expected profitability potential of each model?
    - What are the risks associated with each model and how, if at all, do companies' capital structure differ when financing projects sold using the different models?

- Are the alternative business models attractive and applicable for Swedish real estate developers?

In the end, this report aims to contribute to the existing body of research examining the effect of alternative housing models, by highlighting their effects on the real estate developers rather than the buyers or the tenants. The purpose of this report hence, is to offer practical insights for managers working in Swedish real estate development firms and show what alternative business models exist today, how they work, and their attractiveness and applicability in the context of a real estate developer in Sweden.

2. Background

Historically the real estate market has been characterized by stable and consistent growth, but in recent years this state has been challenged by the changing macroeconomic climate (Fathom consulting, 2023). To lay the foundation of this report, below follows a background to the real estate development industry itself and the macroeconomic challenges that the industry is currently facing.

2.1. Industrial background

Real estate developers' main objectives are to coordinate and monitor the many aspects of a real estate project from start to finish. They typically engage in operations such as ownership, maintenance, and sales, covering different types of properties, including residential, commercial, and industrial. Most of their income is generated from tenants' rents, property value appreciation, and property sales (Handelsbanken, 2023).

2.1.1. Current state of the industry

The Swedish housing market is made up of three main forms of housing. Detached single family houses, which is the largest group, multi-unit rental apartment buildings, and finally condominiums of either detached houses or apartment buildings, which makes up about 25% of the market (Statistikdatabasen, 2022). Condominium, or co-operative building society is a form of housing where each resident is a member of a co-operative that owns the building or buildings

in which they live. Each member of the co-operative owns a percentage stake matching their unit's share in the co-operative (SOU 2022:12). This stake guarantees the right to live in the unit but not ownership of it explicitly. This makes residents more limited in what they are allowed to do in terms of structural changes compared to the internationally more common practice of owned apartments, which is basically non-existent on the Swedish market with only a couple thousand units (Dir. 2023:62).

The conventional and dominating way of purchasing a condominium unit is to purchase it in full with a 15% up front down payment of the purchase price and the rest allowed to be covered by loans (SOU 2022:12). This way is beneficial for the property developers as payments are made in full up front, but can be challenging for the buyers as it requires large financial means to enter the market. Co-operatives have been present on the Swedish market since the 1920's and have varied in form and influence over time given macroeconomic and political fluctuations (Jörnmark, 2005). Since 1970 most of the changes on the market have stemmed from legislative changes moving towards a more open housing market compared to the previous dominance by public developers. Over the past decades, co-operatives have been a dominating presence in the larger city centers as they present profitable calculations to developers and a large segment of individuals in the upper middle class have been able to purchase them (Jörnmark, 2005; SOU 2022:12). It is also in the larger city centers where the issues of affordability and availability have been the largest. The current macroeconomic climate has largely halted development on the overall housing market and presented developers with new challenges in order to sell finished units and develop new projects.

2.1.2. Alternative business models

Apart from the conventional way of purchasing housing units there are other purchasing models with the same end result but different ways of getting there. RTO and co-ownership are examples of two models with similar conditions. They are based on the principle that the buyer of a house or apartment is able to either rent the property for a set number of years and then purchase it at a later date, or that the buyer buys part of the property and then co-owns it together with the developer with the possibility of purchasing the remaining part over the following years (SOU 2022:12). Most research found in relation to this topic is centered around housing affordability

and social sustainability. It has been conducted globally from a buyer's or tenant's perspective, often in relation to social housing reforms where the common goal is to facilitate for lower income households to access owned housing (Paris, 2007). In relation to this, Nanda and Parker (2015) find that the degree of local authority autonomy and type of involved actors play a large role into the possibility of implementation. Different models have also been made in other countries with markets for social housing. This environment is not present on the Swedish market as the legislation of regulated rents in combination with social financial support has created a first-hand rental market with generally low and affordable rents (SOU 2022:12).

Rent-to-own

Jaggia & Patel (2015) discuss RTO contracts and efforts stemming from the financial crisis in 2008 which led to large scale evictions and tighter lending regulations. At this point there was a large overhang of housing but few potential buyers which called for an alternative purchasing model. The authors display how it can be a very attractive option for people that are financially constrained at the moment but expect to have a better situation in the future. This in turn positively impacts developers as their number of potential buyers increase while financial calculations and profit margins still hold. Similarly, Nei et al. (2023) find that an RTO scheme introduced by the Malaysian government reduced overhang for developers and improved conditions for people to move into owned housing. The implementation also stemmed from the 2008 financial crisis and was undertaken in 2018. Risks associated for developers are mainly identified as tenants for different reasons electing to leave instead of purchasing, leaving the developers with unsold units (Nei et al., 2023). Another aspect brought up by the authors was the need for rigorous maintenance of the properties in order to give tenants a positive image of them and lead them to purchase. Advantages for developers circle around the reduced overhang as RTO provides opportunities to attract customers at a larger scale.

An example of an established RTO scheme comes from the French market where the tenant has the opportunity to purchase its unit after a set number of years regulated in the rental contract (SOU 2014:33). During the renting phase the tenant pays both rent and an advance payment which is then written off against the otherwise needed down payment upon the time of purchase, if it exceeds the down payment against the price. During the period of renting, the tenant has

largely the same rights as a regular tenant but also assumes the role of the owner by for example being part of the yearly co-operative board meeting and voting on some issues in regard to the state of the property.

Co-ownership

Co-ownership models are also present on global markets with the United Kingdom and Finland being two of the most prominent (WSP, 2018). In the UK “Staircasing” is one of several measures implemented by the government in a scheme to promote shared ownership (SO) and facilitate owned housing. The scheme allows for mainly, but not exclusively, first time buyers to purchase between 25% to 75% of the dwelling and then gradually increase ownership to fully owned. This loosens the deposit constraint and gets buyers onto the ownership “ladder” (Nanda & Parker, 2015). Rent is paid on the remaining part of the dwelling until purchased in full which is also the first time when the buyer is allowed to sell. If the unit is sold the developer has a first option to purchase (WSP, 2018).

In Finland there are two main models for co-ownership. The Omaksi model, introduced in 2014 by the company Lakea, requires a 7% down payment based on the sales value upon entering the home (Lakea, n.d). Over a 20-year period, occupants pay rent, covering the property owner's interest and amortization costs. At the end of this period, the buyer attains a 72% ownership stake and has the option to purchase the final part (WSP, 2018). In this scheme, the Finnish state supports Lakea, thus guaranteeing the production of homes within this model. Finland also features a dedicated co-ownership model called “Delägarbostad” (WSP, 2018). In the model, buyers initially contribute 10% - 20% of the home's price. After that, they reside in the home, paying rent at a generally affordable level for 5 - 12 years, depending on the agreement's terms. Buyers can potentially acquire additional shares during this period, subject to agreement with the housing company. Once the rental period concludes, the buyer purchases the remaining portion of the home. This scheme can be employed by both private and public developers with the difference being that private can sell to anyone while public are subject to income and asset limitations.

2.2. Macroeconomic background

The real estate market has long been regarded as a stable and attractive investment arena characterized by resilience and consistent growth. Over the last decade, between 2009 and 2022, housing prices in Sweden grew by more than 80% (Fathom consulting, 2023). This enduring performance has made it a preferred choice for a diverse range of investors, encompassing everything from both individual homeowners to large-scale real estate companies. However, this is not the case anymore. The housing prices in Sweden have been declining more rapidly than in any other *G10 economies* in the past year, with residential real estate falling by 15% since its peak in 2022 (Fathom consulting, 2023). This is the effect of several factors such as inflation, geopolitics, COVID-19, and rising interest rates.

2.2.1. Rising inflation and interest rates

Inflation is defined as an increase in the overall price level, resulting in a decrease in the value of money (Riksbank, 2022). In an economic boom, as household income rises, the demand for goods and services tend to increase accordingly, putting firms in a beneficial position to increase prices (Riksbank, 2022). Consequently, as this upward price trend continues, wage demands adjust to these expectations, resulting in a compounding effect that amplifies inflation and sets the stage for a dangerous cycle leading to economic turbulence. Inflation has been relatively low throughout the 2010s, but as the economy has been recovering from the COVID-19 pandemic, inflation has risen in Sweden and in many other countries around the world (SCB, 2022a). The *CPIF*, which is the most common metric for measuring inflation, reached 6.1% in March 2022, which is the highest point measured since the inflation target was introduced in 1995 (SCB, 2022b). The rising inflation rates have led to increased cost for both the development and maintenance of real estate (Creative Global Funding Services, 2023). As the inflation rate rises, the cost of materials, labor, and overhead increase, making it increasingly difficult for developers to produce sustainable profits. Furthermore, additional challenges have also been introduced by the conflict between Russia and Ukraine as the availability of construction materials has become increasingly limited (Dagens Arena, 2022). As a result of the inflation and the limited material, the cost of housing production has increased by 8.2% in 2021 (SCB, 2021).

To counteract the high inflation the Swedish central bank, Riksbanken, has chosen to raise the *policy rate* to reduce purchasing power and bring inflation down (Riksbank, 2023). This leads to an increase in the interest rate in line with the policy rate, which ultimately affects real estate developers, who often use a large portion of debt to finance their capital structure (Riksbank, 2017). The increased interest costs forces real estate developers to increase prices, and this in combination with it being more expensive for individuals to take out bank loans, reduces the ability for individuals to buy property. As a result, this has led to a reduction in asset valuation of real estate developers, creating less of an incentive to develop more properties. In fact, over the last two years, Swedish real estate companies have, on average, seen their stock prices drop by 20% - 50% (Åström, 2022).

2.2.2. Societal and environmental challenges

The population in Sweden is greater than ever before and the demand for housing is increasing (SCB, 2023). According to Boverket (2023a), there is an estimated annual demand for around 67 300 new homes to meet the housing needs in the country in the coming decade. The already difficult situation with a large historical housing deficit is now at risk of getting worse as housing development has stalled while the population continues to grow. According to the Swedish Construction Agency's construction forecast for 2023, only 20 000 new homes will be started in 2024, which is far below the forecasted need (Boverket, 2023a). The challenges faced by real estate developers go beyond their individual and financial interests. These issues represent wider social challenges that have a significant impact on society as a whole.

Furthermore, sustainability is no longer only a luxury, but an essential part of business strategy for all firms, no matter the industry. The real estate development industry is no exception with the demand for sustainable housing increasing and regulators forcing developers to act more sustainably (Walker, 2023; Boverket, 2021). In Sweden all real estate development and construction firms must declare a climate declaration for all new projects applying for a construction permit after January 1st 2022 (Boverket, 2021). In the declaration, the company must declare the climate impact and carbon emissions of the building throughout all stages of its lifecycle (Boverket, 2023b). This puts further pressure on real estate development firms as they must dedicate resources to creating accurate declarations representative of the buildings' entire

life cycle. Additional costs may also arise as the firms must purchase increasingly sustainable materials and adapt new sustainable operations.

3. Problem description

The aforementioned state of the Swedish housing market has prompted some real estate developers to explore new business models in order to remain competitive and continue selling units. With increased production costs, inflation, and increased rates it is both harder for developers to develop and buyers to buy. There are also implications for developers with completed or soon to be completed projects that remain largely unsold, as revenue from sales is typically the most important profit driver in property development projects.

Because of this, the overall objective of these new business models is to lower the thresholds for primarily first time buyers to be able to purchase their first home (SOU 2022:12). At the same time, it is also a way for developers to increase their pool of potential customers as well as recouping the investments made into units that remain unsold. Selling units after completing projects are paramount to developers as large investments, often including debt financing, have been made to develop the project and revenues from sales make up the majority of the positive cash flows in most projects.

The debate around this subject has been present for many years before the macroeconomic issues in the industry started. Then, the main issue in good financial times was that prices were driven up in attractive areas which in turn led to troubles for mainly young, single, and low income households to establish themselves on the owned housing market (SOU 2022:12). One solution to this was a governmental investigation initiated by the previous Swedish government that investigated a potential start-loan system where the state would give a guaranteed mortgage to first time buyers and thus lower the threshold to enter the market. The investigation yielded that this measure would indeed be beneficial but since it was handed over in 2022 no action has been taken in parliament.

The Swedish market today features several examples of mainly private but also public developers that employ the previously described RTO and co-ownership models. There are also

examples of other measures taken by private developers to attract buyers for completed but unsold projects. These include financing of down payments, guaranteed upper interest levels and delayed entry (Peab Bostad, 2023; FO Peterson, 2023). The measures have in common that the developer takes on increased risk and decreases up-front profit in order to market unsold units. The alternative models examined further in this report are, for co-ownership HSB Dela, and OBOS Deläga and for RTO, schemes used by Riksbyggen and Egnahemsbolaget Gothenburg. They are chosen for their relevance as long term business models and potential scalability compared to the measures taken by various private developers that are rather seen as short term interventions.

As mentioned above, the housing sector has been a large topic of debate in Sweden for a number of years. The most recent development affecting the subjects in this report is an investigation ordered by the newly appointed government in May 2023, calling for an analysis of a potential dedicated legislative framework for RTO and co-ownership models (Dir. 2023:62). The main reasons for this are stemming from two areas. First, the current challenges of affordability are highlighted and it is concluded that the current state with demand for a 15% down payment poses a large barrier to entry for mainly young buyers. The second issue is that there is no explicit legal framework for the types of business models investigated in this report. Developers employing them today utilize a combination of legal provisions to find support for their models. This is described as problematic as it increases the risk for confusion and insecurity for all actors involved as concepts described as the same by two actors might have different content (Dir. 2023:62).

The existing models are currently employed by few actors at a small scale. They are however described to be working well but a need for unity and clarity is identified (Dir. 2023:62). This measure will create a common practice and thus improve predictability and understanding for both developers and buyers. It is also expected to facilitate larger scale implementation by mainly improving the aforementioned clarity for all actors involved. The new framework is stipulated to fit into the current legal system in a number of aspects related to security, transaction and ownership. Most relatable to this report is however that it is suggested to include existing models and synthesize them to allow the developers using them to continue building

without large disruptions. It is further concluded that a new framework will have to be secure, unifying and attractive for all parties involved (Dir. 2023:62).

Given the current state of the market together with previous development in other markets, the examined models are not expected to be as profitable as conventional upfront full purchase. RTO especially is expected to be significantly more risky for developers. While not being as profitable given their increased risk, the models are however expected to be attractive for developers for two interconnected reasons. The first is that they in general lower the threshold for potential buyers and thus creates a larger market for developers. Secondly, building on the same notion, the models are believed to prove attractive to developers in harsh economic times as they provide flexibility and allow developers to generate revenue from previously unsold units.

4. Theoretical framework

To assess the attractiveness of the three business models, the analysis will require tools and support based on previous research, and presupposes a fundamental understanding of market efficiency, capital structures, and risk management.

4.1. Market efficiency

The market efficiency hypothesis states that markets are efficient and that there exist no opportunities on the market to make abnormal returns in the long-term (Fama, 1998). In an efficient market investors react rationally and prices “fully reflect” all available information. Hence in an efficient market, although return anomalies can occur due to overreactions and underreactions to information, these inefficiencies are often short-lived and cancel eachother out in the long-term (Fama, 1970). Furthermore, Fama (1970) presents three different forms of the efficient market model, strong form, semi-strong form, and weak form. The three forms differ by the information subsets by which the market price is based. Strong form, represents a market where the price reflects all relevant, both internal and external, information. Semi-strong form, represents a market where the prices efficiently adjust to all publicly available information, and weak form only considers historical prices.

While firms acting in an efficient market are not able to earn abnormal returns, as all information is reflected in the price, firms can expect to receive a fair valuation, equal to the present value, of all assets that they sell (Hillier et al., 2020). The present value of the asset refers to the current value of all future cash flows generated by the asset (Hillier et al., 2020). The more accurate information included in the price, the more representative the price will be of the present value. Hence, theoretically in a strong form efficient market the price of the asset will be equal to its present value, and any deviations from this price can be interpreted as inefficiencies compared to the strong form efficient market. To calculate the present value of an asset, all future cash flows that the asset will generate need to be discounted to today and summed up, see equation (1) in Appendix A.

The greater the present value, the greater the valuation of the asset. By comparing the present value of all future cash flows with the initial investment, the attractiveness of a given investment opportunity can be assessed. This is called a net present value (NPV) analysis. The weighted average cost of capital (WACC) is often used as the discount rate when conducting an NPV analysis (Kincheloe, 1990). The WACC is an important tool used when assessing potential profitability and refers to a company's average cost of capital and is dependent on the company's capital structure. The WACC is calculated using equation (2) in Appendix A.

4.2. Capital structure

A company's capital structure refers to the combination of debt and equity used by the company to finance its operations and growth (Myers, 2001). Companies must find an appropriate balance between equity and debt, based on their operations and financial goals, as the addition of debt to the company's capital structure brings with it both positive and negative consequences. The tax benefit arising from the use of debt is commonly referred to as a tax shield (Jahanzeb et al., 2014). A tax shield essentially involves a reduction in taxable income through an allowable deduction approved by the tax authorities. It serves as a strategic mechanism for companies to reduce their taxable income, which consequently reduces the associated tax burden, and increases the total value of the company. The tax shield is calculated using equation (3) in Appendix A.

The trade-off theory focuses on trying to find the optimal capital structure for a company by carefully weighing the benefits of the tax shield with potential disadvantages and financial challenges that may result from excessive debt (Myers, 2001). These challenges may include for example, cost of financial distress and agency costs of leverage. Increasing a company's debt-to-equity ratio brings with it dangers as the company may put itself at the risk of financial distress. It is important to note that while the tax shield has a clear formula, there is currently no proven formula for calculating the costs associated with financial distress, which makes it difficult to determine the optimal level of debt for a company.

In contrast to the trade-off theory, the pecking order theory stands out as another dominant model in corporate finance for making capital structure decisions (Hillier et al., 2020). This model is considered a substitute for trade-off theory, as it introduces a hierarchy of financing decisions within firms. The central concept revolves around the idea that firms maintain an internal ranking of funding sources, which is affected by the information asymmetry between management and external investors (Jahanzeb et al., 2014). Within this framework, firms are encouraged to prioritize internal sources of finance, giving precedence to debt over equity. Equity issuance is considered only when the debt capacity is reached. Consequently, the pecking order theory implies issuing the safest securities first. This strategic approach involves retaining profits and resorting to external financing only as a last resort, aiming to avoid investor skepticism (Myers, 2001). In situations where a company's equity is undervalued, there is an inclination to issue debt. However, the reverse is not always true. If the company's equity is overvalued, investors may conclude that the shares are overpriced, leading them to refrain from buying until the share price adjusts accordingly. This strategy assumes that it is in the company's interest to issue debt when equity is undervalued, while being cautious when equity is perceived to be overvalued to avoid adverse market reactions (Myers, 2001). The pecking order theory therefore highlights the decision-making process within a company, providing insight into the reasons behind their financial choices.

4.3. Risk management

According to Hillier et al. (2020), when estimating the present value of an asset, both the timing and risk of future cash flows need to be taken into consideration. Hillier et al. (2020) mentions

that, although estimating the timing of the cash flows might be relatively simple, quantifying the risk can be significantly more challenging especially in an inefficient market. Value at risk (VaR) is one metric commonly used to quantify risk (Jorion, 2006). VaR quantifies the extent of possible losses by indicating the maximum losses associated with an investment given a specific level of confidence. By assuming that returns of an asset are normally distributed the VaR can be calculated using the expected returns, the standard deviation of returns, and the z-value associated with the probability of the "worst case scenario" occurring. See equation (4) in Appendix A. Conditional value at risk (CVaR) is a modified version of VaR, which captures expected losses beyond the VaR threshold in extreme situations (Rockafellar & Uryasev, 2002). CVaR is calculated using a similar method to VaR, but takes the entire tail end of the distribution into account. See equation (5) in Appendix A.

As the z-value is correlated with the probability of the "worst case scenario" occurring, to calculate VaR and CVaR a basic understanding of the assets exposure to different risk scenarios is required. Scenario analysis is a set of techniques commonly used in risk management, to identify and evaluate potential risks facing an organization (Open Risk Manual, 2023a). During scenario analysis, risks facing the organization are identified and the potential range of outcomes associated with these risks are evaluated. Stress testing is a form of scenario analysis, commonly used in the context of credit risk, and is used to test how a system will react to a set of hypothetical conditions (Open Risk Manual, 2023b). During stress testing the system of the study and the risk scenario are first defined, and then the outcomes of the scenario are monitored and evaluated. In the case of a real estate developer for example, the system could be a specific development project and the risk scenario could be a loss in revenue or cash flows. Based on the findings from the stress test the organization can then focus their efforts to prevent, mitigate, and establish resilience to risk.

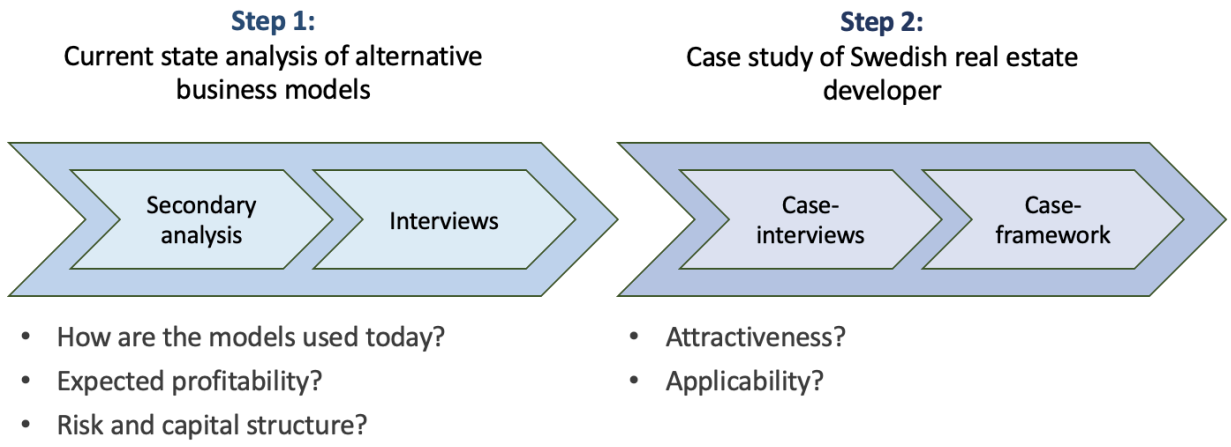
5. Method

In order to investigate the applicability and attractiveness of different business models for Swedish real estate developers, in the wake of macroeconomic challenges, the study features a combination of qualitative research methods.

The study can be divided into two main parts. Firstly, a current state analysis was conducted to get a better understanding of the three business models, how they are used today, and the expected profit and risk associated with each model. An analysis was also conducted of how, if at all, companies' capital structure may differ when financing projects sold using the different models. Once a better understanding of the different models had been achieved, the models' applicability and attractiveness to a Swedish real estate developer was assessed through a case study at a local real estate development company in the Gothenburg area, hereby referred to as RealDev. Figure 1, illustrates a conceptual roadmap of the methodology used in this study.

Figure 1

Conceptual roadmap of the methodology



5.1. Current state analysis of alternative business models

Step 1 of the methodology can be said to consist of three main parts as it aims to answer the following sub-questions:

- How are each of the alternative business models used today?
- What is the expected profitability potential of each model?
- What are the risks associated with each model and how, if at all, do companies' capital structure differ when financing projects that are sold using the different models?

In order to answer the three questions, a combination of qualitative research methods was used to facilitate the explorative nature of all questions. According to Bell et al. (2019) the qualitative

research methods allow for richer and more in-depth data to be collected which is suitable when exploring open-ended and context specific research questions, similar to those presented here.

The three business models that were analyzed were property ownership, co-ownership, and RTO. To first gain a better overall understanding of how these business models worked, from the perspective of the buyer, and how they are being applied today, an analysis was conducted based on secondary sources posted by a select number of real estate development firms that currently use these models today. The selected firms were, for co-ownership, HSB and OBOS, and for RTO, Riksbyggen and Egnahemsbolaget. This analysis was then followed by a set of interviews held with individuals in leading positions at these firms. A semi-structured interview methodology was used to support the explorative nature of the study, whilst ensuring that all the pre-decided focus areas were covered (Bell et al., 2019). The aim of the interviews was to gain a better understanding of the models from the perspective of the real estate firm and understand why they decided to pursue the different models, how it has impacted their profitability and risk, and what capital structure they use to finance projects sold using the alternative models. See Appendix B for the questions asked during the interviews.

5.2. Case study of Swedish real estate developer

Once a better understanding of how the different models are being used, their profitability impact, associated risk, and the capital structure companies use to financing projects had been achieved, the attractiveness of the business models, in the context of a Swedish real estate developer, was studied through a case study at RealDev. RealDev is a mid-sized real estate developer in the Gothenburg area that has currently, and in the past, only developed and sold properties using the conventional model of home ownership. In order to assess the attractiveness of the different models, firstly semi-structured interviews were held with people in leading positions at the company to get a better understanding of the company itself, its operations, and financial objectives. See Appendix C for the questions asked during the interviews.

Once a qualitative understanding had been achieved, three NPV-analyses were conducted for a proposed development project. Assuming an efficient market, the NPV-analysis would allow for a numerical comparison between how the valuation of the project would have been affected by

the different models. The company provided the profitability analysis they had done prior to the project, which was then adjusted to fit the specifications for the co-ownership and RTO models. The NPV-analysis was then supplemented with a scenario analysis, where the profitability impact and risk associated with different scenarios was tested through adjusting the assumptions previously made during the calculations.

6. Results

In this chapter the results of each step of the study, outlined in the method, will be presented. Firstly, the responses from the interviews will be highlighted and divided into four main sections as the inner workings of the models, their profit potential, risk, and the companies' capital structure are outlined. Secondly, the findings from step 1 are applied to a case study and the impact of each model is quantified.

6.1. Current state analysis of alternative business models

To gain a better understanding of how the models are being used today, their benefits, and their drawbacks, in depth interviews were held with the following people.

Interviewee 1, Director of Marketing and Communication, HSB Finansstöd

Interviewee 2, Head of Business OBOS Deläga, OBOS Sverige

Interviewee 3, Head of Business Support, Egnahemsbolaget Göteborg

*Interviewee 4, Head of Sales and Marketing, Riksbygge*n

The interviewees were chosen for their insight into their respective companies' specific purchasing model. All interviews were conducted digitally during December 2023.

6.1.1. Introduction to studied companies and how the models are being used today

HSB

HSB was founded in 1923 as a Swedish member co-operation with the goal of tackling the, at the time, existing housing crisis (HSB, n.d). The aim was to provide high quality yet affordable housing, which is still the goal of the firm even now 100 years later. Today HSB has over 677

000 members, and owns and operates 26 708 rental apartments and 346 381 condominium apartments throughout Sweden (HSB, n.d). In 2016, HSB employed a co-ownership model called HSB Dela. The model started as an initiative to support mainly young adults who struggled to enter the owned housing market due to the high requirements for down payments (Interviewee 1, 2023).

The model is reserved for people between the ages of 18 - 29 years old, and is based on a 50/50 purchase between HSB and the buyer. That means that the buyer pays for 50% of the apartment upfront and then, during the following five to ten year period, pays a monthly fee to HSB, based on market rent, for their half of the apartment. After between five and ten years the buyer can apply for purchase of the remaining share which is then valued by an external actor and sold at market price. If ten years pass without a purchase, the apartment is sold at market price and financial gains or losses are split between HSB and the owner. This is also the case if the apartment is sold during the ten year period. The first project using the model was completed in 2021 and since then 70, of around 2 000 total, apartments have been sold using the model (Interviewee 1, 2023). HSB has capped the use of the model at 20% of new apartments which is significantly greater than the current usage.

OBOS

OBOS is a member-owned Nordic construction and real estate development company founded in Norway in 1929 with inspiration from HSB in Sweden (OBOS, n.d). They have been present on the Swedish market for around ten years with operations centered around development and construction of both detached single family houses and apartment projects (Interviewee 2, 2023). The co-ownership model employed by OBOS on the Swedish market is called OBOS Deläga. It was first employed on the Norwegian market where their approximately 550 000 members inquired about a way to gain access to the owned housing market without having to pay the full price up-front. The model is described to be working very well, since the launch in 2020, and today up to 40% of new apartments produced by OBOS in Norway are sold through their models with one being OBOS Deläga (OBOS Deleie) (Interviewee 2, 2023). The model was launched in Sweden in 2021 and the first purchases were made with the model in 2023 when the first project employing it was finalized.

The model is aimed at all OBOS members and works as follows, the buyer purchases 50% - 90% of an apartment together with an OBOS subsidiary and thus becomes co-owner of the apartment. OBOS however denounce their right of use and decision for their part of the apartment and instead charge a monthly co-ownership fee to the buyer. The fee is based on regulated rent of new developments in the local area and is used to cover OBOS' part of the monthly fee to the co-operative as well as compensate for capital cost and risk (Interviewee 2, 2023). During the upcoming ten year period the buyer is allowed to purchase the remaining stakes in the apartment until it is fully sold. Price for the shares is derived from the initial price adjusted for the current *housing index*. The buyer is also allowed to sell the apartment at any time during the initial ten years. In this case eventual gains or losses are split between the owner and OBOS based on the owned shares. If ten years pass without purchase OBOS are allowed to sell the apartment. In Sweden OBOS offers the model for 20% of all newly developed apartments which has currently yielded 25 purchases out of a total 123 apartments offered (Interviewee 2, 2023).

Egnahemsbolaget

Egnahemsbolaget was founded in 1933 and is part of the public housing organization AB Framtiden in Gothenburg (Egnahemsbolaget, n.d). Compared to their sister companies tasked with owning and operating rental apartments, Egnahemsbolaget operates slightly differently as they develop and sell condominium projects. As a public company their mission is to induce demand for owned housing in areas dominated by rental apartments (Interviewee 3, 2023). The model used by Egnahemsbolaget is a very simplified version of a RTO scheme, which originated a couple of years ago when the firm had to use it for 20% of apartments as a part of the requirements for winning a project bid. Currently the company uses the model to occupy finished but unsold apartments, to cover some of the investments made into the project and hope that the current tenants are able to purchase their apartments in a couple of years.

The premise for Egnahemsbolaget's model is that a potential buyer is allowed to rent the apartment, at market rent, for up to four years with the option to purchase at any time (Interviewee 3, 2023). The purchasing price would then be derived from a previously decided price, adjusted for the national housing index. Using the model requires Egnahemsbolaget to first purchase the apartment and then rent it out, meaning that they are tasked with binding capital

twice plus paying the monthly fee to the co-operative. There is no specific demographic target group for the model, nor is there a certain percentage of apartments that should be sold with it, instead it is seen as a method to be employed if sales are slow in a project. It is however described as an efficient method for lowering the buying threshold and thus increasing the segment of potential buyers. Similarly it could also be financially viable for Egnahemsbolaget if they were able to implement it at a larger scale in more beneficial economic times.

Riksbyggen

In 1940, Riksbyggen was founded by the Swedish construction unions as a response to the ongoing housing crisis (Riksbyggen, n.d). The goal was, and is to this day, to provide housing for all. This is reflected in the operations today where the company, organized as a cooperative economic association, strives for other values than maximizing financial profit. The company currently manages over 100 000 rental apartments and 200 000 co-operative apartments all over Sweden (Riksbyggen, n.d). Riksbyggen operates with different customer segments with one being “young adults”, defined as people between the age of 18 - 35. It is for this group that an RTO model has been developed with the goal of lowering the threshold presented by the required down payment. Apartments sold with the model are first bought by Riksbyggen and then rented to the buyer for a period of maximum four years, during which Riksbyggen finances the monthly payment to the co-operative and the buyer has the option to purchase at any time at a predetermined price (Interviewee 4, 2023). If four years pass without purchase, Riksbyggen will sell the apartment at market price. The model is utilized for 1.5 room apartments in a maximum 10% of newly built apartments.

Apart from being a way to help young adults gain access to the owned housing market, Riksbyggen has previously used a similar model to market and sell unsold units in a project during the 2008 financial crisis. It proved useful to fill apartments but led to challenges as no clauses were put into the rental contracts, making Riksbyggen legally unable to force the current tenants to move out when they wanted to sell. Using this type of model is described to be an option to fill unsold apartments in today’s climate as well if the interest rates decrease slightly as they currently pose a real threat to the model as a whole (Interviewee 4, 2023).

6.1.2. Profit potential

In the short-term, the traditional approach for home ownership is more profitable than co-ownership for OBOS as the returns from the project are immediate instead of spread out over ten years, resulting in less tied up capital (Interviewee 2, 2023). The results are however heavily influenced by the market conditions, as the current interest rate and demand for housing impacts the cost of capital and applicability of the models. Higher interest rate leads to greater cost of capital, which in turn makes the co-ownership model less attractive. The positive cash flows associated with OBOS Deläga only partly cover the company's costs, and it is not until the final stage of sales that the model becomes profitable. In the long-term however, over a ten year period, a comparison between co-ownership and the traditional model indicates a similar level of profitability for OBOS (Interviewee 2, 2023). Here, the conclusions differ from HSB's view of the model as they initially set a return requirement of 2% for the co-ownership model, but are currently having difficulties achieving this target and struggle to generate profit from the model (Interviewee 1, 2023). In traditional housing acquisition, their normal return is around 10%. Whilst both OBOS and HSB acknowledge that this model demands substantial capital tie-up, there is a clear difference in the way they perceive the potential profitability associated with the model. Whilst OBOS sees a long-term and profitable application of the model, HSB mainly views it as a way to generate value for its members. According to Interviewee 1 (2023), HSB sees the benefits the model generates for their members and society as more important than the model yielding profit. This is consistent across the other studied companies as well, given that they all operate under similar cooperative ownership structures. Consequently, there is a strong emphasis on delivering benefits to their members.

Both Egnahemsbolaget and Riksbyggen also mention that the traditional model is typically more profitable than RTO due to direct returns generated from the traditional model (Interviewee 3, 2023; Interviewee 4, 2023). Utilizing RTO ties up considerable amounts of capital which, especially in the current macroeconomic climate with high interest rates, negatively impacts profitability. Interviewee 3 (2023) highlights that interest rates consume most margins in today's rental contracts and explain that their use of the model aims mainly to curb losses. Egnahemsbolaget currently operates at a monthly loss of around 1000 SEK per unit while using their RTO model, which is more favorable than holding unsold units generating a monthly loss of

about 7000 - 8000 SEK per unit. This outcome heavily depends on the interest rate however. An interest rate of as low as 2% - 2.5% would be needed to break-even, otherwise achieving the same profitability becomes challenging. Egnahemsbolaget also stated that if they had the freedom to operate like a private company in a permissive market, the RTO model would have been attractive both from a business perspective and aligned with their mission. Yet, in the current landscape of high interest rate, a substantial market increase or a more flexible rental structure would be required to cover the costs of tied-up capital and generate profit (Interviewee 3, 2023). It is further explained that the impact of current utility value legislation, proposing that increased rents or secured sales at higher prices during a market surge could enhance the model's profitability (Interviewee 3, 2023). Riksbyggen faces a similar situation, struggling with their calculations. Previously, when the market outlook was more positive with lower interest rates and inflation, Riksbyggen aimed for a 10% return, but now, just achieving profitability has become challenging (Interviewee 4, 2023).

A closer comparison of the alternative business models reveals that both co-ownership and RTO models are struggling to generate profitability in the challenging economic and market conditions. A significant challenge is the high interest rates that makes tied up capital costly for developers. The strength of a co-ownership model lies in its ability to mitigate capital tie-up costs compared to the RTO alternative. This reduction is attributed to the shared costs with the customer at the property's purchase moment. By involving the customers in cost-sharing during the property acquisition phase, co-ownership alleviates the burden on developers, resulting in a more favorable capital allocation in these challenging times. This contributes to co-ownership getting a higher profitability when compared with the RTO model. The results of the interviews reveal an important difference between the two models. Whilst Egnahemsbolaget has chosen to use RTO to minimize losses for the time being, OBOS sees co-ownership as a potentially profitable model long-term.

6.1.3. Risk and challenges

Both models increase financial risk compared to conventional sales due to two main reasons. One is that capital is bound within projects for a longer time which affects project cash flows and necessitates different strategies for evaluating risk and profit (Interviewee 1, 2023). Creating this

change in calculations and practice is however described to be very challenging for any organization let alone an entire industry. The second reason is illustrated in all interviews when rent regulations are brought up. Especially in today's climate with high interest rates, is it not possible to cover the cost of capital and development and deliver large profits with just income from law regulated rent. This in turn leads to scenarios of increased risk without a corresponding potential increase in profit to motivate it. Despite this, the studied companies still implement the alternative business models in their operations which is attributed to the underlying nature of their missions. Increased risk can thus be covered by the social contribution resulting from for example young adults being able to access the owned housing market (Interviewee 2, 2023).

The main risks for developers associated with an RTO model compared to conventional sales is the embedded insecurity stemming from the fact that units are not legally seen as sold. Developers run a risk of future issues where tenants might decline to purchase, leaving developers with potentially worn down, less attractive and outdated apartments (Interviewee 3, 2023). In today's climate there are however also large risks associated with unsold units that prompts developers to act in order to make them generate some kind of revenue (Interviewee 4, 2023). In this case it is described how an RTO model can be more attractive than lowering sales prices as the market might stabilize and even improve during the upcoming years leading to a beneficial profit in the end. However, Interviewee 4 (2023) describes how this reasoning can be increasingly risky for Riksbyggen as interest rates might continue to rise leaving developers with large scale RTO implementations highly exposed.

Co-ownership models face similar risks as RTO but are generally slightly less risky as most risk is shared between buyer and developer (Interviewee 1, 2023). There are however increased risks associated for developers compared to traditional sales. One obvious case is that banks granting loans own the first hand lien to the apartment despite the developer owning half which leaves the developer with all of the risk but little security (Interviewee 2, 2023). Both Interviewee 1 (2023) and Interviewee 2 (2023) bring up that a main source of risk stems from these types of models lacking a common industrial practice or dedicated legal framework. Its absence leads to insecurity among developers, banks, municipalities and buyers, making large scale implementation increasingly challenging. Interviewee 2 (2023) exemplifies how this was the case on the Norwegian market until two models were standardized. This facilitated existing

developers scaling up but also for new actors to establish themselves as mainly banks and buyers gained a better understanding and acceptance for the models.

6.1.4. Capital structure and financing

At the outset of a project, financing approaches for co-ownership and traditional methods used by HSB show no significant difference (Interviewee 1, 2023). They require the sale of 30% - 50% of the projects to secure a loan for the remaining investment. HSB notes that in more challenging market conditions, the threshold rises to 50%, whereas in favorable economic times, 30% suffices. Both HSB and OBOS rely on equity-based strategies for financing the model (Interviewee 1, 2023; Interviewee 2, 2023). In the case of HSB, their local associations participate in purchasing HSB's stake in co-owned apartments (Interviewee 1, 2023). Similarly, OBOS follows a comparable pattern, utilizing a subsidiary to acquire homes alongside customers. A pivotal consideration in project financing is the bank's stance. Interviewee 1 (2023) emphasizes that their model necessitates equity-based funding due to banks being hesitant to fully endorse it. This reluctance is due to the fact that banks perceive the security of the project as insufficient and do not see the property as fully sold, which complicates the interaction between banks, developers, and buyers..

Although no differences were found between the financing methods for RTO and the traditional approach in the same company, there was a difference between the companies utilizing RTO and those using co-ownership. Egnahemsbolaget utilizes a portion of its own capital and borrows the remainder from its parent group, AB Framtiden, which, in turn, borrows from the City of Gothenburg. This arrangement is deemed highly advantageous according to Egnahemsbolaget, as the municipality secures loans on exceptionally favorable terms (Interviewee 3, 2023). Subsequently, Egnahemsbolaget sets an internal interest rate on their borrowings, aligning with market rates but remaining below what conventional banks offer. Interviewee 3 (2023) regards this as a beneficial arrangement for the municipal operation in terms of value obtained against costs incurred. The financing approach remains consistent for Egnahemsbolaget, irrespective of whether they opt for lease purchase agreements or the traditional way. They are also exploring the potential of transferring entire projects to one of their affiliated companies to convert unsold units into rental apartments.

Like Egnahemsbolaget, Riksbyggen relies on loans to fund their projects, a practice they have historically followed (Interviewee 4, 2023). However, in 2020, Riksbyggen sold a substantial portfolio of rental apartments, consequently receiving increased equity that has since been utilized for project financing over the past couple of years (Interviewee 4, 2023). Yet, Riksbyggen presently faces a challenge with numerous unsold apartments, resulting in capital being tied up. In addition, Riksbyggen are also sometimes forced to buy the unsold apartments which ties up even more capital and also require them to pay monthly fees to co-operatives. Consequently, they are reverting to a more traditional business model, where they sell planned apartments before seeking bank financing for construction, a strategy activated once they reach just over 50% of sales (Interviewee 4 , 2023). The comparison between co-ownership and RTO models reveals distinct approaches to financing. Co-ownership relies on equity post-project launch, contrasting to RTO, where both parties rely on loans throughout. The interviewees consistently highlight the capital-intensive nature of both models, tying up substantial capital that affects their financial structure and ability to fund other ventures.

6.2. Case study

To finally better understand the attractiveness and applicability of the different business models, in the context of a Swedish real estate developer, a case study was conducted with the real estate development department at RealDev. Interviews were held with the following people to develop a better understanding of the company's operations, goals, and specific contextual situation.

Interviewee 5, CEO of Real Estate Development, RealDev

Interviewee 6, Project Developer, RealDev

RealDev is a construction company active in Sweden's largest regions with three main operational branches, construction, facility management, and the one which will be of focus in this study, real estate development (Interviewee 5, 2023; Interviewee 6, 2023). The company has approximately 150 employees and a turnover of about 2 billion SEK, mainly stemming from construction projects. RealDev is currently better positioned than most to manage the macroeconomic challenges of today, as the company only has a few ongoing large projects at risk of hitting the market with the current unfavorable conditions (Interviewee 5, 2023; Interviewee 6, 2023). The company however, has an outspoken strategy of reinvesting its

organizational earnings in their own projects, and are looking at ways of, how to best invest their money, and how to ensure that these investments are profitable even during these challenging times. Previously, RealDev has only sold properties using the conventional model of home ownership, but during the interviews the company CEO highlighted that RealDev is currently experiencing a new type of challenge as the company, due to the macroeconomic climate, is unable to sell a number of residential units (Interviewee 5, 2023; Interviewee 6, 2023). The company is hence actively looking for new solutions to resolve the issue.

6.2.1. NPV-analysis

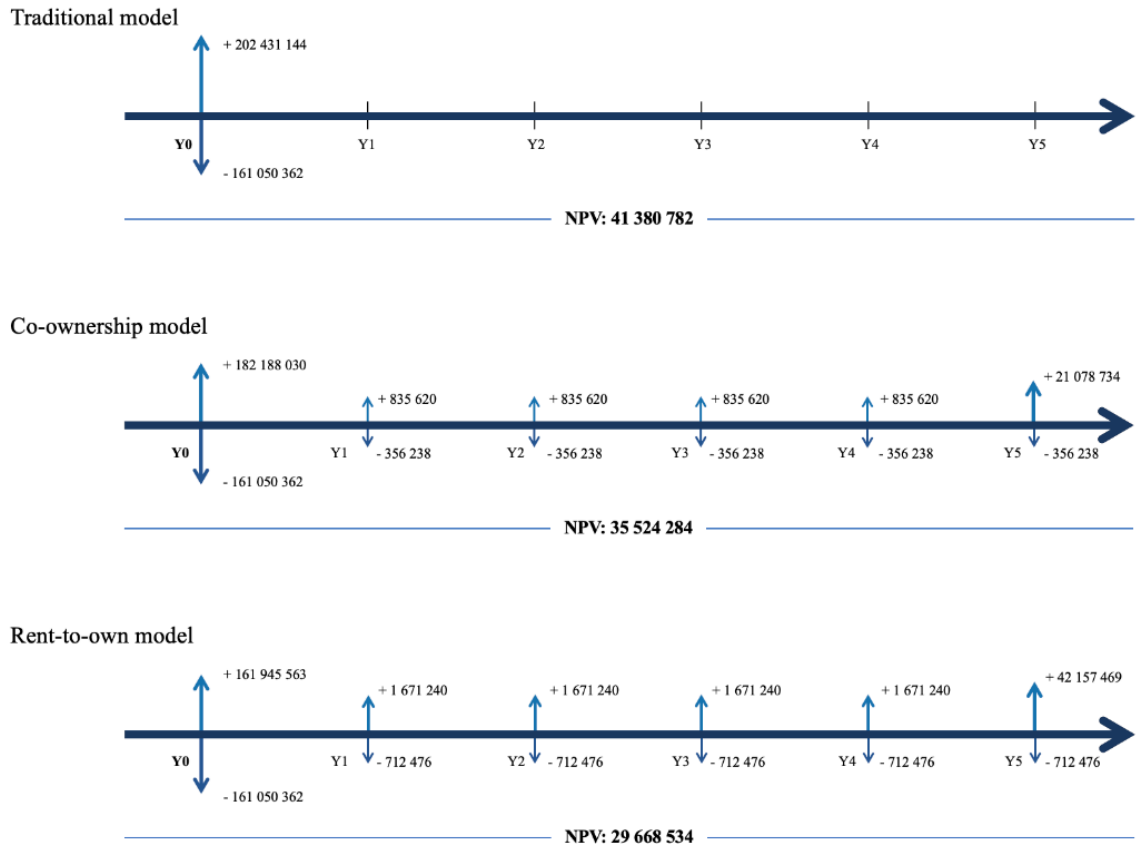
To analyze the applicability and attractiveness of the co-ownership and RTO models the net present value associated with the different models was compared for a single development project. The project that was analyzed was a residential building with 72 residential units, located outside of Gothenburg (Interviewee 5, 2023; Interviewee 6, 2023). Three NPV-analyses were generated, one where 100% of the building was sold using the traditional model, one where 20% was sold through co-ownership, and finally one where 20% was sold through RTO. For the co-ownership and RTO analyzes the remaining 80% were assumed to be sold through the traditional model. To create a fair comparison between the models, and for simplicity of calculation, the calculations assume that 100% of all units were sold. The co-ownership and RTO models that were used during the calculations were built on assumptions gathered from the previous interviews with OBOS, HSB, Riksbyggen and Egnahemsbolaget.

The RTO analysis included three main sources of cash flow. Firstly, 80% of the building is sold through the traditional model at year 0. After the initial cash flow there is both a positive and a negative annual cash flow as the buyer pays a fee to RealDev, representative of the market rent, and RealDev pays a fee to the co-operative managing the building. Finally in year 5, the remaining 20% of the building is sold. For the co-ownership model four main sources of cash flows can be identified. Firstly, same as for RTO, 80% of the building is sold through the traditional model at year 0. On top of that however, an additional 50% of the remaining 20% of the building is also sold at year 0, representing the upfront payment made by the buyer for co-ownership. Then a monthly fee, equal to 50% of the market rent, is paid yearly to RealDev by the buyer and RealDev pays a fee, equal to 50% of the fee paid in RTO, to the co-operative.

Finally the remaining 50% of the 20% is sold at year 5. All future cash flows were estimated and discounted to year 0 using a discount rate of 10%, as it was deemed to be representative of the normal returns of a development project. Figure 2 includes a visual representation of the non-discounted cash flows associated with each model, and the results from the NPV-analysis. See Appendix D for the full NPV-analysis.

Figure 2

Non-discounted cash flows associated with the traditional model of home ownership, co-ownership, and RTO.



6.2.2. Scenario analysis

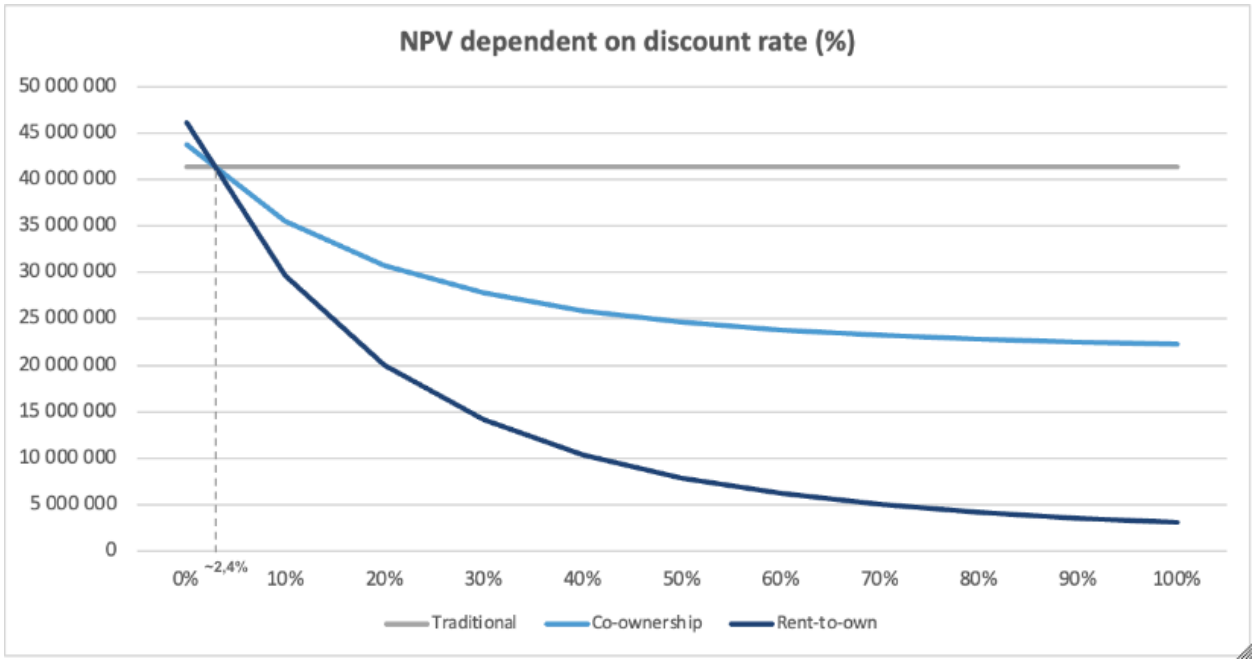
From the results in Figure 2, one can quickly see that the traditional model is the most profitable, followed by co-ownership, and RTO. This falls in line with the findings from the interviews presented earlier in the current state analysis, as the large amount of tied-up capital negatively impacts the profitability of the alternative models. Furthermore, using the results from the

NPV-analysis and assuming a scenario where the standard deviation of the returns is 15%, which is based on the variation in results if less than 100% of units are sold, the VaR at a significance level of 5% for the traditional, co-ownership, and RTO model are 1,9%, - 0,2%, and - 2,3% respectively. This once again falls in line with the results from the interviews as RTO was described to be the riskiest model for real estate developers, followed by co-ownership.

These results however, are based on a set of assumptions, which if altered could significantly impact the results of the analysis. One such assumption is that the discount rate used is 10%, which was deemed representative of the normal returns of a development project. The discount rate however is based on the company's cost of debt and cost of equity, so if these were to increase or decrease it could impact the discount rate. With the current, highly uncertain, macroeconomic climate for example, any sudden increases in interest rates could majorly impact the profitability associated with the models. Figure 3 is a representation of how the three NPV-models are impacted by changes in the discount rate that is used, all else being equal.

Figure 3

Impact of the discount rate on the three different NPV-analyses of the project



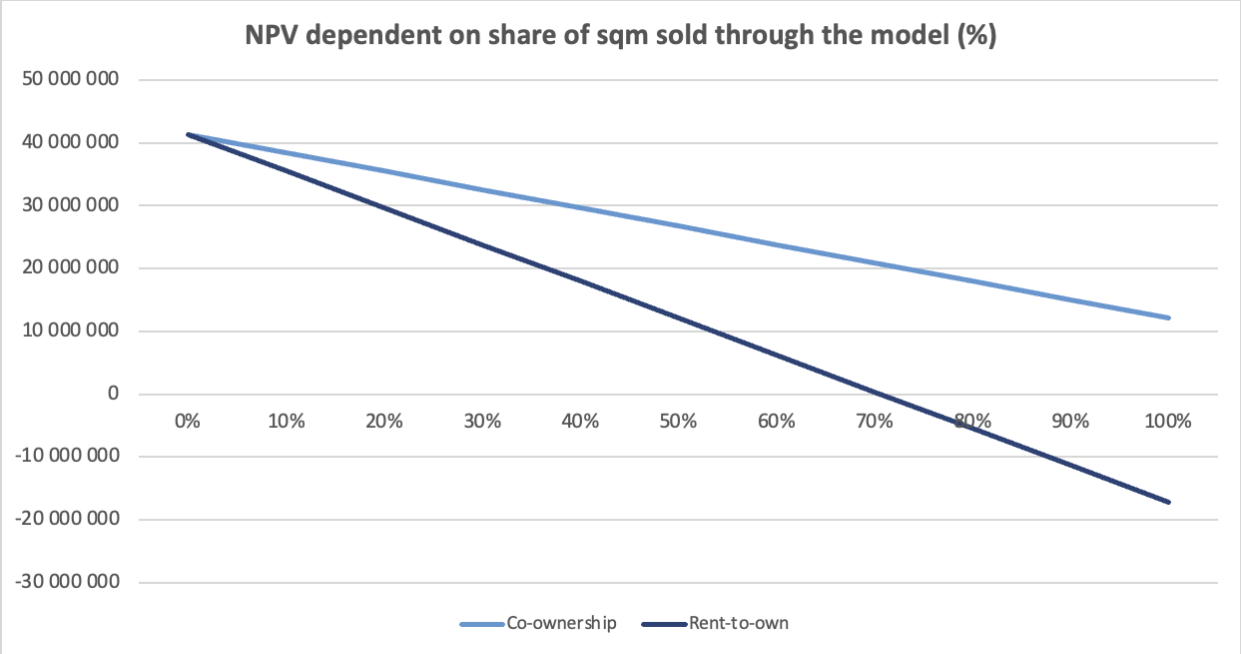
From the figure, one can see that RTO and co-ownership are actually more profitable than the traditional model whenever the discount rate is below 2,4%. After that point however, any

increase in the discount rate will quickly lead to a decrease in the profitability of the models. The RTO model is the most volatile to changes in the discount rate, which once again supports the idea of RTO being the riskiest model for real estate developers, followed by co-ownership.

Another assumption that was made during the analysis was, the share of the apartments sold using the alternative models versus the the share of apartments sold using the traditional model. In the calculations above, 20% of the building was assumed to be sold using the alternative models and 80% was assumed to be sold using the traditional model. These assumptions were based on the results from the previous interviews where most companies allowed for a maximum of 10% - 20% of apartments to be sold using the alternative models. Figure 4 illustrates how the NPV would have been affected if the share of apartments that were sold using the alternative models changed, assuming a 10% discount rate.

Figure 4

Impact of the share of apartments sold using the alternative models on the NPV-analyses



From the figure, one can see that as the share of apartments sold using the alternative models increase, the profitability of the project will decrease. This makes intuitive sense as the models are deemed less profitable than the traditional model, assuming a 10% discount rate. What stands out however is that if more than 70% of the apartments would be sold using a RTO model the

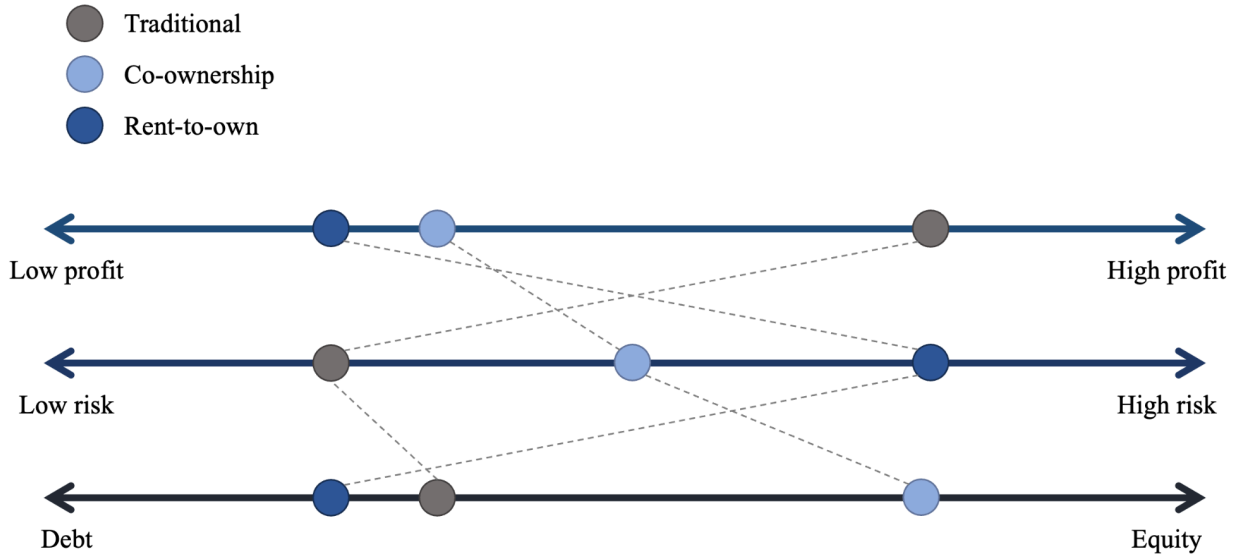
NPV would be negative. This means that although RTO may be a suitable alternative to sell some of the apartments that were previously difficult to sell, it is not an attractive model to be used at scale for the entire building, given a 10% discount rate and current rent regulations.

7. Discussion

To put the results of the study into perspective, in the following chapter the results from the interviews and the case study will be discussed and analyzed. While the results chapter above presented an objective view of how the models work today, below follows a discussion of how these models may impact the firms in the future, their potential benefits and drawbacks, and areas for future research. Figure 5 illustrates a visual summary of the results from the interviews in the current state analysis presented above.

Figure 5

Comparison between the traditional model, the co-ownership model, and the RTO model in terms of their profitability impact, associated risk, and capital structure for financing projects



Note: The ranges are all relative and based on the interview results from the current state analysis. The differences between the models are hence not to scale.

7.1. Discussion and analysis of results

An aspect which all interviewees stress is that profitability should not be solely measured in monetary terms. They advocate a broader perspective, arguing that the model not only can generate profits but also creates a social benefit which results in improving the company's goodwill, promoting a positive reputation, raising its status, and ensuring customer satisfaction. This intangible value goes beyond mere assets, creating a unique and broader value proposition for these organizations (PRV, 2021). Interviewee 1 (2023) argues that the model does not necessarily have to provide large profits for HSB, as it creates value for their organization by opening to a broader target group and potentially long-term customer relationships. The perspectives on profitability, when applying the model, vary between HSB and OBOS. This discrepancy can be attributed to OBOS's frequent utilization of the model in Norway, where it has proven to be profitable, allowing them to get valuable insights (Interviewee 2, 2023). Moreover, OBOS exhibits a more extensive integration of models compared to HSB where the model is available for all their members, compared to HSB who primarily employ it to assist individuals aged 18-35 (Interviewee 2, 2023). Interviewee 2 (2023) also believes that the model opens for more people to enter the market. Even if the model is not as profitable for OBOS in a short-term perspective, the company works to find a balance between social benefit and business sense. This is important for both property developers, as they are cooperative organizations and must meet the needs of their members. The societal benefit derived from the co-ownership model poses a challenge in direct comparison with the traditional acquisition method, as the latter lacks similar societal contributions. This unique way of generating value for the real estate developers underscores the innovative aspect of the co-ownership model. This way of attracting and building long-term relationships with mainly young customers can create added value for developers and result in long-term profitable customer relationships. For a private company like RealDev however, social contribution is desired but not a spoken goal in the operations. They instead have to find ways to make a prospective model yield a good enough risk versus reward to find it attractive and worthy of using.

One feature that shapes the trajectory of both models is the involvement of financial institutions, notably banks, and their role in shaping the capital structure. The pursuit of an optimal capital structure, one that aligns with the trade-off theory's principles, becomes a complex endeavor.

OBOS notes that the diverse, unregulated models adopted by different stakeholders make it difficult for banks to align on a comprehensive level (Interviewee 2, 2023). This difficulty contributes to their hesitance in collaborating with OBOS as banks seek a more standardized approach for greater ease of engagement. This aligns with Egnahemsbolaget insights regarding the bank's criteria stipulate that a functioning co-operative requires 60% of units to be sold and expresses skepticism toward projects involving apartments sold with an RTO model (Interviewee 3, 2023). Their primary concerns revolve around profitability, loan repayment, and security measures. Ultimately for Egnahemsbolaget, achieving a 60% sales threshold in a project is crucial to exploring alternative models in the remaining portion (Interviewee 3, 2023). These challenges are also applicable to RealDev as their ability to enter the RTO or co-owning market is severely hindered by the lack of clarity and momentum in the industry. Another challenging aspect is the immediate need for liquidity often outweighs the quest for an ideal structure, requiring a delicate balance between meeting financial obligations and securing future growth prospects. The co-ownership model's use of equity differs from RTO reliance on loans. This divergence results in Riksbyggen and Egnahemsbolaget benefiting from tax shields due to borrowed capital but potentially facing financial distress. External factors like prevailing interest rates significantly influence loan utilization, impacting profitability. Moreover, constraints imposed by Swedish rental legislation limit the ability to set competitive rents, as noted by Interviewee 3 (2023).

A future outlook of the studied models' potential shows a relative consensus from the government and this report's interviews and case study. Today, the models are found to have low to modest profitability compared to conventional sales, meaning that developers using them must see to factors other than profit when evaluating them. These other factors can be extracted from the interview results where all studied companies mention either social contribution or recouping losses on unsold apartments as their main arguments for why the model is attractive to them. They all also express that they believe the models could be profitable with certain changes in market state and legislation. The Norwegian market is brought up as an example of what would be needed in Sweden to reduce the risk and improve the potential for these alternative models (Interviewee 2, 2023). It previously saw the same issues seen on the Swedish market today and legislators made an effort to standardize and emphasize two models (co-ownership and RTO) which led to a clearer understanding among banks, developers and other involved actors which

facilitated the current upscaling seen in the market. Similar unity and clarity is requested on the Swedish market by both Interviewees 1 & 2 (2023) who argue that a clear framework would reduce risk and uncertainty and facilitate upscaling of both RTO and co-ownership models. This is also the main message presented in the governmental directive for the ongoing investigation which indicates that there is an agreement among the most central actors about what is needed to implement the studied models at a larger scale and increase their attractiveness. Another important aspect to consider when discussing the roadmap to implementation of the alternative models is the fact that they require developers to change their way of calculating and evaluating profit and risk in their projects. Interviewee 3 (2023) elaborates further on this topic as he describes that Egnahemsbolaget would have to change many of their calculations and measurements for profitability if they were to implement their RTO scheme at a larger scale. At the same time he notes that the upturn in property values seen over the past decade would have rendered apartments sold with and RTO models more profitable than conventional sales. This illustrates that this is an intricate issue that requires a strong ability to analyze and understand different market concepts in order to be successful.

7.2. Limitations and areas of future research

Although every effort was made to make the results of the study as unbiased as possible there do exist some potential sources of error which needs to be taken into consideration when analyzing the results of the study. Firstly, to complete the first step of the study a large amount of company specific information was required which was collected both through interviews and company websites. However, since only a few companies are currently using the co-ownership and the RTO model, the sample size of company perspectives is rather small. In turn, as nearly all of the information gathered came from sources in direct association with the companies that use these models, one needs to consider potential biases as the results of the study are heavily dependent on the perspectives of these companies. In order to get a more holistic unbiased view of the models a greater number of companies would need to be surveyed, which was unfortunately not possible as not enough companies are currently using these models at scale.

For the second part of the methodology, the case study of RealDev aims to provide generalisable results for the attractiveness and applicability of the co-ownership and the RTO models for

Swedish real estate developers. Once again some caution needs to be taken here, as although the results may be generalisable to a large degree, the attractiveness and applicability are also dependent on the specific contextual situation of each firm. Hence, the results of other Swedish real estate developers may be better or worse than RealDev depending on specific contextual factors. A greater number of case studies would need to be conducted at different firms, in order to make the results more generalisable for the real estate development industry as a whole.

Finally, one major risk that was identified during the non-case interviews was the risk of unsold units. As the purchasing power of the buyers is reduced there is a major risk, associated mainly with the traditional model, as buyers are unable to afford the down payment of the apartment. Although this risk is reduced through the alternative models it is difficult to quantify the extent of the reduction and it was hence decided to be left outside the scope of the case study. In the case study, it was assumed that 100% of all units were sold for each NPV-analysis and in turn the benefits associated with the reduced risk of unsold units was not considered. The reduced risk of unsold units has been identified as a major strong point of the alternative models, and the quantification of the aforementioned benefit could make an interesting area of future research. Furthermore, the NPV-calculations presented featured cash flows from future sales several years in the future that were not written up using an index. This was presented as something commonly done currently by the general interviewees and was excluded in the case calculations due to complexity and lack of time. Implementing them could bring further relevance to the calculations and make them convey more representative results.

8. Conclusion

The aim of this report has been twofold. Firstly, it seeked to conduct a thorough investigation into the current utilization and future use of alternative business models by Swedish real estate developers, through a comprehensive analysis of the potential profitability, associated risks, and the capital structure companies' use when financing projects that are sold using the alternative models. Secondly, the report has aimed to assess the applicability and attractiveness of these alternative business models within the specific context of a Swedish real estate developer through a detailed case study. The practical insights derived from this analysis are intended to

assist managers in Swedish real estate development firms, offering a nuanced understanding of the existing alternative business models, their attractiveness, and applicability.

The results show that co-ownership and RTO models are currently employed at a relatively small scale by only a few actors in Sweden compared to other markets. This is partly attributed to the Swedish market lacking a dedicated legislative or industrial framework for the studied models. A framework like this however seems likely to be developed over the coming years as a governmental investigation has been launched into the matter, in line with what has been seen as successful in other countries. Further, the studied models are less profitable and more risky than conventional sales which is the largest barrier to larger scale implementation. The lower profit levels are mainly attributed to the binding of capital required for the alternative models, as high interest rates and limited possibility to charge rent restricts the potential yield for developers utilizing the models. The developers using the models despite their limited profit potential and high risk motivate it by either accounting for the social contribution generated or by seeing it as a way to occupy and generate some revenue from unsold apartments. The case study further emphasizes these results and illustrates how cost of capital and required rate of return play a large role in the profitability of a project using one of the alternative models. In summary it can be concluded that even though the alternative models in a vacuum are less attractive than conventional sales from a purely financial standpoint, they can still prove attractive to developers in different situations with the right circumstances.

The findings of the report contribute to the existing body of research by investigating the use of co-ownership and RTO models from the viewpoint of the developer rather than from a buyer's perspective, which has dominated previous research. It is further an important and relevant mapping of the current state of the Swedish housing market in relation to the studied models. It could prove useful for industry actors seeking a broader understanding in the coming years as the governmental investigation is finished and legislative changes improving the conditions for the models might be presented.

This paper marks a bottom line for studies into this topic in a Swedish context. Future research building on the findings could benefit from more in depth data and broader scopes to further reach definitive conclusions about the impact and attractiveness of the studied models. Another

relevant area for further development is to be able to further extend the calculations and thus account for and quantify more of the risks associated with real estate projects, especially surrounding the amount of apartments sold beforehand to start a project compared to the risk of having unsold units upon completion.

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Appendix

Appendix A

Equations from the theoretical framework

Net present value

$$PV = \sum_{t=1}^{T} \frac{CF_t}{(1+r)^t} \tag{1}$$

$$PV = Net\ present\ value, \quad CF_t = Cash\ flow\ at\ time\ t, \quad r = Discount\ rate$$

Weighted Average Cost of Capital

$$WACC = \frac{E}{E+D} \cdot r_E + \frac{D}{E+D} \cdot r_D \cdot (1 - t_C) \tag{2}$$

$$E = Equity, \quad D = Debt, \quad r_E = Cost\ of\ equity, \quad r_D = Cost\ of\ debt, \quad t_C = Tax\ rate$$

Interest Tax Shield

$$PV(Interest\ Tax\ Shield) = PV(t_c \cdot Future\ Interest\ Payments) \tag{3}$$

$$t_C = Tax\ rate$$

Value at Risk

$$VaR = E(R_A) - z * \sigma \tag{4}$$

$$E(R_A) = Expected\ return, \quad z = "Worst\ case\ scenario", \quad \sigma = Standard\ deviation$$

Conditional Value at Risk

$$CVaR = \frac{1}{1-\alpha} \cdot \int_{-1}^{VaR} xp(x)dx \tag{5}$$

$$\alpha = Significance\ level, \quad p(x)dx = Probability\ density\ of\ getting\ a\ return\ with\ "x"$$

Appendix B

Non-case interview questions

Background

1. **How does the model work?**
    a. How did the model originate in your company, what was the original motivation?
    b. Why are you using this model today, are the reasons the same as when it was implemented?
    c. To what extent do you use the model (percentages of projects or total developments)?

Evaluation of model

2. **Is the model more or less profitable than the conventional model for you as a real estate developer?**
    a. How do you calculate how profitable a development project will be?
    b. What are your profitability requirements?
    c. What does your cash flow look like?
    d. Short-term vs Long-term?
3. **How does the model affect your capital structure?**
    a. How do you finance projects that are then sold using the model?
        i. Using loan or cash?
4. **What major risks do you associate with the model?**
    a. Specific scenarios and likelihood of happening?

b. How do you evaluate/calculate risk?

Other questions

5. **How does the bank view the model?**

6. **What laws and/or regulations affect these models in the country you are operating?**

    a. How do you think this may differ in Sweden?

    b. Are you expecting any legislative changes in relation to the current governmental investigation?

        i. How do you foresee them affecting your business model?

Specific for rent-to-own

7. How do you weigh risk vs reward in relation to the larger customer segment compared to your increased risk and delayed?

Appendix C

Case interview questions

Background to the company, its operations and financial goals

1. What business models do you currently use to sell newly developed properties?
    a. Do you finance the projects with debt or equity?
    b. How important are up-front payments for you in your projects?
        i. How would the projects be affected if the bulk of income from sales came after a few years?
        ii. How would this change your profitability?
2. What new challenges have been posed to you from the recent changes in the overall economy?
    a. How have they affected your operations?
    b. Have you made any changes because of it?
3. Have you considered implementing alternative business models?
    a. Why/Why not?
    b. How much do you know about these models?
4. What major challenges can you identify with implementing these types of business models in your organization?
    a. Changes in regard to operations?
    b. Changes in regard to finance?
    c. Laws and regulations in Sweden?

5. How would you decide if a business model would be attractive to implement?
    a. Which factors would you consider?
    b. How would you go about analyzing these factors?
        i. Do you have any frameworks/theories that you use?
6. What are the most important factors you consider when evaluating a new business opportunity?
    a. Are there any certain criteria related to profit or risk that have to be fulfilled in order for you to take on a project?

Evaluation of a single project

1. Could you walk us through the calculations for this project and describe how it is financed?
    a. What is the risk and expected profitability associated with the project?
2. Explain closely what your revenue streams look like in the project.
    a. How reliant are you on the up front payments to cover costs and loans?

Appendix D

NPV-analysis for the traditional model, co-ownership model, and RTO model

Traditional model

Input data

Number of years (1-10)	5	Price per sqm	46 028
Total sqm	4 398	Building cost per sqm	-36 619
% of sqm sold	100%	Income from monthly fee per sqm per year	0
Discount rate	10%		

Output data

Upfront income (traditional)	202 431 144
Investment cost	-161 050 362

Year	Y0	Y1	Y2	Y3	Y4	Y5
Income from sales	202 431 144					
Net monthly fee						
Building cost	-161 050 362					
Cash flow	41 380 782	0	0	0	0	0
Discounted cash flow	41 380 782	0	0	0	0	0
NPV	**41 380 782**					

Co-ownership model

Input data

Number of years (1-10)	5	Price per sqm	46 028
Total sqm	4 398	Building cost per sqm	-36 619
% of sqm sold	100%	Income from monthly fee per sqm per year	1 900
% of sqm sold (model)	20%	Cost of monthly fee per sqm per year	810
Discount rate	10%	Upfront pay (model)	50%

Output data

Upfront income (traditional)	161 944 915
Sales income (model)	40 486 229
Income from monthly fee	835 620
Cost from monthly fee	356 238
Investment cost	-161 050 362

Year	Y0	Y1	Y2	Y3	Y4	Y5
Income from sales	182 188 030					20 243 114
Net monthly fee		479 382	479 382	479 382	479 382	479 382
Building cost	-161 050 362					
Cash flow	21 137 668	479 382	479 382	479 382	479 382	20 722 496
Discounted cash flow	21 137 668	435 802	396 183	360 167	327 424	12 867 040
NPV	**35 524 284**					

Rent-to-own model

Input data

Number of years (1-10)	5	Price per sqm	46 028
Total sqm	4 398	Building cost per sqm	-36 619
% of sqm sold	100%	Income from monthly fee per sqm per year	1 900
% of sqm sold (model)	20%	Cost of monthly fee per sqm per year	810
Discount rate	10%		

Output data

Upfront income (traditional)	161 945 563
Sales income (model)	40 486 391
Income from monthly fee	1 671 240
Cost from monthly fee	712 476
Investment cost	-161 050 362

Year	Y0	Y1	Y2	Y3	Y4	Y5
Income from sales	161 945 563					40 486 391
Net monthly fee		958 764	958 764	958 764	958 764	958 764
Building cost	-161 050 362					
Cash flow	895 201	958 764	958 764	958 764	958 764	41 445 155
Discounted cash flow	895 201	871 604	792 367	720 334	654 849	25 734 180
NPV	**29 668 534**					