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**REIT Investment Decision Making:
A Multi Step Process?**

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Abstract:

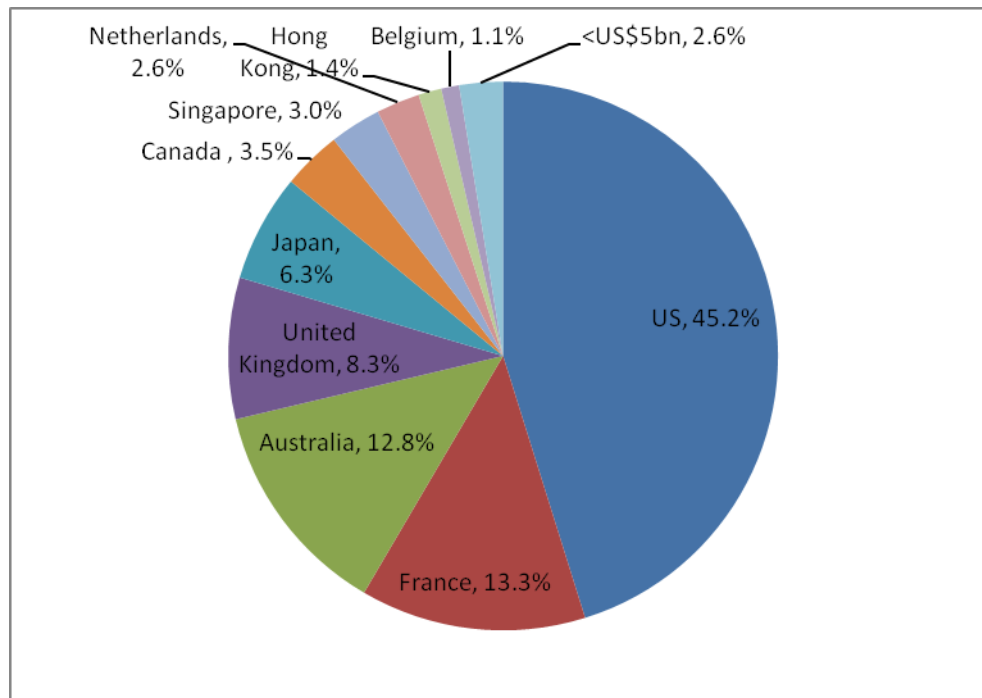
Real estate investment trusts (REITs) are multi-billion dollar property investment vehicles, well established in various countries around the world. Despite their size and prevalence, relatively little research has been undertaken into the property investment decision making processes adopted by REITs.

With the aim of identifying whether the property investment decision making process is sequential and, if so, the nature and extent of the sequence, a review of the literature addressing generalised frameworks for the property investment decision making process was undertaken. Following analysis of the literature reviewed, a six phase approach to property investment decision making is hypothesized and then reconciled to the literature reviewed.

Further empirical research is proposed to determine the appropriateness of classification into phases and to specify the content of each phase, together with determining the extent of difference, if any, between generalized property investment decision making frameworks for institutions and those adopted by REITs.

1.0 Introduction

Real estate investment trusts (REITs) are now well established as a property investment vehicle around the world. In February 2008, 436 REITs existed in eighteen countries including 152 in the US, 50 in France, 18 in Singapore and one in Italy with a global REIT market capitalization of US\$661bn, relative to a global stock market capitalization of US\$38,886bn, as illustrated in Figure 1 (Radanovic and DeFrancesco (2008)).



Global REIT Market Capitalisation – February 2008

Source: Radanovic and DeFrancesco (2008)

Figure 1

However, the global financial crisis has been particularly severe for REITs with the Australian REIT index falling around 75% from a zenith in mid 2007 to a nadir in early 2009. Following the previous stock market and property market collapse, Roulac (1994) noted:

“Extraordinary financial losses and market disruption in the late 1980s and early 1990s are eloquent, if damning, testimony to the proposition that the quality of many real estate decisions is less than distinguished.”

which could equally be applied to events of the recent past.

While REITs invest billions of dollars in property, relatively little research has been undertaken into the decision making processes that drive such investment. The following

seeks to review the literature concerning property investment decision making in general and for REITs in particular to identify whether the process is contended to be sequential and, if so, the nature and extent of the sequence.

Section 2.0 comprises a survey of the literature concerning generalized property investment decision frameworks. Section 3.0 then analyses the literature to identify whether the process is sequential with Section 4.0 considering the nature and extent of the sequence. Section 5.0 briefly considers the role of judgment and section 6.0 draws conclusions from the analysis of the literature and identifies areas for further research.

2.0 Literature Survey

Following a keyword search, the literature concerning property investment decision making in general and by REITs in particular was found to principally comprise textbooks, refereed journal papers and industry or professional journal papers. A further search of conference proceedings yielded only a very limited contribution from conference papers, which generally had been subsequently published.

In overview, the textbooks were found to address multiple aspects of the property investment decision making process but in limited detail, whereas the journal papers tended to focus on an individual aspect of the process in considerable detail with three exceptions identified. Accordingly, for the purposes of this survey, it is proposed to consider the contribution of the textbooks and the three specific journal papers that address multiple aspects of the property investment decision making process.

Significantly, the survey of the literature found neither textbooks nor journal papers that solely address the property investment decision making process in the context of REITs. Certain text books consider investment decision making in the property sector generally including reference to REITs (see, for example, Wurtz bach et al (1994) or Geltner et al (2007)), whilst others consider REITs but with limited, if any, reference to investment decision making (see, for example, Block (2002) or Garrigan and Parsons (1997)).

Accordingly, it may be contended that the literature surveyed focuses primarily on individual property investment decision making and institutional property investment decision making, but with the nature of the institution undefined. Institutions may take a range of forms including large and small, long term superannuation funds or short term development funds, unlisted entities or listed entities and so forth, such that a generalized property investment decision making framework is, by definition, generalised.

While REITs may be distinguished from individuals from the viewpoint of decision making, they may be expected to have greater similarity to institutions. Such aspects as fiduciary responsibility may be common between REITs and various forms of institutions though the requirements of stock exchange listing, such as continuous disclosure, may differ between REITs and unlisted institutions. It may, therefore, be anticipated that the REIT property investment decision making process may have much in common with that

of institutions generally but vary to reflect the differences between the REIT environment and that of institutions generally.

As noted by Roberts and Henneberry (2007), the textbook and journal paper authors generally approach the property investment decision making process as a normative model, being an exercise in rational analysis with a dependence on the use of rational evaluation tools such as modern portfolio theory and the capital asset pricing model to inform decision making.

Among the US texts, Pyhrr et al (1989) propose a ten step process including:

1. determine the investment strategy;
2. generate alternatives;
3. analyse property using basic financial feasibility models;
4. negotiate basic terms with sellers;
5. do detailed feasibility research;
6. complete financial and tax structuring;
7. perform a DCF analysis;
8. final negotiations and closing;
9. manage the property; and
10. terminate the property.

Jaffe and Sirmans (2001) propose a five step process as a series of organised and co-ordinated steps that can be followed to systematically analyse potential real estate investments:

1. identify goals, objectives and constraints;
2. analyse the overall investment environment;
3. forecast expected future benefits and costs;
4. apply appropriate decision making criteria; and
5. accept or reject the investment.

Pagliari (1995) considers the portfolio management process as a six step process, comprising:

1. investor's objectives and constraints;
2. real estate market conditions and expectations;
3. target portfolio determination;
4. portfolio strategy determination;
5. portfolio monitoring; and
6. portfolio performance measurement.

Roulac (1994) observes that the real estate decision process is inherently generic to any decision involving major capital commitments, having close parallels to the corporate capital budgeting process and proposing four sequential critical phases:

1. structure (being the specification of the decision process which, if not explicitly articulated, may be implicit leading to ambiguity and sub-optimal decisions);
2. opportunity (being the initiation of an investment opportunity from organizational initiative or third party presentation);
3. assessment (being the evaluation of the opportunity); and
4. decision (being the authority to make the decision and subsequent implementation).

Significantly, Roulac (1994) notes that decision making in an institutional setting, such as exists in the publicly listed REIT environment, should emphasise process with each phase being undertaken separately, rather than combined, by distinct parties.

Among the UK texts, Baum (2002) proposes a six step process comprising:

1. determination of ideal portfolio structure;
2. identification of target sub-sectors;
3. sourcing new stock from the market;
4. appraisal;
5. modeling of portfolio impact; and
6. acquisition process.

Brown and Matysiak (2000) note four distinct activity groups in the capital budgeting process, being:

1. screening;
2. evaluation;
3. implementation; and
4. auditing.

Hartigay and Yu (1993) propose the investment decision making process to consist of five steps, being:

1. definition of objectives and specific goals;
2. search for a set of alternative investment projects which promise to achieve the objectives and goals set;
3. evaluate, compare and rank the alternatives in terms of the quantified expectations of risk and return;
4. choose the most satisfactory alternative; and
5. at a later date, evaluate the consequences of the decisions taken earlier, draw conclusions, revise goals and criteria.

Among the published journal papers, Farragher and Savage (2008) refer to good real estate investment decision making being based on the application of experience, good judgment and creativity in a nine step decision making process:

1. setting strategy;
2. establishing risk/return goals;
3. searching for investment opportunities;
4. forecasting expected returns;
5. evaluating forecast returns;
6. assessing and adjusting for risk;
7. decision making;
8. implementing accepted proposals; and
9. auditing operating performance.

Farragher and Kleiman (1996) suggest a seven step process for real estate investment decision making, comprising:

1. setting strategy – strategic analysis;
2. establishing risk / return objectives;
3. forecasting expected costs and returns;
4. assessing investment risk;
5. making risk adjusted evaluations of the forecast costs and returns;
6. implementing accepted proposals including due diligence, formal feasibility analysis, independent appraisal and formal implementation plan; and
7. post audit review of the performance of operating investments.

Based on their analysis and combination of various normative models proposed in the literature, Roberts and Hennebery (2007) propose a ten step composite model of the property investment decision making process:

1. setting of initial (property) investment goals and decision criteria;
2. formulation of a fully defined decision making strategy (relating to portfolio structure and performance);
3. search (for suitable properties);
4. information input (including analysis of market conditions);
5. prediction of outcomes (return and risk at portfolio and property levels);
6. application of decision criteria;
7. trade off (between properties);
8. project screening (of properties);
9. investment selection; and
10. negotiation, deal resolution and post investment activity.

In overview, regardless of whether the property investment decision making process is that of an individual or an institution, that literature reviewed would appear to indicate not only considerable similarities but also considerable differences for further analysis.

3.0 Literature Analysis

The literature reviewed clearly indicates a generalised framework for property investment decision making, with considerable similarities between authors. Based on a review of the literature, Roberts and Hennebery (2007) helpfully propose one possible summary framework for property investment decision making that comprises ten steps incorporating most, if not all, of the elements cited by other authors. Usefully, Roberts and Hennebery (2007) in common with Brown and Matysiak (2000) adopt the approach of grouping elements within the property investment decision making process as activity bundles such as “search” or “evaluation”.

The principal similarity in the literature may be contended to be that the property investment decision making process is sequential. With the possible exception of Roulac (1994), each author has a common starting point, comprising some form of strategic element, though the end point varies with some authors stopping at the point of property investment and others going on to include post investment activities of various forms.

However, while each author sees the investment decision making process as a series of steps in a linear process, that which happens between the common starting point and end point of the property investment decision making process varies between authors not only in the number of steps but also in the names given to the steps and the activities undertaken within each step.

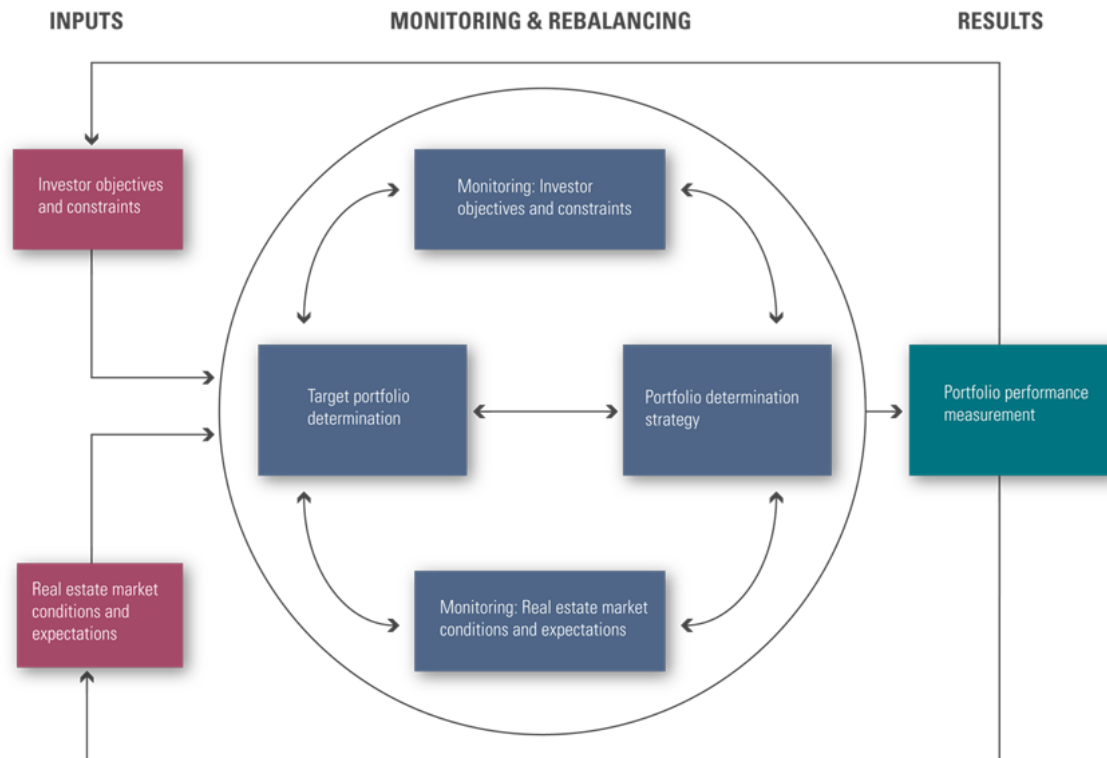
Accordingly, based on that literature reviewed, it may be contended that the property investment decision making process is sequential and linear but that the nature and extent of the process differs between authors. Similarly, it may be contended that the generalised framework proposed in the literature may apply to individuals and to institutions though the literature does not specifically consider application to REITs to the extent that they differ from institutions generally.

It is, therefore, proposed to hypothesise a simplified property investment decision making framework, based on the literature reviewed, that is capable of application by REITs given their specific characteristics and that may be tested by subsequent empirical analysis.

4.0 Nature and Extent of the Sequence

While the investment decision making process may be contended to be sequential and linear in nature, it may also be circular in extent. Hartigay and Yu (1993) refer to drawing conclusions and then revising goals and criteria and Pagliari (1995) refers to linking results back to inputs, which may be contended to indicate a circular process.

Pagliari (1995) refers to “the dynamics of the real estate portfolio management process” and succinctly summarises the activities therein graphically, as reproduced in Figure 2.



Real Estate Portfolio Management Process

Source: Pagliari (1995)

Figure 2

Pagliari (1995) clearly echoes Hartigay and Yu (1993) with the activity of “portfolio performance measurement” linking back into the inputs of “investor objectives and constraints” and “real estate market conditions and expectations”, thereby completing a portfolio management process which is circular in extent.

The extent of the property investment decision making process in terms of content, however, differs considerably between authors. Such differences are challenging to consider as it is unclear whether the apparent difference is due to authors describing different activities or using different terms to describe the same activity. For example, it is unclear whether the activity of “auditing” described by Brown and Matysiak (2000) is the same as “portfolio performance measurement” described by Pagliari (1995) or “post investment activity” described by Roberts and Henneberry (2007).

Similarly, the risk management activities of appraisal and due diligence are specifically referred to by some authors. Though other authors may not specifically refer to same, it is not necessarily clear that such activities are excluded by those authors and they may be included but simply unspecified.

Accepting the propositions that the property investment decision making process is sequential and linear in nature and circular in extent, there are clearly a series of phases comprising the process. The various authors identify a large number of elements in the property investment decision making process, some of which are common among authors and some of which vary. The large number of elements identified by various authors may be grouped as activities which comprise a range of elements occurring close together in a sequence. Further, the smaller number of activities may then be combined into phases which comprise a series of activities that require completion before the next phase may commence.

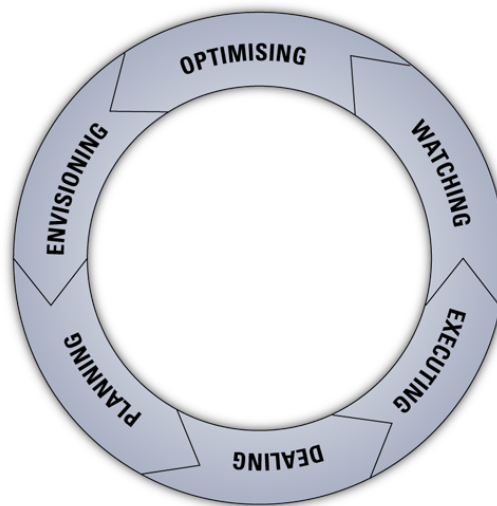
Brown and Matysiak (2000) adopt a high level phase approach to the capital budgeting process, referred to above, through classification into phases of screening, evaluation, implementation and auditing. While the authors acknowledge that this refers to the capital budgeting process only, the grouping principle may be equally applicable to the property investment decision making process as described by other authors.

Roberts and Henneberry (2007) proposed a ten step framework based on the literature, but it may be contended that some of the steps may be combined to create phases. For example, steps 1 and 2 involve the identification of goals and strategy which comprise a phase requiring completion before proceeding further. Similarly, steps 4, 5 and 6 involve different forms of information processing that also comprise a phase requiring completion before proceeding further. It may be hypothesized, therefore, that the number of phases in property investment decision making may be fewer than the number of steps proposed by Roberts and Henneberry (2007).

It is, therefore, proposed to hypothesise a simplified property investment decision making framework, based on the literature reviewed, that is capable of application by REITs given their specific characteristics and that may be tested by subsequent empirical analysis. Viewing the property investment decision making process as a sequential, linear, circular process comprising a small number of high order phases, it may be hypothesized that the various elements and activities may be classified into the following phases:

- defining the purpose and rationale for the portfolio, which may be described as the envisioning phase;
- determining how the purpose and rationale for the portfolio will be implemented in practice, which may be described as the planning phase;
- seeking to bring the planning phase into reality, which may be described as the dealing phase;
- converting the planning phase into reality, which may be described as the executing phase;
- monitoring the reality that is the portfolio, which may be described as the watching phase; and
- linking the watching phase back to the envisioning phase through an active process, which may be described as the optimising phase

and which may be illustrated graphically in Figure 3.



Mapping the Real Estate Portfolio Management Process
Source: Author (after Pagliari (1995) and Brown and Matysiak (2000))
Figure 3

Such an approach to mapping the property investment decision making process may be contended to be consistent with the literature surveyed as it reflects a process which is sequential and linear in nature and circular in extent.

Further, it may be contended that such an approach allows inclusion of each of the steps identified by the various authors in the literature reviewed. Adopting the step numbers used by the respective authors, Figure 4 indicates how the steps in the approaches to the property investment decision making process identified within that literature surveyed may be reconciled with the phases suggested in Figure 3.

For example, Pyhrr et al (1989) propose a ten step process including:

1. determine the investment strategy;
2. generate alternatives;
3. analyse property using basic financial feasibility models;
4. negotiate basic terms with sellers;
5. do detailed feasibility research;
6. complete financial and tax structuring;
7. perform a DCF analysis;
8. final negotiations and closing;
9. manage the property; and
10. terminate the property.

While step 1 may be included within the envisioning phase and step 2 in the planning phase, steps 3, 4, 5, 6 and 7 may be combined in the dealing phase. Thereafter, step 8 maybe included in the executing phase, step 9 in the watching phase and step 10 in the optimizing phase.

A similar approach may be adopted for the frameworks proposed by other authors with Figure 4 indicating that the hypothesized phases are potentially capable of accommodating the various elements and activities identified by the respective authors.

Phase	Envisioning	Planning	Dealing	Executing	Watching	Optimising
Pyhrr et al (1989)	1	2	3, 4, 5, 6, 7	8	9	10
Jaffe and Sirmans (2001)	1	2	3, 4	5		
Pagliari (1995)	1	2, 3	4		5, 6	
Roulac (1994)		1	2, 3	4		
Baum (2002)	1	2	3	4, 5, 6		
Brown and Matysiak (2000)	1		2	3	4	
Hartigay and Yu (1993)	1	2	3, 4			5
Roberts and Henneberry (2007)	1	2	3, 4, 5, 6, 7, 8	9	10	
Farragher and Savage (2008)	1	2	3, 4, 5, 6	7, 8	9	
Farragher and Kleiman (1996)	1	2	3, 4, 5	6		7

**Reconciling the Mapping of the Real Estate Portfolio
Management Process to the Literature Surveyed**
Source: Author
Figure 4

Interestingly, Figure 4 indicates that, on the basis of the approach adopted by the majority of authors, the majority of steps are taking place in the dealing phase, being the conversion of the planning phase into reality. Based on that literature surveyed, this phase includes a range of analytical and modeling activities including feasibility research, risk return forecasting, DCF analysis and modeling.

It is unclear, without further analysis, whether the greater focus on the dealing phase is because there are a much larger number of activities to be undertaken in this phase, whether this phase has been subject to greater analysis than other phases, whether this phase forms a greater part of the teaching curriculum in tertiary courses and so comprises a larger portion of text books or for other reasons yet to be identified.

Accordingly, the property investment decision making process may be contended to be sequential and linear in nature and circular in extent with identifiable phases but with

further research required to specify the content of each phase and the applicability of the process by REITs, given their distinct characteristics such as the requirement for continuous disclosure.

5.0 Role of Judgment

Roberts and Henneberry (2007) note that the textbook and journal paper authors generally approach the property investment decision making process as a normative model, being an exercise in rational analysis with a dependence on the use of rational evaluation tools such as modern portfolio theory and the capital asset pricing model to inform decision making. This characterizes the property investment decision making process as fundamentally quantitative with decision rules that are essentially numeric or financial and limited space for qualitative input or judgmental, subjectively based decision rules.

Alternatively, Farragher and Savage (2008) refer to good real estate investment decision making being based on the application of experience, good judgment and creativity, suggesting a role for qualitative input and judgmental, subjectively based decision rules.

Within the phases proposed in Figure 3, it may be hypothesized that each phase may accommodate both quantitative, objective elements and qualitative, subjective elements. For example, bringing the planning phase into reality through the dealing phase may combine quantitative analysis, modeling and numeric decision rules with qualitative negotiation. Accordingly, further research is required to investigate the extent to which each phase may comprise quantitative, objective elements and qualitative, subjective elements.

Significantly, however, as Roulac (1994) notes, decision making in an institutional setting, such as exists in the publicly listed REIT environment, should emphasise process. How the fiduciary responsibility of REITs might be reconciled with the potential use of judgment through qualitative, subjective elements in the property investment decision making process also requires further research.

6.0 Conclusions and Areas for Further Research

Considering the massive size of the global REIT market, surprisingly little research has been undertaken into REIT property investment decision making.

From the literature surveyed, it is evident that the property investment decision making process is complex, non-standardised and potentially lacking in transparency.

While the property investment decision making process may be contended to be sequential and linear in nature and circular in extent with identifiable phases, considerable further research is required to both determine the appropriateness of classification into phases and to specify the content of each phase.

Further research is also required concerning the extent to which the steps within each phase may be either omitted or undertaken in a different sequence together with the possible impact of same on the resulting decision.

Similarly, further research is required to determine the extent of difference, if any, between generalized property investment decision making frameworks for institutions and those adopted by REITs to reflect their differing characteristics, such as the environment of continuous disclosure.

Such research may include a survey of the journal literature concerning specific elements in detail, based on which the decision making framework hypothesized above may be refined and restated. The restated decision making framework could then be tested through empirical research, such as REIT manager interviews, to determine the extent to which the hypothesized decision making framework adequately describes the process adopted in practice.

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