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Pre-decision control mechanisms of strategic investment decision

A multiple case study on the application and dynamism of pre-decision
controls in Swedish real estate companies

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Summary

Title - Pre-decision control mechanisms of strategic investment decision - A multiple case study on the application and dynamism of pre-decision controls in Swedish real estate companies
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Five Keywords - Strategic investment decision (SID), Pre-decision control, Commercial real estate, Property investment, Uncertainty
Purpose - The purpose of this study is to investigate how pre-decision control mechanisms are applied in strategic investment decisions, and what contextual factors could influence the pre-decision control mechanisms. To fulfill the purpose, the study examined the use of pre-decision controls in different strategic investment decision processes and the relationship between contextual factors and the dimensions of applied pre-decision controls, with a main focus on current increasing uncertainty.
Methodology - We follow a multiple case study approach where empirical data is gathered from five Swedish commercial real estate companies by conducting semi-structured interviews.
Theoretical perspectives - The theoretical framework of this study has four dimensions: (i) The definition, characteristics, and process of SID/SIDM (e.g. Harris, 1999; Alkaraan & Northcott, 2007; Northcott & Alkaraan, 2007), (ii) the definition, investment, and property management of real estate (e.g. Hamelink, 2000; Tan, Cai & Chen, 2022; Jones & Trevillions, 2022), (iii) the use and effect of pre-decision control mechanisms (e.g. Alkaraan & Northcott, 2007; Emmanuel, Harris & Komakech, 2010), and (iv) the dynamism of pre-decision control mechanisms in relation to internal and external factors (e.g. Slagmulder, 1997; Huikku, Karjalainen & Seppälä, 2018).
Empirical foundation - The empirical data is structured as follows: 1) The introduction of case companies and their SID/SIDM process, 2) Findings on the applied pre-decision controls throughout the SID process, 3) The focus and locus of pre-decision controls, 4) The perceived effect of pre-decision controls, and 5) the dynamism of pre-decision controls in relation to contextual factors.
Conclusion - This thesis provided empirical evidence that pre-decision controls are widely used by Swedish real estate companies. Based on the SID process by Alkaraan and Northcott (2007), pre-decision controls with different emphases exist in each stage of SID. In the case companies, applied pre-decision controls have more similarities than differences. We conclude that the differences in pre-decision control mechanisms could be attributed to the factors such as organisational strategies, geographical focus, and property portfolio. In the context of the dynamism of pre-decision controls, we contribute to previous studies by investigating some propositions and conclusions by Slagmulder (1997), and Huikku, Karjalainen & Seppälä (2018). Specifically, our study of the changes in pre-decision controls is time-sensitive by taking the current issues into account.

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1. Background

The investment decision has been discussed for the last decades. Strategic investment decision (SID), the investment decision with a long-term impact on the organisation's strategic focus, was identified and defined by Northcott and Alkaraan (2007) by seven characteristics: non-programmed and unusual, substantial, complex, long-term, competitively orientated, uncertain, and subjective (Northcott & Alkaraan, 2007). Limited information makes it hard to understand SID at the beginning since the objectives and ideas about investment are very vague (Mintzberg, Raisinghani, & Théorêt, 1976). Generally, SID could be the investment in new business, expansion to a new market, new product development, and mergers and acquisitions (Northcott & Alkaraan, 2007). For real estate companies, strategic investments include acquiring buildings, expanding to new geographic regions and developing existing property (FI, 2019).

Management control mechanisms in investment decision-making processes can be divided into pre-decision controls and post-decision controls (Huikku, Karjalainen & Seppälä, 2018). Pre-decision control is the control mechanism implemented before the final investment decision. During different SID processes, several types of pre-decision controls are applied for multiple purposes (Alkaraan & Northcott, 2007). The pre-decision control mechanisms could be influenced by internal and external factors (Slagmulder, 1997; Huikku, Karjalainen & Seppälä, 2018), the changes in organisational strategies, macroeconomic conditions, and other contextual factors have the influence on the use of pre-decision controls in different dimensions such as frequency, locus, and tightness (Huikku, Karjalainen & Seppälä, 2018).

Historically, the Swedish real estate industry has been seen as a stable environment and technical-oriented (Palm, 2015). Decades of economic growth and the combination of good access to capital with low-interest rates had led to real estate prices increasing enormously in Sweden (FI, 2019). By 2017, the market value of Swedish real estate is worth 12,000 billion SEK and the listed real estate companies on Stockholm Stock Exchange cover a third of the value, while the institutional investors cover 28 per cent of the value (Katzler, 2017a).

However, in the past, certain crises occurred in the Swedish real estate industry. For instance, during the financial and real estate crisis in the 1990s, the demand for real estate decreased and the interest rate increased (FI, 2019), and the tax system was also reformed (Lagen, 1995). This

led to several consequences such as a decrease in the value of the property, and during the crisis, many commercial real estate companies went bankrupt (FI, 2019). Similarly, the 2007-2008 global financial crisis affected Sweden when the US financial sector was under high pressure from the collapse of the real estate market (Magnusson, 2021).

Currently, a similar story is happening with a series of events such as the COVID-19 pandemic, the war in Ukraine, and the increasing energy price. The impact of these events has been spreading in Sweden's economy, in the last two years, the Riksbank's policy rate has to be raised to control inflation in Sweden (Sveriges Riksbank, 2023a). Real estate companies are very sensitive to increases in interest rates (FI, 2019) and the operating cost and maintenance costs will also increase if inflation maintains at a high level (Fastighetsnytt, 2022a).

1.1 Problematization

Problematization from a practical aspect: current condition of real estate and pre-decision controls

Real estate is always affected by macroeconomic issues and other environmental factors. The financial crisis in 1990 and 2008 affected commercial real estate companies (Sveriges Riksbank, 2017). After this crisis, the banks focused on cash flows and yields instead of the market value of the real estate (Sveriges Riksbank, 2017). However, the market value is still important. The Swedish commercial real estate industry is equal to 40 per cent of the Swedish GDP and is a capital-intensive industry (Sveriges Riksbank, 2017). Commercial real estate companies are exposed to interest risks and refinancing risks, while banks are exposed to credit risks (Sveriges Riksbank, 2017). The main point is that most commercial real estate companies are limited companies and in case of bankruptcy, the banks will not receive any money back.

The ongoing inflation level in Sweden is 8 per cent for March 2023 which is much higher than 2 per cent which is the target of the Riksbank (Sveriges Riksbank, 2023b). If the interest rate increases gradually, the real estate companies can still handle the loans by refinancing the loans to higher interest rates (Sveriges Riksbank, 2017). However, it is assumed that the rent from the tenants increases gradually to reduce the negative effects on the interest coverage ratio. The recent COVID-19 pandemic provided some evidence of the events that could influence the real estate market and business (Ali & Song, 2022; Holostencu, 2022). According to Holostencu (2022), the real estate business and its role in Europe have changed systematically after the

pandemic and the current worsening macroeconomic conditions and ongoing war in Ukraine also created more turbulence in the European real estate market. The ongoing uncertainty makes our study interesting in that we want to explore the relationship between uncertainty, other contextual factors, and the pre-decision controls in real estate. In addition, this study could bring suggestions for practitioners through empirical findings.

Problematisation from a theoretical aspect: How do companies apply the pre-decision controls of strategic investment decisions

It is assumed that managers with the same information for decision-making will reach the same rational decision to maximise economic profit and judgement is not needed (Emmanuel, Harris & Komakech, 2010). However, strategic investment decisions are a challenge for managers to handle uncertainties since there is no perfect information to make a rational decision. Commercial real estate companies will always encounter uncertainties while making strategic investment decisions. Strategic investment decisions have an integrated process with stages and a feedback loop (Haynes and Solomon, 1962; King, 1975; Harris, 1999 in Emmanuel, Harris & Komakech, 2010). However, the company does not necessarily have formal stages and the number of stages is also unclear. Evaluation and analysis are also a part of the process (Emmanuel, Harris & Komakech, 2010). Different levels of managers will participate in different stages in the process and will not have access to all relevant information (Emmanuel, Harris & Komakech, 2010).

There are a lot of financial and non-financial techniques to analyse or evaluate real estate investments, but it is not much known about the holistic view behind the final decision in strategic investment decisions for real estate companies. It could be assumed that many companies use standard developed methods to evaluate investments such as cash flow, yields and capital value which is very common (Jones & Trevillion, 2022). Pre-decision controls for strategic investments include many different controls (Huikku, Karjalainen & Seppälä, 2018), and what kind of pre-decision controls companies apply is lacking in previous theoretical papers. There is not much research on how real estate companies use pre-decision controls to optimise strategic investment decisions. It is therefore interesting to study the pre-decision control process of companies and investigate what kind of pre-decision controls they use before making the final decision to what extent, tightness, and frequency.

1.2 Purpose

The purpose of this study is to examine how commercial real estate companies in Sweden use pre-decision control in strategic investment decisions and what contextual factors affect the use and design of pre-decision controls in different dimensions. By doing this, the authors hope to contribute to a better understanding of what kind of pre-decision controls commercial real estate companies base their decisions on before finalising the investment decision. Therefore, two research questions of this thesis are:

RQ1: How is the pre-decision control mechanism used and designed throughout the SID process?

RQ2: What factors and elements affect and influence the pre-decision control mechanism?

To fulfil the purpose and analyse the research questions, a multiple case study will be conducted. Semi-structured interviews will be conducted with commercial real estate companies with high-level managers who have knowledge about the strategic decision-making process. This study aims to get a better understanding of what kind of pre-decision controls exist in big Swedish real estate companies and how they design the pre-decision control mechanisms. There is not much literature about these areas of commercial real estate companies which links to the ongoing uncertain situation, therefore, the authors aim to fill this gap by conducting this research.

1.3 Outline

This report is structured as follows. In the methodology section, the chosen research method is introduced and discussed. This is followed by a theoretical background, where relevant aspects of strategic investment decisions, pre-decision controls mechanism and real estate are reviewed from a theoretical perspective. In the empirical findings section, findings from case companies are presented. Next, the discussion section focuses on the findings and discusses the findings in relation to pre-decision controls of existing literature. In addition, contributions, limitations, restrictions, and future research are also discussed. The last section summarises a conclusion.

2. Methodology

In this section, methodological choices will be discussed. A description of why a certain method was used and why it is the best choice. The methodology section is structured as follows: The first subsection describes the choice of research design. The second subsection describes the selection of companies and interviewees and how data was collected. The third subsection describes how the analysis was conducted. The fourth subsection describes a discussion about reliability and validity. The last subsection describes ethical considerations in the research.

2.1 Research design

To be capable of conducting in-depth interviews with real estate companies, the most suitable research design for this study was comparative design. Bryman and Bell (2015) explain that this design uses identical methods in two or more cases and embodies a logic of comparison. Furthermore, when many cases are compared, it implies a better understanding of the phenomena. The comparative design allows both quantitative and qualitative research and can take the form of a cross-sectional design (Bryman & Bell, 2015). In addition, the cross-sectional qualitative design collects data from interviews while the cross-sectional quantitative design collects data from surveys. By choosing the comparative design, it is possible to compare how different real estate companies use pre-decision control and investigate if their controls are the same, similar, or totally different. In addition, by choosing the qualitative approach, it is possible to ask follow-up questions during the interviews to get more information about a certain answer while the quantitative approach with surveys can not.

As the purpose of this study was to examine how commercial real estate companies in Sweden use pre-decision control in strategic investment decisions and how different factors affect the use and design of pre-decision controls., it is of utmost importance to use a method that allows in-depth data collection. The qualitative study allows us to learn more about events in different case companies. As a result, a multiple case study is the best choice for our research.

2.2 Data selection and collection

2.2.1 Selection of cases

This study was limited to commercial real estate companies which invest in projects as strategic investments. The authors aimed to interview five commercial real estate companies. When choosing cases, Yin (2014) explains that it is important to have access to the cases such as interviews and only choose the cases that will illuminate your research question. In this research, the authors already had access to four large commercial real estate companies in Sweden from the previous study. The fifth company was chosen from a list of the top 20 biggest real estate companies in Sweden (Fastighetsnytt, 2022b). The other four cases were also included in the list. The case companies represent a large part of the real estate industry in Sweden when it comes to the market value of properties and geographical locations.

2.2.2 Selection of Interviewees

When selecting interviewees from the companies, the interviewee should know pre-decision controls of SID. From previous experience, it has to be someone at the top level such as the regional manager or experienced project leader. Similar positions like those are eligible to participate in our study because they have knowledge about pre-decision controls and have been involved in the SID process. The process to find interviewees was to look at their web pages to find high-level managers and a phone number to call. When finally calling the managers, the strategic investment and pre-decision control were explained to them to make sure that they really knew what they were discussing. The authors managed to find interviewees in the first call and only one company which recommended someone else who was responsible for pre-decision controls. After making an appointment, the interviewees received a confirmation email.

The appointments were made one month in advance to make sure that they have time to do the interviews at their office. One week before the interview, one document with a short description of pre-decision controls and strategic investments was sent to the interviewees' email. Three open questions were also included in the email to give them time to reflect and prepare for the interview (see Appendix 1). No potential interviewee cancelled the interviews except for changing the appointment day through an email.

2.2.3 Data collection

Pre-decision controls can be very complex and complicated in each of the companies and the purpose was to get more detailed information by conducting interviews. In qualitative interviews, it is allowed to have a rambling interview which gives the interviewee the possibility to talk about what is relevant and important (Bryman & Bell, 2015). In addition, it also allows the interviewers to depart from the interview guide and ask new questions to follow up on replies from the interviewees. Furthermore, it is also possible to ask questions from the interview guide in different orders and ways. Primary data was collected through interviews with each case. As a complement to the interviews, secondary data such as annual reports were used to gather basic information about the interviewed companies to present basic information about them.

Semi-structured interviews were chosen to give the authors flexibility during the interviews. The interviews started with the authors informing about being anonymous and asking for permission to record the interview. Then, describe the master thesis project, pre-decision controls and strategic investments. An interview guide (see Appendix 2) was used to guide us through the whole interview and was based on the three questions the interviewees received in advance. Questions were prepared for each of the three questions to guide the interviewee to provide us with good answers. The interview guide was divided into four parts. The first part consisted of basic questions about the interviewee, title, and experience. The second part was the main part with an open question where the interviewee was asked to describe one or more projects and describe the pre-decision controls. Follow-up questions were asked frequently during the second part to help the interviewee to reflect, and it also helped us to get good answers. In the third part, the interviewee was asked to tell us if they can see any positive or negative effects of pre-decision controls. In the last part, questions about previous events and uncertainties were asked to let the interviewees explain if they learned anything from that and if that has affected their work today.

Four of the five interviews were conducted mainly in English with Swedish to support some words. Every interview was recorded by electronic devices. The records were run in online software called Google Speech-to-Text to help us to transcribe the record into English text automatically. A disadvantage of this study was that it lacked respondent validation due to the time limits which is the process that send a draft of transcription to the participants to confirm everything is understood correctly (Bryman & Bell, 2015).

In the interview with one of the companies, Swedish was used instead of English and was transcribed and translated to English manually. Conducting the interviews in first language allowed interviewee to provide more information. The authors discussed how to interpret words and sentences to present the findings in a structured way.

The following table summarises the cases. However, one case (Company E) was excluded from the findings and the reason for that was that the interviewee was not able to provide us with enough data on the telephone.

Company	Position	Interviewee	Years in the company	Date	Communication	Duration
Company A	Project Manager	Interviewee A	5+	2023-04-18	Visiting office	60 min
Company B	Regional manager	Interviewee B	10+	2023-04-25	Visiting office	50 min
Company C	Regional manager	Interviewee C	10	2023-04-27	Visiting office	60 min
Company D	Business area manager	Interviewee D	5+	2023-05-03	Visiting office	50 min
Company E	Regional manager	Interviewee E	10+	2023-04-24	Telephone	40 min

Table 1: Interview Summary

2.3 Analysis of data

The quality of the collected data was very important. Therefore, a quality check has been done by the authors. Data that was considered irrelevant has not been presented. In addition, each interview has to be completed with a holistic picture of the company's pre-decision controls of the SID process.

When analysing the findings, it was possible to answer the research questions. The transcription of interviews provided precise textual data for our empirical analysis. Direct quotes are used in Empirical findings, and the authors also double-checked the answers we collected from the interviews to make sure that all the information is correct and without any contradictions. During the analysis, only relevant data will be presented and the data with potential representativeness problems will not be included. In addition, the empirical findings are discussed in relation to previous research, and this method is in line with the approach by Yin (2009).

2.4 Reliability and validity

Bryman and Bell (2015) discuss reliability and validity. According to LeCompte and Goetz (1982) in Bryman and Bell (2015), reliability can be divided into external reliability and internal reliability while validity can be divided into internal validity and external validity. Validity can be explained as you are observing, identifying, or measuring something you say you are doing (Mason, 1996 in Bryman & Bell, 2015). External reliability is the degree to which a study can be replicated (LeCompte & Goets, 1982 in Bryman & Bell, 2015). In this study, a detailed description of how the study was conducted was presented. It is possible to replicate the study but the choice of companies, focus areas or countries can affect the result. Internal reliability means one or more members of a research team discuss and agree on what they see and hear (LeCompte & Goets, 1982 in Bryman & Bell, 2015). All the collected data were recorded and transcribed together before deciding what to include in the findings. This required the authors to discuss and sort out relevant data and exclude irrelevant data.

Internal validity means there should be a good match between the researchers' observations and the theoretical ideas they develop (LeCompte & Goets, 1982 in Bryman & Bell, 2015). To increase the validity, questions in the interview guide were based on the theoretical framework used in this research. The questions were made to be able to answer the research questions about how real estate companies use pre-decision control in SID and how different factors affect the use and design of pre-decision controls. The questions were sent to the participants one week in advance and it also included explanations of what pre-decision control and SID are to avoid misunderstandings. The observations in the research met our expectations and it was possible to generate theoretical ideas.

External validity is the degree to which findings can be generalised across social settings which in qualitative research can be a problem because they use case studies and small samples (LeCompte & Goets, 1982 in Bryman & Bell, 2015). In addition, Bryman and Bell (2015) discuss that findings in one case cannot represent all the other cases. Cases cannot be generalised in the whole industry (Bryman & Bell, 2015). This study consists of five cases with five interviews which cannot be generalised in the whole Swedish real estate industry. To be able to generalise, it is necessary to do a more complex study and include a huge amount of commercial real estate companies. This study does not aim to generalise but to get a better understanding of what kind of pre-decision controls exist in the big Swedish real estate industry.

2.5 Ethical Considerations

Bryman and Bell (2015) discuss the importance of ethics in business research. They especially mention four areas: the risk the participant can getting harmed, informed consent, invasion of privacy and deception (Bryman & Bell, 2015).

In the early stages where the authors were looking for participants, the participants were informed about the master thesis, the topic of the study, and a description of pre-decision control and strategic investment. They were also offered to be anonymous. During the interviews, to make sure that they only reveal relevant information and not sensitive information about themselves or the company, they were asked if it was ok to publish the company name and their name. This for sure made them think about not revealing sensitive information but they agreed. This is according to informed consent where the participants received information and could voluntarily decide if they want to participate (Bryman & Bell, 2015). Deception is when research represents something else than what the researchers have informed (Bryman & Bell, 2015). In this research, the authors have been honest with the participants about the purpose of the master thesis which also made the participants show interest in the topic.

The topic was not so sensitive that the participants would leak confidential information. What could be perceived as sensitive information was the working process of pre-decision control which could be unique for them. The interviewees' names in this research were kept anonymous because the data can be perceived as sensitive by the interviewees. Therefore, their names were denoted by A, B, C, D and E. In addition, it also makes it easier to follow the study. The authors discussed if they should reveal the company names or not and decided not to reveal them because the specific

titles the participants had in the companies could easily be identified. Bryman and Bell (2015) mentioned harm to career prospects or future employment which could happen if the participants reveal too sensitive information. However, the participants were free to talk during the interview and the open questions gave them the opportunity to just talk about what they perceive as not sensitive. When people agree to participate, it does not mean they have to reply to everything (Bryman & Bell, 2015). Furthermore, when they refuse to reply to questions, it can be due to questions about their privacy or other areas they perceive as sensitive (Bryman & Bell, 2015). For some reason, the participants replied to almost all the questions in a satisfying way and also showed commitment to the research.

3. Theoretical background

The following review has three objectives to build a theoretical basis for our research: The first objective is to make a clear definition of SID and get an understanding of different process models of SID. The second objective is to review the previous literature in the area of pre-decision controls to gain knowledge about different aspects of it. The last objective is to summarise the real estate industry by its definition and previous real estate study related to SID pre-decision controls, and uncertainty which we will discuss in discussion.

3.1 Strategic investment decision (SID)

3.1.1 Definition and Characteristics

According to Northcott and Alkaraan (2007), SIDs have a significant impact on the future direction of organisations and involve critical long-term financial commitment under high levels of uncertainty. Organisations usually have limited information and understanding of the situation related to SID at the beginning and have only vague objectives and ideas about the investment (Mintzberg, Raisinghani, & Théorêt, 1976). In addition, strategic investments are important for improving an organisation's long-term performance (Van Cauwenbergh, Durinck, Martens & Bogaert, 1996). For example, investment in a new business, expansion to a new market, new product development, and mergers and acquisitions (M&A) are strategic investments with long-term goals and complexity (Northcott & Alkaraan, 2007; Slagmulder, 1997; Van Cauwenbergh et al. 1996).

SID is characterised by different studies associated with strategic investment and its processes (Mintzberg, Raisinghani, & Théorêt, 1976). One comprehensive summary of SID's characteristics is the seven characteristics summarised by Northcott and Alkaraan (2007), they described strategic investment decisions as non-programmed and unusual, substantial, complex, long-term, competitively orientated, uncertain, and subjective.

Northcott and Alkaraan (2007) also discussed the differences between operational investment and SID. The major difference is whether the investment could be conceptualised by managers and analysed by existing decision-making protocols (Northcott & Alkaraan, 2007). This is supported by Mintzberg, Raisinghani and Théorêt (1976) noting that only after going through an iterative and discontinuous process can the organisation gain a clear understanding of the dynamics of SID to make a final decision. Another notable difference is that operational investment is close to current operations and short-term activities, in contrast, SID is long-term and connected with a new strategic direction (Northcott & Alkaraan, 2007).

3.1.2 Process of SID

A variety of staging models of investment decision-making or SIDM from literature focused on different theoretical backgrounds and empirical findings. The staging models provide not only the sequential process of investment but also a location for different study areas such as appraisal approaches, strategic analysis techniques, and pre-decision control mechanisms (Alkaraan & Northcott, 2007; Northcott & Alkaraan, 2007; Huikku, Karjalainen & Seppälä, 2018). Table 2 visualises four streams of staging models from previous research.

King (1975) analysed capital budget theory and sought a solution for improving capital investment. His model pointed out that investment decision-making involves different processes which are the key to the acceptance of proposals. Northcott and Alkaraan (2007) mentioned that the success of an investment decision depends on the early stages from King's (1975) model, and the post-decision review or post-audit combined with late stages also has a positive effect on organisations. Harris (1999) designed a strategic investment appraisal process based on the study of risk assessment in European logistics organisations. Compared to a straightforward process, Harris' model included feedback processes or adjustment decisions located between each stage. Similar to King (1975), Harris (1999) also emphasised that pre-decision and post-decision control mechanisms play an important role in an investment decision. Harris' (1999) model could be the fundamental tool of some research topics such as the cognitive and social

behaviour of decision makers throughout the whole capital investment decision process (Emmanuel, Harris & Komakech, 2010). Some investment decision-making models based on more specific research questions created the connection between the investment process and other elements to analyse the influence among them. Alkaraan and Northcott (2007) developed a model to seek the influence of pre-decision control mechanisms on the SIDM process. Different control mechanisms are linked with specific SIDM processes, and managers implemented different levels of control and focus during early and late processes (Alkaraan & Northcott, 2007). Roberts and Henneberry (2007) developed a normative model of the property investment decision-making process based on a study in different European countries. From aforementioned, the SIDM process(es) with different focuses also presented a look at the stage-gate process which was developed by Cooper (2008). The author also mentioned that organisations need to adjust each specific process to make it more efficient and suitable for their own projects (Cooper, 2008). Reddy, Higgins and Wakefield (2014) investigated Australian institutional investors' property allocation decision-making process. They found out that the process is an interactive, sequential, and continuous process. The investment process also includes many internal and external decision-makers and is supported by feedback loops (Reddy, Higgins & Wakefield, 2014).

	King (1975)	Harris (1999)	Alkaraan and Northcott (2007)	Roberts and Henneberry (2007)
Stage 1	Triggering	Ideas and opportunities	Identification	The setting of initial investment goals
Stage 2	Screening	Preliminary assumptions	Evaluation	Formulation of decision-making strategy
Stage 3	Definition	The divisional executive team views	Selection	Search
Stage 4	Evaluation	Detailed assumptions	Implementation	Information input

Stage 5	Transmission	Divisional executive team judgement	Prediction of outcome
Stage 6	Decision	Group board criteria	Application of criteria
Stage 7	Execution	Measured outcome	Screening
Stage 8			Selection
Stage 9			Negotiation and post-investment activities

Table 2: Four streams of staging models from previous research

3.2 Pre-decision control mechanisms

Management control includes the systems and devices which managers implement to ensure a good alignment between employees' behaviours and the organisation's strategies (Malmi & Brown, 2008). For investment decision-making, management controls exist in different investment processes. Taking the decision process as a midpoint, management controls could be separated into pre-decision controls and post-decision controls (Huikku, Karjalainen & Seppälä, 2018). On one side, pre-decision controls refer to the control mechanisms implemented before the investment decision (Alkaraan & Northcott, 2007). On the other hand, post-decision controls such as post-auditing are the control mechanisms used after the investment decision-making and monitoring stages (Huikku, Karjalainen & Seppälä, 2018; Huikku & Lukka, 2016). In aggregate, management controls' function is in different processes of investment decision making and according to Malmi and Brown (2008), the management control systems could be described as a package in the organisation.

Pre-decision control mechanisms have been found in the investment process by previous literature (Burns & Walker, 2009; Haka, 2007). The specific examples of pre-decision controls are sensitivity analysis, the required payback period, the required rate of return, formal rules, and formal procedures (Huikku, Karjalainen & Seppälä, 2018). The most common type of pre-decision control is the formal procedures, standards, and rules introduced during the early stages of capital

investment (Arnold & Hatzopoulos, 2000; Alkaraan & Northcott, 2007; Huikku, Karjalainen & Seppälä, 2018). Applied techniques related to investment approval limits such as hurdle rate are another typical type of pre-decision control (Simons, 2000). The pre-decision controls involved different hierarchical levels (Simons, 2000). Critical strategic investments always require control mechanisms or approval from the board of directors (Melgin, 2016). Top management is often responsible for establishing formal procedures, financial estimation, and rules for other employees to set boundaries on their behaviours and decisions (Miller & O'Leary, 2007). The interaction between different hierarchical levels and the strategic alignment in the organisation are also the objectives of pre-decision control mechanisms (Emmanuel, Harris & Komakech, 2010; Alkaraan & Northcott, 2007; Slagmulder, 1997; Jørgensen & Messner, 2010). Risk tools are beneficial for companies, especially early in the investment process (Alkaraan & Northcott, 2007; Abdel-kader & Dugdale, 1998), but limited companies implemented sophisticated risk-controlling techniques (Pike, 1996; Arnold & Hatzopoulos, 2000).

For real estate companies, pre-decision controls related to financial analysis and techniques are widely used. In commercial real estate companies, strategic investments are for example acquiring real estate or investing in new productions (FI, 2019). Tan, Cai and Chen (2022) explained that investing in real estate is very risky and requires large investments. Therefore, it is a must to make accurate estimations in the planning stage of the project and it includes investment and cost of the project, economic benefits and investment decisions. The reasons for that are the cost of the projects are complex since each project is unique and there are many changing factors that make the project uncertain (Tan, Cai & Chen, 2022).

Jones and Trevillion (2022) described basic concepts for underpinning investment decision-making. According to FI (2019), when real estate companies finance real estate, financing risk exists. The average loan-to-value ratio for the Swedish commercial real estate companies was 55 per cent in the third quarter of 2018 and the banks' total issued loans to commercial real estate companies were 43 per cent of the total issued loans to companies in Sweden (FI, 2019). When a recession emerges, there is a risk that the commercial real estate companies' debt is increasing and leading to increased interest costs and thus leading to expensive refinancings and difficulties to get a loan (FI, 2019).

Comparing yields between different investments requires the investor to know about the capital value of the real estate and the rental income to calculate the expected value of the yield in per

cent (Jones & Trevillion, 2022). By comparing different investments, it is possible to assess which investments are expensive and which investments give a high yield. Furthermore, an investor might accept real estate with a low initial yield if there is a possibility of growth in future income (Jones & Trevillion, 2022). When investing in real estate, the rate of return should be higher than the return for putting your money in the bank because investing in real estate means you are taking a risk (Jones & Trevillion, 2022). Discounted cash flow is another way to evaluate real estate investments to determine the market value (Mütze, Senff & Möller, 2012; Jones & Trevillion, 2022). It takes the consideration of expenditures and income to determine the cash flow for every year (Mütze, Senff & Möller, 2012; Jones & Trevillion, 2022: FI, 2019).

In addition to the above-mentioned perspectives of pre-decision controls, Alkaraan and Northcott (2007) systematically analysed the influence of pre-decision control mechanisms on the SIDM process. The authors conducted surveys and interviews with managers to investigate the managers' perceived impact of pre-decision controls on their decision-making process. In general, pre-decision controls have a huge impact on SIDM behaviours and SID projects (Alkaraan & Northcott, 2007). Another key finding from Alkaraan and Northcott (2007) is that the achievement of overall alignment between the organisation's strategies and SID by setting formal controls is the critical pre-decision control at early stages.

The change and dynamism of pre-decision control mechanisms is another interesting research topic. Slagmulder (1997) analysed control changes from several investment projects to examine the strategic fit in a dynamic way with the changes in environmental conditions. According to Slagmulder (1997), both the internal and external environment such as changes in the competitive environment, and organisational structure require adaptation and adjustment of pre-decision controls. Huikku, Karjalainen and Seppälä (2018) explored the relationship between some specific variables and pre-decision control adaptations. From their study, they found evidence that the increased financial pressure, more emphasis on exploitative activities and more frequent change in management is related to more implementation of pre-decision controls (Huikku, Karjalainen & Seppälä, 2018).

3.3 Real estate

3.3.1 Definition

Tan, Cai and Chen (2022) have two definitions for real estate, the narrow definition and the broad definition. The narrow definition is that real estate is a physical object and stands for land and buildings. The authors also explain that in China, real estate includes both commercial and non-commercial real estate in rural and urban areas. The broad definition is like the narrow definition, but it also consists of the associated rights and responsibilities, such as ownership rights, the right to dispose of, and the proper to receive benefits (Tan, Cai & Chen, 2022). Tan, Cai and Chen (2022) divide real estate into two categories: residential housing and non-residential real estate where nonresidential real estate is divided into real estate for business, office, industry, agriculture and special purposes.

3.3.2 Investment decision in real estate

The most typical investment in real estate is the acquisition of properties. According to Jones and Trevillions (2022), there are two ways of acquiring buildings, direct investments, and indirect investments. The characteristics of acquisition property are in line with the definition of SID (Northcott & Alkaraan, 2007). The major project of a real estate company could affect the long-term strategic portfolio and the property portfolio is a significant element of risk reduction for property investors (Hamelink, 2000). The diversification of the property portfolio includes the types of property, geographic regions, and other dimensions (Hamelink, 2000). The benefits of diversified geographic regions and economic regions are various in different markets, for example, in the US the diversification strategies based on the economic region could result in more benefits compared to the diversification strategies based on geographical regions (Miles & McCue, 1982). And in the UK, Hoesli, Lizieri and MacGregor (1997) analysed different dimensions of property diversification and found that property type is the most critical dimension. Another study by Lee and Byrne (1998) also mentioned the importance of property type and they developed an efficient portfolio by sectoral, regional, and functional classifications. The dimensions of property diversification are limitless, Hartzell, Eichholtz and Selender (1993) investigated European property portfolios by employment characteristics and reported that similar regions are scattered in Europe. The result by Hartzell, Eichholtz and Selender (1993) also suggested that the study of property diversification should focus on the smaller and economically homogeneous areas. The studies of property diversification are highly diversified by study

methods, regions, models, focus groups and applied theories. The common strategy of property diversification management is to maximise homogeneity within a single group and maximise heterogeneity between groups (Hamelink, 2000; Katzler, 2017b). An interesting conclusion from the study by Katzler (2017b) pointed out that although the diversification strategies based on purely geographical regions have limited support by literature, however, the result of the Swedish real estate market illustrated that the strategy is efficient.

3.3.3 Uncertainty in real estate

Another strand of the literature analysed the effect of environmental uncertainty and informational factors on the real estate market. The uncertainty of the real estate market is related to the change in real estate policies and regulations, the occurrence of natural disasters and social events, the development of new technologies, and the situation of economic downturns (Gupta, Sheng & Ji, 2021; Ali & Song, 2022; Majid, Said, Huat & Razali, 2022; Holostencu, 2022; Chen, Mo, Tang & Li, 2023). For example, Chen et al. (2023) measured the real estate policies in China and revealed the positive relationship between policy uncertainty and real estate industry uncertainty. The recent COVID-19 pandemic provided some evidence of the events that could influence the real estate market and business (Ali & Song, 2022; Holostencu, 2022). According to Holostencu (2022), the real estate business and its role in Europe have changed systematically after the pandemic and the current worsening macroeconomic conditions and ongoing war in Ukraine also created more turbulence in the European real estate market. Other natural disasters also have different types and degrees of impact on the price of real estate. According to Gatzlaff, McCullough, Medders and Nyce (2018), hurricane mitigation systems could positively increase the price even if the system is not disclosed. Social factors such as the risk of sex offences negatively affect the price, and the move in or out of sex offenders could create a drastic drop or rebound, respectively (Pope, 2018).

Many scholars have been interested in the influence of information and how decision-makers interpret the relevant information (Admati, 1989; Malmendier & Nagel, 2011; Agarwal, Driscoll, Gabaix, & Laibson, 2008; Gallagher, 2014). The efficiency of information in the real estate market has also been studied by several researchers. For example, the information related to changes in demographic statistics could adjust the willing price of the buyers (Clapp, Nanda & Ross, 2008).

4. Empirical Findings

This section is structured as follows: The first sub-section introduces our case companies and our interviewees with tables summarising all key information and factors. In addition, the overview of their SIDM processes will be presented according to our interviewees' descriptions. The second sub-section presents the use of pre-decision controls inside the case companies and refines the results related to two more aspects, and the perceived effect of pre-decision controls. The observed dynamism of pre-decision controls will be provided and discussed in the last sub-section of our empirical findings. We only present the findings from four case companies and Company E is excluded due to the quality of data.

4.1 Introduction to the case companies and their SID process

Company	Listed or not	Location	Property value (Approximately in SEK billion)	Property Portfolio (Approximately)
Company A	Yes	Öresund Region	50	Office/Retail 80% Logistics 15% Others 5%
Company B	No	Sweden	190	Office 80% Retail 15% Others 5%
Company C	Yes	Nordic Area	180	Office 55% Warehouse 15% Others 30%
Company D	Yes	Europe	220	Residential 50% Office 15% Others 35%

Table 3: Facts of case companies.

4.1.1 Company A

Our first case company, Company A, employs more than 200 full-time employees and owns around 300 properties with a business focus on the major cities in the Öresund region.

“We are pretty (geographically) concentrated. If you compared to many other real estate companies, we have only commercial properties, so it's industrial properties or office properties.”
- Interviewee A

According to Interviewee A, the business model inside Company A is not special compared to other commercial real estate companies and the organisational structure is flat. Acquisition of new buildings or a new property project could be considered a strategic investment decision.

“We don't have that many levels if you want to do investment decisions, and we don't have to write to different committees and get different approvals all the time... With a lot of power in the property managers, if they (property managers) want to do something they normally can do it.”
Interviewee A

The SID processes of Company A concluded four processes of SID: Identification, evaluation, selection and implementation. During the interview with Company A, we received two substantive cases with detailed processes of each SID stage. One is a project in Denmark, and another is in Malmö. In the beginning, usually, region managers start the project by identifying a business opportunity in a new area with a preliminary feasibility analysis.

“Last year we bought two properties that are closer to Copenhagen Airport Kastrup. That was a large strategic investment for us because the rent level is maybe double compared to the other areas where we are (operating). It was mostly driven by the colleague (The regional manager) in Copenhagen because they know the market.” - Interviewee A

Moving to the evaluation and selection process, Company A has different types of quantitative methods, from both financial and non-financial aspects, to evaluate a project. However, the rates and limits are not mandatory for approval if the project has long-term potential and is a good fit with organisational strategies which is feasible for the local market. The evaluation process also depends on the decision-makers subjective judgement, for example, the understanding of a regional market. It is possible to make bold assumptions and decisions by project managers since

they have the power to do so within a flat organisational structure. During the selection process, marketing factors are still the most important and organisational strategies are considered.

“We started another project in Sweden that was a large office building here in Malmö. We have no tenant at that time (evaluation period) so it was pure speculation that we were able to fix the tenant(s) during the billing time.” - Interviewee A

4.1.2 Company B

Company B is one of Sweden’s largest real estate companies with a strong sustainability focus. Company B’s property holdings are concentrated in the metropolitan areas of the four largest Swedish cities. The strategy of Company B is clear: they only provide commercial buildings in the most attractive areas and city centres with strong potential growth and high liquidity.

“We only (manage properties) in the centre, (or) the most attractive area. That’s where we have all our buildings, (and) compared to other companies we are just owning buildings that are very near the centre of only big (Swedish) cities.” - Interviewee B

The SID process of companies has a linear process with frequent feedback activities. There is a clear division of work in the decision-making process, and different teams and personnel are responsible for different aspects of one project. The local team like Company B’s office in Malmö focuses more on the marketing analysis and other practical tests, on the other hand, Company B’s headquarter is responsible for the process such as calculation and strategic analysis. The kill/go decisions could be found during SID processes in Company B and depending on the importance and size of the project, the decision-making process also has certain differences.

“For example, if we want to build a new building in Malmö, the team in Stockholm will take charge of the different calculations and help us with it.” - Interviewee B

“Sometimes everyone is involved, sometimes it’s just me or someone else. It depends on what we have to do, what we need to do right now. But the process is very well done, and we have checklists... so that we don’t miss anything.” - Interviewee B

In general, the SID process inside Company B is multi-layered and collaborated by local teams and headquarters. The organisational structure is highly efficient with different function teams and specialists.

4.1.3 Company C

Company C is one of the largest listed property companies in the Nordic region. The portfolio was in Nordic areas, most in Sweden, but also properties in Denmark, Norway and Finland. Sustainability is an important consensus and strategy of Company C, and they are pursuing a sustainable, modern, digitalised workplace for companies and employees.

The project team is the basic unit inside Company C with certain power and autonomy. A SID process is started with the identification of local project managers. The project teams are quite flexible in structure consisting of different personnel with different knowledge and experience. The investment committee and the board play a crucial role during the late selection process in Company C, and the project team cannot make the final decision if the project is not approved by the committee.

The project teams and boards, executive teams have separated roles and functions during the decision-making process. Project teams start by proposing the ideas, opportunities and preliminary assumptions through local marketing analysis, and executive teams and investment committees examine the project by predetermined criteria.

“Cost plan also (shows) how much money we have to invest for the buying of the land and for the building and so on... And with those parts, we can make locally, we can have a picture of the whole... Also, the business proposal, the investment case (analysis), and we can find out about the revenues in the buildings, and together we put this into a decision making.” - Interviewee C

“If we by ourselves are finding this proposal to be a good investment, then we (will) send it up to the Company C investment committee and they do their own investigation of our plans and if we have the same picture of the investment.” - Interviewee C

The feedback process of each step of the SIDM process is common in Company C, however, the kill/go decisions are not absolute in the long term. The investment proposal that is not approved by the investment committee could be saved by the local team and waiting for a future chance to

restart the SIDM process. The timing of the investment decision is also critical due to the market environment being complex and unpredictable. The concurrent projects also need to be prioritised based on the marketing analysis. As a result, the sequence of the SID process is not fixed and with high uncertainty and risks.

“The problem with putting projects on hold is that you never know how the market will be changed when you think you're going to start the investment later...” - Interviewee C

“If there are other projects or other investments that are better (than it) right now, then we have to postpone it and do it later on.” - Interviewee C

4.1.4 Company D

Company D is a multinational real estate company with properties in Sweden, Denmark, Finland, Norway, Germany, and the United Kingdom. Compared to the other case companies, Company D's portfolio is more diversified. The strategic investment provided by Interviewee D is an ongoing huge facade renovation project and it is a residential building in Lund.

“The project is in Lund with residential real estate. The problem is that the old technology has to be replaced because it was good at that time does not mean it is good today. The process has been very long because this project consists of a big area with many buildings. Also, this project is very costly because everything needs to be replaced.” - Interviewee D

The project started with the identification period by the project department at Company D which is responsible for the strategic projects. The identification process involves not only the internal project department but also possible external consultant teams. Each step is separate, and each step has a predetermined procedure. After approval, it will enter the next step.

“We have a project department in Company D that is responsible for this kind of big project. Sometimes the project department also gets help from external consults. The project department asks external companies about solutions, and we consider the solutions and prices before accepting the solution.” - Interviewee D

“When we have identified a need, we have to discuss it with different kinds of people in Company D, this process is done step by step before taking it to the next level.” - Interviewee D

There is a clear boundary between each process of SID in Company D, for instance, discussion during the identification period is mostly based on the discussion of need and market, and detailed financial or non-financial techniques will be used during the evaluation stage. The organisational structure of Company D could also be investigated by the SID process, the involvement of each level of managers is regulated and determined by the project. Both the process and the limits of authority according to hierarchical level are linear.

“We evaluate a lot on the returns on projects... We do a lot of calculations because returns are very important... I would say we check everything [including financial requirements]. We are a company that counts each crown (Swedish kronor).” - Interviewee D

“Each manager has the right [to] take on projects within his limit. If projects are over the limit, then a discussion has to be taken with the next level manager. This process goes further and further until it reaches the manager who is responsible for business area Sweden to approve the project.” - Interviewee D

4.2 Applied pre-decision controls of the SID process

4.2.1 The use of pre-decision controls

During the interviews, different types of pre-decision controls were discussed and investigated. There is substantial evidence that could support that the case companies are using and aware of pre-decision control and its effect on investment decisions. The findings could be summarised by Alkarran and Northcott's (2007) organisational control systems and also the types of controls listed by Huikku, Karjalainen and Seppälä (2018). The table below shows the outcome of our study related to the use of pre-decision controls:

Pre-decision controls	Company A	Company B	Company C	Company D
Formal procedures for planning, evaluation, and selection levels	Average	High	Average	Average
Formal rules for applying capital budgeting techniques	Yes	Yes	Yes	Yes
Formal investment approval limits assigned to different hierarchical levels	Low	Average	Low	Average
Presentation of financial estimates in the formal meetings	Yes	Yes	Yes	Yes
Involvement of different levels of managers	Low	High	Average	High
Managers' interaction with other managers to coordinate investments	Low	Average	Average	Average
Sensitivity, Scenario, Simulation analysis	Yes	Yes	Yes	Yes
Organisational strategy	Yes	Yes	Yes	No
Risk analysis	Yes	Yes	Yes	Yes
Performance objectives	Low	Average	Low	Average
Strategic fit	Yes	Yes	Yes	No
Hierarchy of approval authority	Low	High	Average	Average

Table 4: The use of common pre-decision controls (adapted from Alkaraan & Northcott, 2007 and Huikku, Karjalainen and Seppälä, 2018)

The empirical results bring us a picture that almost all types of common pre-decision controls were adopted by the case companies. However, the extent of use and the frequency of those pre-decision control mechanisms are different in each company. There is no doubt that some of the pre-decision controls are mandatory and required by top management. To present our deeper understanding of the pre-decision controls in these four real estate companies, further findings will be presented according to different SID processes (identification, evaluation, and selection).

Identification stage:

An organisational strategy is one of the most common pre-decision control mechanisms, our interviewees have a profound understanding of their companies' strategy. During the identification stage, three companies require the new strategic investment to be in line with organisational strategies. The perspectives of the strategy include the strategic objectives, strategic portfolio, strategic position, and strategic layout. The most notable organisational strategy is from Company B. They have a very clear strategic goal that Company B is only located in the most attractive area of the four largest cities in Sweden. Company C also emphasised their long-term organisational strategy that currently they want to provide modern and sustainable buildings to commercial tenants. If a project does not align with organisational strategy, then the likelihood of moving to the next decision-making stage is not high.

A unique case would be Company D, Company D has no strategic limit for the identification process so that their local project teams could seek unlimited investment opportunities.

"We know exactly what the strategy is... If I think it's right [but not aligned with Company B's strategy], I have to try to convince the biggest leading group that this is a good thing to do. We decided that we like it [the project which does not fit organisational strategy] very much, but we saw too many things that could be a problem for us." - Interviewee B

"Because we have demands, sustainability demands, that are necessary that we fulfil otherwise we don't get, we don't get the money from Company C centrally because the investment money is not locally planned, it's centrally planned." - Interviewee C

"We don't have a strategy [during the decision-making process]. In Company D, all investments with good yield are always a good deal that we will take on... We don't work with strategy... We

try to do it in our own ways and don't listen to what other outside people think. However, not working with strategy is unique.” - Interviewee D

Formal procedures and rules can be found in all four case companies and interviewees could be aware of their existence in different projects. The companies design formal procedures and rules for each project to make sure that every decision-making activity is documented, analysed, and discussed carefully. Interviewee B gave us a detailed description of Company B's digital formal procedures during the SIDM process, and other interviewees also provided evidence.

“We have a lot of things that we have to structure, things that we have to achieve. It's in the project book and it's very obvious that we have to follow. So, it's kind of easy to know what to do and it's more like everything is formal... Also, we have checklists... so that we don't miss anything.”
Interviewee B

“The formal procedures and steps are we know how to put, how to start the process, and we know which steps we have to make every time.” - Interviewee C

Different levels of management are involved in the identification stage, but the way of their participation will vary according to the organisational structure and decision-making process. Company A has a relatively flat structure and project managers have greater power; therefore, the involvement of higher-level management is not as frequent as in other companies. In Company B, if a project could be considered a strategic investment and has a long-term impact on the company's future, the local team has to report it to higher levels of management for approval. Company C and Company D also have the mechanism that different levels of management should be involved in the early stage to make an initial judgement on the projects, but in Company D, the involvement is broader and more frequent.

“We need the board approval of course, but we don't have many layers and during last year, we also started what we call a business council. We discussed with the regional directors and the CFO and the CEO what we should invest in if we should put money into buying things or in projects or in property management.” - Interviewee A

“We put this into a decision-making plan, sort of. It's about three or four pages that we fill in and then we have two decision steps. You can say one here locally in my region, we call it in the steering investment committee and then we have one up in the headquarters.” - Interviewee C

“When we have identified a need, then we have to discuss it with different kinds of management and specialists in Company D, this process is done step by step before taking it to the next level.” - Interviewee D

Evaluation stage:

When a SIDM process has been approved from the identification process, more sophisticated and comprehensive analysis and evaluation techniques will be used. Generally, both financial and non-financial methods will be implemented at this stage and each company has predetermined analysis procedures including different metrics and assumptions.

According to interviewees, financial analysis is formal with little room for flexibility. The techniques such as the rate of return, hurdle rate, payback period, and cash flow analysis are widely used to evaluate a project. The interviewees emphasised the importance of financial analysis, including the estimation of costs and expected revenue. The board of directors and higher-level management will also evaluate the financial indicators of a project through formal meetings or presentations.

“The calculation, I think they must be very formal... And they do all the counts and about whether is this something that will be good for us strategically and financially, do we get the right price?” - Interviewee B

“We do a lot of calculations because returns are very important... We do consider the cash flow, I would say we check everything. We are a company that counts each crown (Swedish kronor). There could be many reasons for making a certain deal very good but the most important is the return that we focus mostly on. Cost is also a very important aspect because high competition in this market will make us value each crown.” - Interviewee D

Despite the financial evaluation, non-financial evaluation has also been discussed during the interviews. The first group of non-financial evaluation techniques is related to the market and each

case company has their own metrics for certain projects. The occupation rate is one of the most common analyses in commercial real estate companies, and another example is NKI (nöjd kundindex/satisfied customer index) in Company D. In addition, non-financial evaluation related to climate, sustainability and society is also mentioned during the interview, especially the project in the central area or the project that cooperated with public sectors such as school buildings and hospitals.

“It's not just financial evaluation, but also lots of evaluation, from market to customers, also like the environment, cultures and local markets.” - Interviewee B

“Sustainability demands that are necessary that we must fulfil otherwise we don't get the budget from Company C centrally... So, demands in both sustainability and, the concept, we call it about how we design it and how it's going to be modern workplaces and so on” - Interviewee C

Risk management was also addressed by interviewees that it is important to analyse both macro and local risks. For real estate companies, besides the financial risks, risks that are related to the construction and maintenance of buildings are also needed to be assessed. How to calculate and manage the risk is a natural part of project management and in each case, companies have a list of risks which must be upgraded and re-evaluated annually. Some companies have a separate risk management team or personnel, and others have risk management procedures inside the project teams. How to define risk, decide on the risk list, and assess the possibility of each risk is generally decided by the higher-level management of the company and will finally be presented in the annual report. Another finding about risk is that due to the current increasing uncertainty, many companies regard risk as an important indicator for evaluating a project. If the expected risk of a project is significantly higher than the average, then the project may be postponed.

“There could be a financial risk, but there could also be some technical risks during the project development.” - Interviewee B

“We have sort of a risk model that is in a paper and then our team is responsible for the investment. They [the investment team] have key people that are business developers, and in their responsibility is to make the risk chart for projects... To fill in the risk chart, we discuss it together, every line in the chart, both the risk and how that risk is going to affect this investment.”

Selection stage:

After a project has been fully evaluated, generally higher-level management will analyse different projects and finally complete the final selection. The selection could be based on different criteria and some other factors such as intuitive judgement and environmental factors. The selection decision is not fully quantitative and objective all the time, and the selection criteria is changing according to the company's contextual factors and financial pressure level.

By the selection stage, financial and non-financial estimates are well established. Some companies have clear targets and minimum requirements for each indicator, and if a project doesn't meet those goals, it's usually not continued further. However, the company which is seeking explorative projects could accept a project even if its estimated performance is not as required. In addition, the reliability of a project sometimes is determined by the hierarchy of the approval authority, for instance, new projects proposed by a very experienced project manager or team could bring more confidence to the board and the top management.

Strategic fit is a typical type of pre-decision control at the selection stage. The strategic fit is the control mechanism about how companies allocate resources and competitive advantages according to the organisational strategies. The case companies addressed the importance of strategic fit for real estate projects and provided detailed procedures of strategic fit by case. Currently, the organisational strategy related to risk control profoundly influences the strategic fit process. The projects with more potential risk could be replaced by other projects with lower risk.

“After the investment proposals have been sent to the board and investment committee in Stockholm. They can also prioritise between the projects... we [Company C headquarters] have this much capital and we have ten possible investment opportunities, we can do ten or maybe we can do five of them... then they also go through our plans and, and sort of prioritise through risk and possibilities and also the revenues in every product.” - Interviewee C

The selection process in companies with flat organisational structure and more power on project managers usually involve different levels of managers to discuss. For example, the business council in Company A:

“We [project manager] discussed with the regional directors and the CFO and the CEO what we should invest in if we should put money into buying things or investing in projects with our long-term strategic focus in the property management.” - Interviewee A

The companies with less or no strategic focus during the SIDM process only based on financial criteria and performance objectives to conduct the final selection. In Company D’s Malmö office, they considered the strategic limits as a limit and a project with a good yield is always selected by the management team. Other companies even have to follow the strategic alignment during the selection process, they designed a mechanism to save the projects not in line with the strategy and evaluate and restore it when the companies adjust their organisational strategies in the future.

“We have specific project teams just for managing innovation or the more creative project, and even if it [the creative project] is not suitable at this moment and you can just save this. Then you will get a team that sends you inputs and examples and you also have a team that does the valuation of them and makes the selection based on the filter.” - Interviewee C

“In our organisation, we don’t work with a strategy like other companies because we see it as a limitation in our work... We don’t have a strategy. In Company D, all investments with good yield are always a good deal that we will take on.” - Interviewee D

4.2.2 The focus and locus of pre-decision controls

Financial and non-financial

The balance of financial and non-financial aspects is a critical question when companies designed their pre-decision control mechanisms. The significance of financial and non-financial analysis depends on the individual company's strategy, financial situation and other factors. For real estate companies with a concentrated strategy, the pre-decision controls related to both financial and non-financial aspects are important since they are seeking long-term objectives with a clear organisational strategy.

For example, Company B is a company with a strategy that manages properties in the most central area. This kind of project requires performance more than financial objectives when it has a huge strategic impact on both the company's and the city's development.

“Despite the financial evaluation, we also conduct lots of evaluation, from the financial, technician, market, to customers. In addition, sustainability, that's very important for us.” - Interviewee B

“Even though we [project team in Malmö] have limited human resources locally, we are working closely with different specialists who take charge of both financial and non-financial analysis.” - Interviewee C

Based on the process developed by Alkaraan and Northcott (2007), each process has a different balance of financial and non-financial analysis or control mechanisms. Beginning with the identification stage, all case companies started with a regional project team or department. And the non-financial analysis such as market and customers are conducted by local teams. Companies with a flat structure or companies that empower the project team with greater power (Company A and Company C) could also let the local teams finish the initial financial analysis. In contrast, companies like Company B only make the project team mainly responsible for non-financial analysis.

“We [the local project teams] analysed different perspectives of the project including financial things like yield but also non-financial things such as occupation rate.” - Interviewee A

“And actually, the financial analysis such as hurdle rate is conducted locally in Malmö, we also have the responsibility of investigating the market and customers.” - Interviewee C

In the evaluation and selection process, pre-decision controls related to financial criteria are more important than non-financial criteria. Even though all interviewees answered about the procedures of non-financial analysis such as risk analysis in the evaluation process. However, financial evaluation is more decisive, and the financial indicators of a project are the most important in the whole evaluation and selection process.

“The investment committee at our headquarters will investigate and compare projects from different geographical locations by financial performance such as estimated revenue.” - Interviewee C

“Financial aspects are the most important, even when we investigate different aspects of a project during the decision-making process.” - Interviewee D

When discussing the interaction between pre-decision controls related to financial and non-financial analysis, some interviewees made a statement that the non-financial controls could help maintain a healthy environment and financial situation inside the company.

“Sustainability is very important for us... Both a stable environment and financial performance are critical for the success of a project, and a well-established marketing and risk analysis will benefit a lot for the detailed financial analysis.” - Interviewee B

“I would say that there is no conflict between the organisational strategy, sustainability and financial perspective since each of them is the basis when you start a new project, and they complement each other.” - Interviewee C

Locus of pre-decision controls

From the above-mentioned findings, the applied pre-decision controls in case companies have more similarities than differences generally. In addition to the degree of use and frequency, the locus of pre-decision controls is varying in each of the case companies. The locus of control could refer to the location or hierarchical levels, and the companies designed the involvement of pre-decision controls according to their organisational structure and strategies.

When it comes to the location of pre-decision controls, both regional offices and headquarters could be the Implementers. Because the interviewees are all regional managers or leaders, they have very rich experience in how to carry out projects in their region and how to cooperate with the headquarters. Companies A and C have more powerful regional project teams, and most of the analysis and techniques were applied by the project teams themselves, especially during the early stages (identification and evaluation process) of SID. Company D also requires the local project team to analyse all the perspectives of a new project, but their focus of pre-decision controls is mainly on financial aspects, therefore, the project just needs to calculate the yield and other financial metrics. In contrast, Companies B have more pre-decision controls implemented in headquarters or other central offices by different specialists or managers.

“We [the project teams] analyse the index related to the market and the financial aspects before we send the business proposal to the board.” - Interviewee A

“We have the specialists who take charge of all the formal calculation processes in Stockholm or Göteborg office, and we, the local office doesn’t involve in the calculation process. The analysis we need to conduct is more related to the market and local environment.” - Interviewee B

The difference in the locus of pre-decision controls also exists in the hierarchical levels, the most obvious similarity is that the final selection process needs to be submitted to the board or the investment committee for final decision-making. However, during the early stages, the involvement of hierarchical levels is different, and it also depends on the size or importance of the new project. Companies A and C have less involvement of higher-level management, and the involvement is more informal in Company A than in Company C. Company B’s local teams work closely with higher management in headquarters since their project is usually larger in costs and even local managers don’t have the authority. Company D’s higher levels of management evaluate the project locally after the analysis techniques conducted by project teams.

“After the evaluation process by the project team, the higher level of management such as regional CEO or CFO could be involved formally or informally to discuss the project.” - Interviewee A

“When the project exceeds the limit for the local team, then I must submit the project to the higher level of management in our headquarters, and we use the digital system for both local and management in headquarters to follow the project.” - Interviewee B

“My manager and I work very closely together... We do the evaluations together.” - Interviewee D

The Communication and Coordination Process

Another element to investigate is how companies design communication and coordination processes during the use of pre-decision controls. Several mechanisms such as formal and informal meetings, specific organisational structures, and special communication design.

Formal communication is applied by all the companies for discussing the analysis and results during the identification, evaluation, and selection process. Different types of pre-decision controls are designed and implemented by different personnel or teams; therefore, all the decision-makers need a platform to share the relevant information and data. Companies mentioned that formal meetings are usually set for financial and strategic discussion of a project and different levels of management are involved.

Informal meetings and communication are common for real estate companies. Both formal and informal meetings exist in a company's SIDM process. For a discussion on a specific topic, the participants and the form of memory are also not fixed.

“Even though we have a flat organisational structure, the business proposal and meetings with the investment committee are very formal... Also, activities related to administration every year are much more important than filling in a paper for your boss about something.” - Interviewee A

“We know exactly what we have to do in the process and different people do the process together to find out if we should go on or not. So, the meetings are formal, or it could also be informal meetings. Sometimes everyone is with me, sometimes it's just me and some specialists. It's depending on what we have to do, what we need to do right now.” - Interviewee B

“We have to present our business plans in a formal way.” - Interviewee D

The interviewees also mentioned frequent communication with different colleagues and specialists could improve the SIDM process and get a better understanding of the procedures and analysis by pre-decision control mechanisms. For most of the circumstances at the local project team level, what matters is not the form of communication, but the content of communication and mutual understanding.

The findings from above could be illustrated by:

SID process	Early (Identification)			Intermediate (Evaluation)			Late (Selection)		
	Applied controls	Locus	Communication	Applied controls	Locus	Communication	Applied controls	Locus	Communication
Company A	Organisational Strategy Formal procedure Preliminary analysis (financial and non-financial)	Local-Project team level	Informal or formal communication	Pre-determined financial analysis techniques Risk analysis	Mainly at Local-Project team level	Informal or formal communication (Meetings and Business council)	Performance objectives Strategic fit Hierarchy of approval authority (depends)	Local and the board	Formal
Company B	Organisational Strategy Formal procedure Preliminary analysis (non-financial)	Local-Project team level with Involvement of headquarters	Formal communication	Pre-determined financial analysis techniques Risk analysis	Central-higher management level	Formal communication (Meetings and digital system)	Performance objectives Strategic fit Hierarchy of approval authority	Central-the board	Formal
Company C	Organisational Strategy Formal procedure Preliminary analysis (financial and non-financial)	Local-Project team level	Informal or formal communication	Pre-determined financial analysis techniques Risk analysis	Mainly at Local-Project team level	Formal communication (meetings)	Performance objectives Strategic fit Hierarchy of approval authority	Central-the board	Formal
Company D	Formal procedure Preliminary analysis (financial)	Local-Project team level	Formal	Pre-determined financial analysis techniques Risk analysis	Local-project team with Local-management level	Formal communication	Performance objectives Hierarchy of approval authority	Central-the board	Formal

Table 5: The pre-decision controls of SID in four case companies

4.2.3 The perceived effect of pre-decision controls

Most responses we received from interviewees have a positive comment on their pre-decision control mechanisms. From different perspectives, the pre-decision control systems ensure the normal operation of the project decision-making stage, ensure that the whole SIDM process can avoid bias, and ensure that the result is an investment decision that is in the interests of the company.

In addition to the positive effect on the project, pre-decision controls also improve the capability and experience of individuals to make decisions, especially during the highly uncertain period. Teamwork is heavily used in all interviewed companies, as real estate projects involve many aspects of decision-making and the role of individuals is limited, however, these pre-decision control mechanisms allow everyone to play their part in the decision-making process and collaborate with other people to maintain a smooth cooperation.

“I think it's good to know what decisions I can make or can't make. I think it's easier for everyone if you know the procedures and rules [of pre-decision controls] ... It's [pre-decision control mechanism] not a limit. It's just that I have to talk to someone else, I don't decide myself and we are a team, and we make the best decisions together.” - Interviewee B

Interviewee C was also concerned about having too much focus on the pre-decision control activities during the SIDM process. And there are also views expressed that certain pre-decision controlling systems may limit the room for the project team to discover opportunities. But overall, the pre-decision controls still have more positive effects.

“It's always a risk when you do control activities, you have to be sure of how you do the controlling so that the impact will not be negative.” - Interviewee C

4.3 The dynamism of pre-decision controls

The current macroeconomic situation, which is increasingly unstable globally and in Sweden, and possible potential crises create increasing uncertainty for the Swedish real estate industry. The factors include the increasing inflation rate, interest rate, potential economic recession, etc. All

case companies agree with this statement and express their concern about the increasing uncertainty.

“We are in a very special world right now, thinking about the rising energy, inflation, interest rates and the economic increase in the interest rate and that's something we have all around the world.”

- Interviewee B

“If there is a lot of uncertainty, for instance right now about the market, the world economy about the environment, then it's quite a lot harder to make the decisions and be sure of it is the right one.” - Interviewee C

For real estate companies with stable and strong financial positions, the increasing uncertainty could also be interpreted as an opportunity to seize the market and make strategic investment decisions which other opponents cannot invest in currently. Some companies we interviewed also expressed that the influence of the current uncertainty is complicated and comprehensive. Since real estate companies work closely with their commercial and individual tenants, the deteriorating economic situation had a greater impact on their customers, especially small and micro businesses. So, although these interviewed real estate companies have the financial resources to invest in new projects, the deterioration of the market environment may have an impact on their subsequent rental income.

“We are not that affected as many other companies are... We work for longer terms but still, we have to be careful.” - Interviewee B

“If everything is predictable, you know everything is going to happen, then there are no risks. However, the current market conditions are difficult to predict, and we have to handle everything more carefully.” - Interviewee C

The current increasing uncertainty does affect the companies' SID process and their use of pre-decision controls. All companies presented that they need to make investment decisions more carefully compared to previous years. In addition, the analysis techniques during the selection process should be conducted more cautiously according to the new environment. For instance, the higher risks caused by macroeconomic factors required the companies to analyse the risks more detailed. The market environment also demands more analysis, and, in the meantime, real

estate companies need to consider more about their customers. Company D mentioned that as a part of their social responsibility, they need to overcome the situation with their customers together.

“Now, it is harder to make the strategic decision and we need to take care of the higher risk more carefully.” - Interviewee C

“We are in a situation where we need to think more carefully. Our tenants know about the situation and are also affected by the crisis, and we are all trying to do our best in this situation together.” - Interviewee D

The financial analysis in both the evaluation and selection process has become more formal and rigorous. In company A, interviewee A expressed that increasing interest rates and costs required the project team to evaluate the financial aspects more frequently and a project needs a higher return to start. In company B, even interviewee B believes that they have the strength to invest even during the turbulent economic conditions, however, there is no new strategic investment during 2022. The investment committee in Company C increased the cap when selecting projects, some projects had to be deferred to the future.

“We also have to pay higher rates, so we don't have all that money that we had the year before. Therefore, we have to use and plan our money more wisely. We evaluate and think three or four times before we do any new investments.” - Interviewee A

“The revenue in the project has to rise to a certain level compared to the previous years, and the investment committee also selected the projects from different geographic locations more cautiously.” - Interviewee C

In addition to the above changes of pre-decision controls, in Company A, a newly started business council involved different levels of management has been started since 2022. The new business council created more communication opportunities so that the previously relatively independent project managers need to discuss the feasibility of the project on different formal and informal occasions.

“Last year, we also started what we call the business council... We discussed with the regional directors and the CFO and the CEO what we should invest, and other things related to the property management.” - Interviewee A

5. Discussion

5.1 Discussion of the SID Process

The first step of our study is to investigate the SID process of each case company by specific SID case(s) or general overview. Clear distinctions between operational investment and SID are explained by Northcott and Alkaraan (2007) where operational investments have programmed procedures for short-term activities while SID does not have and are instead characterised by such as non-programmed and unusual, substantial, complex, long-term, competitive-oriented, uncertain, and subjective. It is because of these properties of SID that control systems are important and worth studying.

In the interview, the interviewees described SID cases in every detail and in overview, the SID cases of real estate companies included acquisition, investment of new strategic properties and other strategic investment decisions such as vital property development. For real estate companies, the major project has a long-term impact on the companies' strategic focus, for instance, Company C invested in a new office building in central Malmö and the impact of the new property on Company C is long-term, additionally, the company's future strategic layout in this city will also be extended from this property. The development of properties to add or maintain value to the overall property portfolio could also be considered a strategic investment decision. Even though the case companies have pre-determined formal investment procedures, the project itself contains unpredictable risks and outcomes. The complexity and long-term orientation of SID inside the case companies are in line with the research results by Van Cauwenbergh et al. (1996), Slagmulder (1997), and Northcott and Alkaraan (2007).

It appears that the SIDM process of each case company is difficult to describe simply by linear process or stage-gate model. The SIDM processes of these four companies have certain similarities with the previous theoretical models, but they cannot be completely described and

interpreted according to the previous theoretical models. Based on the capital budget theories, King's (1975) capital investment model has 7 stages. The triggering and evaluation process exists in our empirical research, however, the definition stage is missing in Companies B and D. The timing of transmission of decision-making information is not fixed in Companies A, B and C, transmission can be located at any stage, so it is impractical to describe it with a sequential model according to King (1975). Previous studies like Harris (1999) describe not only the linear process but also the feedback process which is more comprehensive and similar to our empirical findings. However, in practice, the involvement of hierarchical levels and division of work is more complicated and sometimes the process is repetitive and overlapping. In general, Alkaraan and Northcott (1997) described the SID process in accordance with the management control mechanisms which is most suitable for depicting the case companies' SID process. All companies have a clear process including identification, evaluation and selection phases which could be interpreted as the basic process.

To aggregate the discussion of companies' SID/SIDM process, our find is parallel with Mintzberg, Raisinghani and Théorêt (1976) that the investment decision process is always iterative and discontinuous, and the inherent risks and unpredictability determining that it is difficult to describe the complexity that existed in the SID process by the single theoretical model. Thus, it is interesting to investigate how the companies handle this complexity and maximise the outcome of final decisions through pre-decision control mechanisms.

5.2 Pre-decision control mechanisms of the SID process

According to Northcott and Alkaraan (2007), pre-decision control is important, especially for SIDs. From our empirical findings, every company's pre-decision control system is substantive and ubiquitous throughout the SID process. The overview of the common use of pre-decision control is in line with the research by Burns and Walker (2009) and Haka (2007). Our interviewees, as regional decision-makers, have a deep understanding of pre-decision control systems and a clear understanding of the positive impact of pre-decision controls on a strategic project.

5.2.1 Discussion of Pre-decision Controls in each stage

Early stage (identification)

The organisational strategy is the beginning analysis of a SID process in many organisations since the project will have a long-term impact on the companies' strategic focus (Northcott &

Alkaraan, 2007). Management control systems exist to direct employees' behaviour to align with the organisational strategy (Malmi & Brown, 2008). When identifying investment opportunities, the potential projects should be aligned with the organisational strategy and the decision-makers should be aware of their organisational strategies to distinguish the right opportunities. Three of the four case companies take on projects which are aligned with the strategy and are according to the theory. However, company D is special because it is not required to be aligned with the strategy. Company D explained that the financial perspectives such as yield, and cost are the most important and they evaluate different SID solutions that have the best yield and cost according to quality in the identification phase. Strategic alignment prevents Company D from choosing the most profitable projects.

The complexity of the companies makes it difficult for the top management to make all decisions by themselves. Therefore, different hierarchical levels of managers are empowered with certain decision-making power (Simons, 1994). The four companies have different hierarchical decision-making levels. Companies B and C have local and central decision-making, and this is because the companies are divided into different regions, each with its own power and separate duties. Company D is divided into business areas and business areas can form a region. It is not surprising because company D is a multinational company, and have a more complicated hierarchical structure. Company D works step by step with the decision-making process. However, the higher-level managers are already involved in the early stages and have interacted with the subordinates to be involved in the subordinates' decision-making and is according to the interactive control system in Simons' Levers of Control (1994). Company C also involves high-level managers early in the process and the final decision is made by the board. Company B involves its local team to conduct non-financial analysis while the financial analysis is conducted by the headquarter. The reason is that the local team focuses on their own area because they know more than the headquarters. The headquarters focuses on the financial analysis because the final decision will still be taken by them, and they can also have the experts in one place to make the analysis more accurate.

Company A is very interesting. The company is both formal and informal in the hierarchical decision-making and the involvement of managers. The reason is that the organisational structure in Company A is relatively flat, and it has fewer layers. Company A is smaller than the other companies according to the property value and focuses only on the Öresund region which is a small part of the Swedish real estate market. It is not necessary to involve other managers in

decision-making because company A is very flexible with the business council where all kinds of managers have formal and informal meetings to discuss everything so high-level managers know what is happening and the decisions can be made by a project manager. Formal rules and procedures are usually implemented by the top management (Miller & O'Leary, 2007) and can be seen in the four companies regardless of if they work with strategy or not. Formal rules limit risk-taking behaviour from the managers which can be seen in all four companies interacting with subordinates (Simons, 1994).

Intermediate stage (Evaluation)

Real estate investment is very risky and often requires a high amount of cost, therefore it is very important to make a very accurate estimation in the evaluation stages (Tan, Cai & Chen, 2022). Furthermore, financial evaluation is especially important due to the complexity of each project and there are many changing factors that make a project uncertain. Even the locus of financial analysis is different in each company, the four companies stated during the interview the importance of conducting formal financial analysis which is very crucial for the project.

For non-financial analysis, Companies A, B, and C conduct many non-financial evaluations and it is an important part of pre-decision controls. However, Company D does not conduct that many non-financial evaluations since they realise that cost and yield is the most important factor.

According to the four companies, cash flow seems to be the most important today. Before the financial crisis in 1990, the real estate companies and the banks focused on market value and there were no limitations for getting a loan to finance the investments (Sveriges Riksbank, 2017). However, after the financial crisis, it seems that real estate companies and banks have learned a lesson to focus on cash flow and are aware of the risks. Discounted cash flow can be used to evaluate real estate investment to determine the market value (Mütze, Senff & Möller, 2012; Jones & Trevillion, 2022). Risk evaluation is a formal process in the four companies, and it could be a risk management team, personnel or a project team that assesses the risks. They need to be aware of recessions and be able to survive. During a recession, companies will have increased interest costs, expensive refinancing costs and difficulties to get a loan (FI, 2019). The four companies are aware of these problems and will make a very careful decision according to the risks.

Late stage (Selection)

Managers that can approve investments with approval limits (Simons, 2000). In the selection, critical SIDs always require the board of directors to approve (Melgin, 2016). When the evaluation phase is finished, it is time for the higher-level managers to decide. The four companies analyse projects and look at both financial and non-financial aspects and base the decision on the company's contextual factor. There are minimum requirements for each metric and will not continue project if it does not meet the requirements. However, if they are explorative, they might approve even if it does not meet the requirements. If they have experienced teams or project managers, the board and the top management will have more confidence to approve a project.

Strategic fit also plays an important role in the final selection phase (Emmanuel, Harris & Komakech, 2010), projects that do not match the strategy can be cancelled or postponed for further investigations in the future. In company B, critical SID is always done by the board and the managers must convince the board if an SID project is in line with their strategy. Similarly, company C also requires the board to decide it. However, if there are too many projects for the board to analyse, they might only choose some of them that fit the best to their contextual factors and strategies.

5.2.2 Discussion of Pre-decision Controls beyond the SID Process

The emphasis on financial analysis

It appears that all companies design the pre-decision control mechanism by involving both financial and non-financial analysis, however, the perceived importance of financial control is more than non-financial control. The most typical case is Company D which rarely evaluates the non-financial aspects during the evaluation and selection process. Even other interviewees considered the non-financial analysis also important for the SID process, the formality and levels of detail are less than their financial analysis system. Prior research also proved this point that the investment practice has a focus on financial analysis (Pike, 1988; Arnold & Hatzopoulos, 2000). From a narrower perspective, the SID in real estate companies could be achieved by a financial analysis task (Alkaraan & Northcott, 2007) since capital is the most important resource and the real estate economy itself has a nature of pursuing value.

With the increasing concern and focus on the environment, social responsibility, and also the sustainability of real estate, non-financial analysis and performance are also critical for the

success of property companies. All companies set objectives for sustainability and Companies A, B and C provided detailed information about how they achieved sustainability through project development and design. From a broader perspective, the investment decision is also linked to the management control issue (Alkaraan & Northcott, 2007). The non-financial analysis such as risk analysis is beneficial for companies, especially at the early stages of the SID process (Abdel-Kader & Dugdale, 1998), our findings proved this result that most of the non-financial analysis was conducted at the identification and evaluation stage. In the final selection, the period involved the board and top management, financial criteria are more decisive.

The balance of financial and non-financial analysis and techniques could be the future objectives of pre-decision control mechanisms development. At present, the emphasis on non-financial analysis is more reflected in procedures and awareness. All the case companies have clear non-financial analysis processes, and the interviewees were aware of their importance. However, regarding the details of the non-financial analysis, many companies do not have clear requirements and criteria. The formal coordination and discussion of non-financial analysis within companies are also less than the financial analysis. In Companies A and C, the list of risks is determined by the top management and board annually, the local office only needs to follow the procedure set by headquarters and has a limited understanding of them. Company B has special teams for analysing financial and non-financial information, however, the formality of non-financial controls is not on the same level as the formality of financial techniques. The sophistication of non-financial techniques is also less than the financial analysis, for instance, the risk analysis in Company B and C is only based on the fundamental and general risk categories. It is not a unique case, according to Pike (1996) and Arnold and Hatzopolous (2000), limited companies implemented sophisticated risk-controlling techniques.

Learning and reflection process

Perhaps not repeating previous mistakes is an extremely important part of the SIDM process. The reflection process is usually conducted during the post-decision process. The post-decision control is located after the implementation process of SID which the different hierarchical levels summarised the reflection of the previous project (Alkaraan & Northcott, 2007). All interviewed companies expressed their learning procedures, for example, after the implementation of each SID, there will be a mechanism for continuous tracking and summarizing performance, and exchanges and discussions will be held through formal or informal meetings.

There are several previous crises and economic downturns in the last three decades that had a huge impact on the Swedish real estate industry. Although some of our interviewees have not experienced those previous crises due to limited experience, the top management and the board of these companies have experience and knowledge in how to deal with similar crises. For example, during the ongoing economic downturn, each company has corresponding countermeasures reflected in the pre-decision control system and can roughly predict the impact of the possible economic situation on real estate companies. The authors will discuss the countermeasures of each company in the next subsector, but what is certain is that all the case companies reviewed their previous performance and refer to the previous experience during the pre-decision control activities. The feedback and learning process could be interpreted by Harris (1999), Roberts and Henneberry (2007) also summarised the property investment process should be ended by post-investment activities such as reflection and review.

5.3 The dynamism of pre-decision controls

The changes in different factors that influence the pre-decision control mechanisms from our empirical findings present some resemblance to the research done by Slagmulder (2017) and Huikku, Karjalainen and Seppälä (2018). In previous studies, Slagmulder (2017) examined both internal and external environments that affect the pre-decision controls and how the changing environment required the adjustment of pre-decision control mechanisms; Huikku, Karjalainen and Seppälä (2018) investigated the relationship between changing factors and three dimensions of pre-decision controls. Based on the findings from these studies, we will discuss the similarities, differences, and new perspectives on the dynamism of pre-decision control mechanisms in this subsector. The discussion framework could also refer to the pre-decision control models and SID process from Alkaraan and Northcott (2007), and Simon's (1994) Levers of Control.

5.3.1 Uncertainty and pre-decision controls

The real estate industry is highly uncertain, especially with the recent downturn of the macroeconomic situation caused by a series of events since the pandemic started in 2019. The domain of uncertainty we discussed with our case companies includes the increasing inflation rate, interest rate, energy price, material costs, and overall macroeconomic situation in Sweden and the Nordic area. The uncertainty in this research is in line with other studies related to the uncertainty of real estate based on different periods. The pandemic had a profound impact on the real estate market (Ali & Song, 2022; Holostencu, 2022), and the war in Ukraine also

systematically affected the European real estate business (Holostencu, 2022). The impact of these uncertainties on Swedish real estate companies was also confirmed in interviews, for instance, Company B did not invest in any new projects last year, the first time in the past five years.

Minor, incremental modifications of pre-decision controls

According to Huikku, Karjalainen and Seppälä (2018), typically, companies adjusted their pre-decision controls subtly by increasing the frequency or intensity. The empirical results support this proposition since the pre-decision controls were designed over a very long period and the design and modification process of these pre-decision control systems is very complicated. In more cases, these companies only adjust to a certain extent, to respond to potential crises in the near future.

The most typical case is financial analysis, in Companies A, B and D, the interviewees responded that the financial analysis during the SIDM process became more formal and frequent than in previous years. Another explanation for these changes is that the economic downturn increased the financial pressure on the companies, FI (2019) acknowledged that the recession could cause a sequence of impacts such as increasing debt and more expensive refinancing. Increasing financial pressures can also lead companies to increase the frequency, formality and tightness with which control mechanisms are used (Huikku, Karjalainen & Seppälä, 2018).

Even though companies increased their use of pre-decision controls, especially the financial analysis, during the final selection process, the investment committee or other higher-level management also raised the bar for approving a new strategic investment. This might be due to the complexity of real estate projects, especially when the economic situation is unstable. Some common financial analysis techniques such as DCF are very accurate, but they can only make limited judgments based on some pre-determined assumptions. The most challenging thing is how to predict future cash flows and the probability of potential risks related to property management, such as vacancy rate (Mütze, Senff & Möller, 2012). In company C, after a project has undergone a more rigorous analysis, the headquarters will not make a choice according to the previous standards. And they will make a final selection decision by comprehensively evaluating risks after comparing projects from different regions. And Company B stated that their financial situation is healthy and has the strength which other small property companies don't

have during the pandemic, but the board considered the uncertain future as difficult to predict and more intensive financial analysis is not enough.

Evolutionary adaptation

Based on the three dimensions of pre-decision control changes classified by Huikku, Karjalainen and Seppälä (2018), the evolutionary change should have at least two variables. In addition, compared to minor modifications such as frequency increases, the evolutionary changes should be more radical, possibly involving fundamental design changes like the hierarchical shift (Burns & Scapens, 2000).

The newly started involvement of different levels of management or adaptations in the locus of decision-making (Huikku, Karjalainen & Seppälä, 2018) could be regarded as an evolutionary adaptation. The involvement of different levels of management throughout the SIDM process is a typical type of pre-decision control mechanism (Alkaraan & Northcott, 2007). During the uncertainty, many companies also redefined the approval limit of each hierarchical level. For companies with flat organisational structures like Company A and C, before the uncertain period, the project teams at local offices had a greater power to decide the SID. However, after the emergence of economic recession and unstable conditions, higher levels of management are increasingly involved in the property decision-making process, and the analysis and decision-making responsibility for many projects continues to separate from the project team and shift to the higher levels of management. In companies where different levels of management had shared decision-making processes previously, in response to increasingly unstable macroeconomic and market conditions, more formal and informal communication was also applied in the SIDM process.

According to Simon's (1994) Levers of Control, the case companies have introduced more boundary and interactive control mechanisms during the increasing uncertainty. For instance, the approval limits for each hierarchical level are the boundary control in which the top management sets new limits and rules throughout the SIDM process; the more involvement of top management in pre-decision control and analysis is the interactive control. From our empirical findings, interviewee A mentioned that the regional CEO and CFO participated in the early SIDM stages more often than before. The evaluation and selection processes also contained more involvement of senior management in Company C and D and top management conducted more risk analysis related to the complicated scenario. When the economic situation is stable, delegating more

authority to the project team can promote the company to seize more investment opportunities and markets. At the same time, there are no overly complex and unpredictable factors that require higher-level management to analyse. The most strategic and critical investments always require the approval from top management or the board (Melgin, 2016), and the interaction between different hierarchical levels and the strategic alignment is the main module and objectives of pre-decision controls (Emmanuel et al. 2010; Jørgensen & Messner, 2010). With the increasing uncertainty, the companies have to rethink these questions more carefully and adjust the involvement of top management and investment requirements accordingly.

New control mechanism

The research by Huikku, Karjalainen and Seppälä (2018) suggests that even though the introduction of new pre-decision control mechanisms is an identified dimension of the change of pre-decision controls, no evidence showed there was a company that introduced new control mechanisms. From our empirical study, Company A introduced a new business council which involved the project team and regional CEO, and CFO to discuss the project development formally or informally. Interviewee A mentioned that due to the flat organisational structure in Company A, the project managers have greater autonomy compared to other real estate companies. According to Slagmulder (1997), the change in the external environment could affect the pre-decision control mechanisms during the capital investment process, the increasing uncertainty and financial situation make this autonomy in Company A must be assisted to a certain extent because the complex external environment requires more senior and experienced management to conduct analysis and decision-making activities. The function of the newly introduced business council by Interviewee A is in line with the research result by Slagmulder (1997). In this business council, different levels of regional management and relevant experts discuss with each other the aspects of a new project, such as legal and market issues. Regarding the goal of setting up a business council, Interviewee A said that the integration of regional personnel can make the SIDM process of new projects more comprehensive and ensure the stability and consistency of company A in the region.

5.3.2 Organisational Strategy and Pre-decision Controls

On one side, strategic alignment is one of the objectives of pre-decision control mechanisms (Emmanuel et al. 2010; Jørgensen & Messner, 2010), on the other side, the strategic factors within the organisation also affect the pre-decision control mechanisms (Huikku, Karjalainen & Seppälä, 2018). The discussion of the variation relationship between organisational strategy and

pre-decision controls will be expanded as follow: Organisational strategies of different Swedish real estate companies and their different pre-decision control systems, and how changing strategies in an organisation affect the pre-decision control system.

The four case companies have organisational strategies with different geographical locations, property portfolios, organisational cultures, business focus and operational scales. From a geographic perspective, Company B has a clear strategy with only a focus on the most attractive areas in the four largest Swedish cities. Other organisations don't have a boundary about the location of their properties. From the empirical findings, Company B has a special pre-decision control mechanism during the identification process that regional managers must submit the location of the new project to the headquarters. If a project's location does not match the company's strategy, it must go through a more complex analysis before submitting it to the headquarters. The strategic fit is mandatory in Company A but almost non-existent in Company D, a company with no compulsory strategic requirement when proposing a new project. In addition to the pre-decision controls related to the strategy, the financial analysis and risk assessment in the evaluation process also vary according to the location of the real estate. These differences could be interpreted by Jones and Trevillion (2022), the location has a huge impact on the risks, the prime location has the demand of maintaining value and in small provinces value decreasing should be considered during the analysis. Company B has a central project analysis team in Stockholm which is responsible for the calculation of risk and return, and other companies without a prime location focus usually conduct the analysis locally.

Another aspect is the organisational strategy related to exploration and exploitation. An organisational strategy with a more exploitative focus will increase the use of pre-decision control from all three dimensions (Huikku, Karjalainen & Seppälä, 2018). Before the uncertainty rise, Company C had a long-term strategy with a more explorative than exploitative business focus. Due to the increasing uncertainty and unstable financial situation, Company C started setting objectives in the short-term and approving projects with a short-term focus. In parallel with this strategic change, the intensity of the use of pre-decision controls in the evaluation and selection phase of Company C has also increased, and the board of directors has become more cautious in the selection of projects. This phenomenon is applicable to Huikku, Karjalainen and Seppälä (2018) that the strategic focus towards exploitation is linked to the increasing tightness of pre-decision controls. Additionally, all the case companies started using capital and calculating costs more carefully during the uncertainty which resulted in more emphasis on pre-decision controls,

especially on the increasing formalities and tightness. These findings are in line with Slagmulder (1997) that the strategic changes towards cost efficiency during capital investment will increase the use of formal pre-decision control mechanisms.

The property portfolio is an important factor of asset investment (Hamelink, 2000), and it is also worth discussing whether it has an impact on the real estate company's pre-decision control mechanisms. Among the four case companies, Company B and Company D have the least and most heterogeneity and diversification, respectively. Company B and Company D are also the ones who place the most and least emphasis on organisational strategy, respectively. From the perspective of the local office, Company B rarely conducts complex financial calculations but focuses more on market analysis, while Company D almost only focuses on the yield of new investment, the financial aspect is also the most important indicator for the project to enter the next decision-making stage in Company D. Only from the analysis of these four companies, the diversification of property portfolio based on property types and locations is negatively correlated to the emphasis of organisational strategy and strategic fit. In addition, real estate companies with more concentrated portfolios may place greater emphasis on the non-financial perspective of pre-decision control mechanisms. On the contrary, companies with more diversified portfolios might have more formal and tighter financial control mechanisms.

5.4 Research Contribution

Our study contributes to research in several ways. In the field of strategic investment decisions or strategic investment decision-making, the empirical findings provide the description and analysis of strategic investment in Swedish real estate companies. Our study responds to previous literature in this area from a practical perspective, the process of Swedish real estate companies has some similarities with the study by King (1975), Harris (1999), and Alkaraan and Northcott (2007). From the point of view of the real estate industry, the definition of strategic investment and the characteristics of strategic investment decisions are enriched by empirical findings from our multiple case studies.

In the research field of pre-decision control mechanisms, our study contributes to the previous literature by investigating the use and design of pre-decision controls in Swedish real estate companies. The findings from our multiple case studies provide detailed information and a description of the implementation of pre-decision controls in practice. The study also highlights

some aspects from in-depth research on the pre-decision control mechanisms, for instance, the balance of financial and non-financial controls and the perceived effect of pre-decision control mechanisms. With a focus on the strategic investment decision-making process, the findings and analysis of pre-decision controls are based on the SIDM process which contributes to the study by Alkaraan and Northcott (2007). In the comparison of each case company, the similarities and differences from our empirical findings could enhance the understanding of pre-decision controls throughout the investment process.

In the research field of the dynamism of pre-decision control, the resemblance between our empirical and the propositions developed by Slagmulder (1997), and Huikku, Karjalainen and Seppälä (2018) proved the influence of external and internal factors on the pre-decision controls from the empirical evidence of Swedish real estate companies. Our study is time-sensitive and provided findings related to the current issues from 2019 to now, the results could be the historic evidence depicting the beginning of a potential economic recession in the next few years. In addition to confirming the validity of previous research conclusions, our research also provides some new findings, such as the use of new control systems that were not mentioned in the previous literature.

5.5 Limitations, Restrictions and Future Research

Our thesis is subject to several limitations which have been discussed in the methodology section. A reflection has been done after the study was finished and is presented in this section to highlight future research.

Firstly, the dimensions of our research are limited with the only focus on the Swedish real estate companies. The ambition of our research has a comprehensive scope on pre-decision control throughout the SID process, therefore, it is difficult to prove the case companies we interviewed could represent this broad research area and provide generic empirical evidence that will contribute to future research. Due to the limitations of the research objects, many conclusions, especially those related to the relationship between variables, are vague. The time limit for the thesis prevented us from having more empirical study from each case company which could result in a more holistic view of the pre-decision control.

Secondly, our access to the case companies is limited thus the findings we presented in this thesis could be biased. For each case company, we conducted only one interview with one interviewee. Even though we discussed the process of selecting interviewees with a target that interviewing suitable interviewees who have sufficient knowledge and experience of the SID process and pre-decision control mechanisms, these interviewees did not participate in all pre-decision control and decision-making processes, and few of them had the experience and authority to design pre-decision control systems. The interviewee's answer is also subjective to a certain extent and could not fully represent the case company's point of view on pre-decision controls. From the perspective of geographic locations, the cases for the thesis were limited to the south of Sweden where each case only represented a single regional centre.

Another limitation concerns the fact that the study is based on the qualitative method without quantitative research, this leads to a certain limitation in the depth of our research. For confidential issues, we could not design the interviews by each detail of information and collecting internal data. Our research can detect changes and differences in control systems to a certain extent, but it only involves superficial observations and investigations. The current increasing uncertainty such as the inflation in Sweden needs to be tracked and investigated further. The impact of those uncertainties could be long-term and profound on the companies' pre-decision control mechanisms, with an incomplete understanding of the real estate economy and the macroeconomic factors, some assumptions in our study would be conditional and subjective.

For future research, we suggest that the quantitative method could be adopted to investigate the sophisticated relationship between different variables. The SIDM process also consists of the implementation phase and post-decision activities which are related to the reflection process. Since the domain of our study only included pre-decision control and the SID process before the implementation phase, further research could integrate pre-decision control and post-decision control to present a holistic view of the SIDM process and more perspectives on management control. The current economic situation is also worthy of long-term observation, and the future event is also difficult to predict. Future research can expand the time dimension to obtain more accurate and reliable conclusions.

6. Conclusion

This study assessed two research questions. First, we investigated how companies design and implement pre-decision control mechanisms throughout the strategic investment decision process. Second, we analysed what contextual factors could influence the pre-decision control mechanisms. In the findings of our study, we respond to Northcott and Alkaraan (2007) that the strategic investment decision is highly uncertain and unpredictable. Based on prior literature, we identified and adapted a list of pre-decision controls (Huikku, Karjalainen & Seppälä, 2018) and the process of strategic investment decision (Alkaraan & Northcott, 2007) for our multiple case studies. The outcome of this thesis also has some similarities with Slagmulder's (1997) and Huikku, Karjalainen and Seppälä (2018) studies that the contextual factors have impacts on the use and design of pre-decision control mechanisms.

Our empirical findings indicate that the use of pre-decision controls in Swedish real estate companies is prevailing and comprehensive. At different stages of the strategic investment decision process, 10 out of 12 pre-decision controls we examined are applied by all the case companies but to varying degrees. From the study results, all case companies have high similarities in the use of many pre-decision controls, such as formal procedures and regulations throughout the decision-making process and financial analysis. Despite the similarities, differences in the use and design of pre-decision control mechanisms are discovered, for instance, some companies have more emphasis on hierarchical levels and some companies have no or less focus on the organisational strategy. In addition, based on the broader view of pre-decision control mechanisms, each case company has some specific focus of control activities throughout the whole strategic investment decision-making process, the balance of financial and non-financial techniques are designed in a variety of ways and involvement of top management is different with companies special organisational structure or investment procedure. The perceived effect of pre-decision controls by interviewees is more positive than negative, all interviewees expressed that the pre-decision control mechanisms can make investment decisions more professional and reduce risks to a large extent.

When it comes to the relationship between contextual factors and pre-decision controls, the study enhances our understanding of the dynamism of pre-decision control by investigating the influence of current increasing uncertainty in macroeconomic and other contextual factors. Our research has more concrete and detailed findings compared to previous studies by Huikku,

Karjalainen and Seppälä (2018), and Slagmulder's (1997) study. External factors such as increasing inflation rates and interest rates have an impact on companies' focus during the implementation of pre-decision control mechanisms, with more financial analysis and involvement of top management. Internal factors such as the shift of strategic focus and organisational structure in real estate companies with different business and property portfolios also influence the pre-decision control mechanisms. The changes in the pre-decision controls include not only minor changes in frequency and degree but also evolutionary changes and use of new control activities.

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Appendices

Appendix 1: Email that was sent to the interviewees one week in advance.

Hi!

This document is before our interview following Friday at 8:00. The purpose of this document is to provide you with some information about our research, the definition of the terms we will use in our interview, and the topics we want to discuss with you.

Our study focuses on the use of pre-decision control mechanisms during the strategic investment decisions (SID) process under uncertainty, and we selected Swedish real estate companies as our research domain. **Pre-decision controls** refer to the control mechanisms implemented before the final investment decision. **Strategic investment decisions (SID)** are investment decisions that could significantly impact the future direction of organisations and involve critical long-term financial commitment under high levels of uncertainty. For example, investment in new businesses, new buildings, and new systems are strategic investment decisions with long-term objectives.

You will be asked three open questions during the interview, and we will have a discussion about them:

1. Can you tell us about a strategic investment decision you have been involved in and tell us about the process?
2. Can you evaluate the effect/role of pre-decision controls during different SID processes?
3. Have you learnt from the previous events about how to improve the control mechanisms?

If you have any questions, please feel free to contact us. We are looking forward to the interview with you!

Best regards,
Thomas Lo and Yumeng Guo

Appendix 2: The interview guide used in the interviews.

Interview guide:

Greetings!

Confidential issues about recording and anonymity.

Introduce ourselves and describe our project.

Our study focuses on the design and use of pre-decision controls in the strategic investment decision process. Explain what pre-decision control and SID are.

- 1. Ask about basic information such as name, title and years of experience.**
- 2. Ask about projects which included the SIDM process or in general.**

Could you provide us with one or more recent strategic investments of your company?

Follow-up question:

Could you provide us with one or more recent strategic investment projects in your company?

Which types of pre-decision controls are you using in your SIDM processes?

Who design and implements the pre-decision controls, such as different levels of management?

Do you consider both financial and non-financial controls important for the success of a project?

If a project is fit for financial purposes but not suitable for strategic alignment, will you consider that as a good investment opportunity?

Do you have any innovative or unique controls?

Did you build up risk management team or risk personnel? How do you manage risk related to investment?

- 3. Detailed questions after the description of the SID project.**

Do you realise the positive effect of pre-decision controls?

According to different projects, do you use different types of pre-decision controls?

In each SIDM process (See the model), who is the final decision maker?

4. Discussion about previous events and learning process

Did you learn something from a previous event or uncertainty?

Do the current inflation and other potential crises influence your SIDM processes?

Questions related to real estate economics if still have time.

Examples of pre-decision controls:

- 1.1 Formal procedures for planning, evaluation, and Selection
- 1.2 Formal rules for applying capital budgeting techniques
- 1.3 Formal investment approval limits assigned to different hierarchical levels
- 1.4 Formal procedures/dedicated teams for planning phase coordination
- 2.1 Presentation of financial estimates in the formal meetings
- 2.3 Pre-designed decision points during the planning phase
- 3.1 Top management involvement in the planning phase
- 3.2 Managers' interaction with other managers to coordinate investments
- 3.3 Derivation of the initiatives from an explicit strategy
- 4.1 Sensitivity analysis
- 4.2 Scenario analysis
- 4.3 Simulation analysis
- 4.4 Capital Asset Pricing Model Analysis
- 4.5 Required payback period to take into account project-specific risk
- 4.6 The required rate of return according to the project-specific risk
- 4.7 Conservative cash flow estimates to take into account project-specific risk