An Investigation Into Whether Reits Are Misusing Their Reporting Flexibility and Opacity to Unfairly Minimise the Impact of Their Market Risk

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An Investigation Into Whether REITs Are Misusing Their Reporting Flexibility and Opacity to Unfairly Minimise the Impact of Their Market Risk?

by

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Being a dissertation submitted to the faculty of The Built Environment as part of the requirements for the award of the MSc International Real Estate & Planning at University College London:

I declare that this dissertation is entirely my own work and that ideas, data and images, as well as direct quotations, drawn from elsewhere are identified and referenced.

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Abstract

Due, in part to the idiosyncratic risks associated with property valuation, REIT executives are offered a variety of creative solutions for addressing market variations and performance inconsistencies, allowing for fiscal smoothing effects to shape performance over time. At the same time, restatement practices across annual periods can obscure organisational risk exposure, relying upon depreciation, valuation, and investment costs to be transmitted across temporal periods. The purpose of this research was to critically assess the degree to which REIT opacity and reporting flexibility is being used to deliberately mitigate market risk in the UK marketplace in order to predict the likelihood of investor vulnerability. Over the course of this research, a mixed methods, multiple case study approach reviewed five years of performance, restatements, and accounting opacity from LSE-listed REITs in order to determine the potential effects on investor vulnerability. The evidence revealed that cross-period weightings and restatements of financial performance were a critical threat to REIT investor risk assessment accuracy, leading to higher levels of risk and higher vulnerability over the short to medium term. In addition, the evidence suggested that most REITs report annual results on a short term basis, applying credits and depreciation in those periods where it directly benefits the performance output and investor return. This study concludes that without improved regulatory oversight and standardised reporting practices, REITs will continue to employ earnings management techniques through flexibility and opacity to target short-term returns at the expense of long-term performance. To improve REIT transparency and support investment predictability, critical analysis of REIT financial fundamentals must be performed at key stages in REIT growth. By applying the proposed matrix to assess REIT performance outcomes and recognising the likelihood for earnings management, reporting flexibility, and annual report opacity, investors can systematically improve the likelihood of making an improved investment decision.

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1 Chapter 1: Introduction

1.1 Origin of the Topic

A real estate investment trust (REIT) 'is a company that owns, operates, or finances income-producing properties' and frequently consists of a portfolio of properties which are based upon both specialisation (one sector only) and strategic acquisition (multiple sectors) objectives (Chen, 2020, p.1). The majority of REITs are publicly traded on formal exchanges creating a basis for reporting expectations and transparency in their fiscal reporting (Shields et al., 2018). Even given the more traditional financial indicators such as dividends and asset management data, Riddiough and Steiner (2017) acknowledge that REITs are able to employ flexible reporting standards for a variety of indicators including debt ratios, valuation techniques, depreciation costs, and overall capital expenditures. As a result, there is substantial opacity in REIT reporting standards that influences the accuracy and consistency of their reporting of costs and liabilities, artificially influencing risk profiles and systemic vulnerabilities (Dempsey et al., 2012; Adams, et al. 2015).

For investors seeking a high internal rate of return (IRR) and reduced investment vulnerability, REITs offer an attractive solution to more traditional investment instruments such as stocks (high risk, high volatility, varying return potential) and bonds (low risk, low volatility, low return potential) (Dempsey et al., 2012; Riddiough and Steiner, 2017). Predicated upon the structural advantages of the consortia-based qualifications of REITs, Shields et al. (2018) report that these investment vehicles are taxed as corporations, creating opportunities for risk concealment and obfuscation that increases the credit rating and improves the overall risk profile of the investment opportunity. By employing reporting flexibility and opacity as antecedents to strategic advantage, REITs communicate positive risk profiles and performance outcomes despite the widespread threats and vulnerabilities associated with property market volatility (Bodamer et al., 2017). In order to remain attractive to a base of frequently international investors, REITs employ tactical earnings management and reporting standards to amend and restate financial reports and commercial assets in order to maintain smooth performance over periods of market volatility and systemic shocks (Adams et al., 2017).

1.2 Research Focus

Most REITs have adopted a 'straightforward business model' which includes leasing space to commercial tenants, collecting rents on a portfolio of properties, and then distributing the income from the rents as dividends to shareholders (Chen, 2020, p.1). At the same time, due to the debt-driven model of property acquisition, Deng and Ong (2018, p.411) report that most REITs are 'highly leveraged', allowing these investment consortia to maintain a long term capital structure, whilst funding investment activities through seasoned equity offerings (SEOs). Historic evidence captured by Lin and Wu (2013), for example, has revealed that by reducing liquidity risk just prior to SEO filings, firms are able to simultaneously decrease their cost of equity. Through creative earnings management approaches which increase the overall opacity of firm performance and alter the valuation and proposed investment opportunities of the REIT issuance, Ambrose and Bian (2010) acknowledge that managers are attempting to influence investor sentiment and shape performance reports. The problem for investors is that without recognising the constructs of earnings management, information asymmetries and strategic reporting constraints can lead to unrealistic performance expectations and greater market volatility over the medium to long term (An et al., 2016).

Under the ideal structure of a perfectly efficient capital market system, Howton et al. (2017) acknowledge that firms could effectively alter their capital structure in order to gain access to alternative and available investment opportunities. In reality, however, the spectrum of frictions and accessibility hurdles that manifest in modern markets result in pressures placed upon firm flexibility that shape the efficacy of future investment objectives and commitments (Gamba and Triantis, 2008). Given the shocks associated with the global financial crisis in 2008 and the varied and unpredictable growth of the commercial real estate industry over the past decade, reporting flexibility is a critical antecedent to REIT resiliency, allowing firms to 'minimise the costs of financial distress' (Howton et al., 2017, p.335). For this reason, key considerations such as ownership structure (Capozza and Seguin, 2003), market exposure (Zhou and Anderson, 2012), and leverage (Kim and Jang, 2012) have the potential to yield predictive information regarding REIT risks and vulnerabilities under a range of systemic pressures. The current investigation focuses on the underlying conflict between information asymmetry as it is

reported by REITs using earnings management and opacity strategies, and the consequences of ineffective governance fails to recognise changing risk profiles and market conditions.

1.3 Value of Research

This study will critically explore the common practices employed by REITs listed on the LSE by assessing reporting flexibility and opacity in order to determine whether investors are being exposed to undue risks and potential fund performance vulnerabilities. The result of these findings is a pattern of behaviour that can be used to develop a deeper understanding of REIT reporting practices and recommend regulatory solutions that could be used to systematically improve transparency and consistency in future accounting and reporting practices.

1.4 Statement of Research Question and Objectives

The primary research question being addressed over the course of this investigation is stated as follows:

> *Are REITs exploiting their reporting flexibility and opacity to deceive investors by unfairly minimise the impact of their market risk.*

This research question includes concerns regarding how earnings management is used by REITs to achieve flexibility in capital reporting, the consequences and vulnerabilities of this opacity, and the consideration of opportunities for additional regulatory controls and oversight in future REIT accounting practices. The primary aim of this study was to critically assess the degree to which REIT opacity and reporting flexibility is being used to deliberately mitigate market risk in the UK marketplace in order to predict the likelihood of investor vulnerability. Through a comparative review of the literature regarding REIT risks and reporting standards and an in-depth analysis of REIT reporting in the LSE, the following core objectives have been accomplished:

- To critically review the literature regarding REIT financial reporting, assessing the nature and extent of flexibility and opacity in relation to risk-based considerations.

- To critically assess how REITs utilise flexible reporting tactics in practice to unfairly enhance their attractiveness and mitigate the appearance of market risks.
- To compare and contrast the REIT reporting standards of five LSE listed funds in order to assess the degree of flexibility and opacity in these standards.
- To develop a reporting matrix for defining those assessment variables for detecting flexible reporting and opacity in REIT annual reports that could be used to shape and influence regulatory considerations in the future..

1.5 Link to Next Chapter

This chapter has provided an in-depth overview of the focus of this study and the scope of research that was conducted over the course of this exploratory investigation. The remaining chapters progress from an initially academic review of the central concepts and theories relating to REIT information and risk management to an assessment of LSE listed REITs and their earnings management strategies. The following chapter explores peer-reviewed literature regarding REIT reporting standards, flexibility, and opacity.

2 Chapter 2: Literature Review

2.1 Introduction

This research asks the question of whether REITs are exploiting their reporting flexibility and opacity to deceive investors by unfairly minimising the impact of their market risk. The scope of prior research regarding REITs and their accounting transparency is broad as studies pursue deeper understanding of the risk profile of these varying investment strategies. By focusing on those elements directly related to the risk profiling of REITs and their flexible reporting practices, this chapter distils the central dimensions of flexibility and opacity into their conceptual foundations. The following sections outline critical gaps and deficiencies in REIT reporting and identify the antecedents to effective risk assessment and management in REIT processes.

2.2 Structure, Risk, and Reporting Opacity

2.2.1 Structure

There are three primary structures adopted by REITs including equity, mortgage, and hybrid, each of which entails a different degree of risk and return. Equity REITs comprise the majority of the modern instruments and are characterised as a REIT-owned portfolio of real estate that produces income in the form of rents which is then redistributed via dividends to investors (Chen, 2020). Mortgage REITs are debt instruments which lend money to real estate investors, owners, and operators through (direct) mortgages and loans or (indirect) the acquisition of mortgage-backed securities (Chen, 2020). The earnings generated by mortgages REITS is calculated as the net interest margin (spread between interest earned and cost of funding loans) (Chen, 2020). Finally, hybrid REITs include both equity and mortgage strategies, resulting in the ownership of some properties and the holding of mortgages simultaneously on other properties (Chen, 2020).

2.2.2 Risk

At the core of the risk-return basis for REIT investment is what Chaudhry et al. (2004, p.209) have described as a 'comovement risk' which pairs systemic forces (e.g. recession, real estate market, sectoral changes) with higher or lower investment risks in REITs. In addition, idiosyncratic risks related to REIT firm characteristics including leverage, performance expectations, liquidity, and institutional size can affect the long-term performance of these investment instruments (Chaudhry et al., 2004). Leverage, for example, has a direct impact on the earnings of REITs, with higher borrowing levels creating greater agency problems and market exposure for firms seeking to capitalise upon short-term growth opportunities (Chaudhry et al., 2004). Asset efficiency, alternatively, reflects the overall efficiency of REIT investments, with productive firms targeting higher operating income, thereby diluting their riskiness and overall exposure (Chaudhry et al., 2004). Finally, liquidity risk represents a critical impact factor which can restrict the short-term funding capacity of the REIT, particularly when markets decline in trading volume or owned assets are less valuable due to economic recession or market instability (Chaudhry et al., 2004).

In the wake of the 2008 financial crisis, market volatility and the vulnerability of REITs to an increased risk profile became a central focus of the research in this field (Zhou and Anderson, 2012). Whilst traditional stock market risks are characterised by sudden and oftentimes unforeseen shocks, REITs are exposed to longer-term conditions that can lead to performance shortfalls which affect investor returns over a long period of economic recovery (Zhou and Anderson, 2012; Adams et al., 2015). For example, a central risk associated with REITs in commercial markets is interest rate risk which can significantly increase exposure during periods of rate variability (increases or decreases), leading to a higher risk profile and exposure for REIT investors (Chen, 2020). Whilst evidence presented by Zhou and Anderson (2012) charts post-2008 market volatility and its impact on REIT performance across US and UK markets, complexity-increasing factors such as diversification, leverage, and flexibility create inconsistencies in the data that can restrict the overall value of a predictive model or assessment.

2.2.3 Opacity and Flexibility

For REITs, reporting flexibility provides an important basis for managing 'future cash flow, liquidity, and investment shocks in a timely and cost-efficient manner' (Riddiough and Steiner, 20117, p.200). In a case study analysis of the flexibility strategies employed by a particular REIT during the mid-2000s (GGP), Riddiough and Steiner (2017) describe a strategy which was designed to fund corporate investment leveraging the lowest cost debt, namely debt secured by commercial properties. Unable to forecast the consequences of such a large debt burden under the radical pressures of the 2008 financial crisis, however, GGP was forced to declare bankruptcy. Riddiough and Steiner (2017) acknowledge that this case is an example of institutional idiosyncrasies and the conflict between managerial strategies and stakeholder expectations or objectives regarding debt capacity and financial flexibility. Whereby governance itself is restricted and existing structural requirements neglect diversified ownership and governance requirements, efforts to stimulate short-term financing and increase investment attractiveness can lead to long-term consequences that deplete debt capacity and financial flexibility (Riddiough and Steiner, 2017).

Flexibility reporting for REITs is a critical antecedent to resiliency, as real estate portfolios are characterised by a high degree of illiquidity and therefore, consortia are dependent upon the access to financing (secured and unsecured) to support investment objectives (Howton et al., 2017). To address the issue of financial flexibility, Giambona et al. (2017) outline a series of covenants that are tied to unsecured debt contracts and are designed to address the idiosyncratic conflicts that may evolve out of manager-stakeholder conflicts. For example, debt contracts likely restrict the leverage (e.g. less than 60%), the scope of secured debt (e.g. less than 40%), EBITDA to interest expense (e.g. no less than 1.5 times), and unencumbered assets to total unsecured debt (e.g. no less than 1.5 times) (Giambona et al., 2017). It is for this reason that Huston et al. (2011) have proposed that any effective REIT risk assessment considers a spectrum of informed judgements regarding financial resilience, portfolio compliance and orientation, risk tolerance, and overall investment trajectories. In addition, tracing these performance variables over time allows investors to assess whether reporting flexibility may be used to obscure performance deficiencies in one period in order to improve short term returns that could impact long-term funding (Huston et al., 2011; Adams et al., 2015).

The obfuscation of real results through a process of strategic earnings management involves 'real economic actions that managers take to disguise real economic performance' (Deng and Ong, 2018, p.411). In REIT reporting, earnings management takes the form of varying strategies including timing revenue recognition, boosting or cutting discretionary expenses, and timing asset disposition, all of which are frequently used to address liquidity issues and lower the cost of capital according to key changes in the marketplace (Deng and Ong, 2018). Through a comparative assessment of earnings management over time across SEO periods, Deng and Ong (2018, p.434) confirmed that managers seek to attract 'more unified trading in order to provide the liquidity services at lower cost during SEOs', with those REITs with higher liquidity risk often exhibiting a higher proclivity for earnings management prior to SEOs and uninformed trading following real earnings management.

2.3 Funds from Operations (FFO) and Opacity

Whilst typical indicators such as revenues and profit serve as normative reporting standards for REITs, they do not carry the same analytical weight as other indicators related to operational performance and institutional stability or growth (Baik et al., 2008). As a core measure of REIT performance, FFOs are a representation of the bottom line and are calculated as 'net income excluding (1) gains or losses from sales of most property and (2) depreciation of real estate' (Klein and Iammartino, 2009, p.174). As critical indicators of REIT performance potential, FFOs are vulnerable to accounting manipulation and opacity as managers utilise cross-period reporting, restatements, and depreciation/appreciation manipulation to improve their performance profile (Baik et al., 2008; Klein and Iammartino, 2009). In fact, empirical evidence presented by Baik et al. (2008, p.271) reveals that following industry interventions and curbing initiatives designed to 'discourage manipulation' of the FFO and positive reporting guidelines, the frequency of 'meeting or beating analysts' expectations' declines significantly. There are several different ratios used to calculate the relative performance and overall valuation of REIT stocks (Klein and Iammartino, 2009):

- FFO per Share: FFO divided by the number of shares outstanding
- FFO Yield: FFO per share divided by the REIT stock price per share.

- Price-FFO Multiple: Inverse of FFO yield, calculated as REIT stock price per share divided by FFO per share.
- AFFO: Adding or subtracting other items to arrive at Adjusted Funds from Operations (AFFO) such as recurring capital costs.
- CAD: AFFO refined by subtracting non-recurring expenditures to identify Cash Available for Distribution (to shareholders)

Although Gyamfi-Yeboah et al. (2014) acknowledge that the majority of REIT investors prefer FFO to Net Income when seeking to measure REIT profitability, the indicator itself is restricted in its transparency and overall effectiveness. Commercial properties, for example, are vulnerable to structural degradation and decline due to 'wear and obsolescence'; therefore, owners are required to invest in various improvements and structural rehabilitation in order to maintain the property's value (Block, 2011, p.146). If investors elect to add depreciation back into net income to calculate FFO, they receive what Block (2011, p.146) describes as 'a distorted, overly rosy picture of operating results and cash flows' which 'fails to account for these major—but recurring—capital expenditures'. Other features or wear-and-tear items such as carpeting are frequently capitalised and depreciated rather than expensed; when FFO is calculated, however, this indicator often fails to identify these expenditures, thereby artificially inflating FFO and yielding an inaccurate representation of a REIT's real cash flow (Ben-Shahar et al., 2011; Block, 2011). Whilst these items do depreciate over time, the costs incurred for replacement or rehabilitation are real, recurring capital expenditures that affect REIT performance and profitability (Block, 2011; Chen et al., 2012).

From an efficiency perspective, Beracha et al. (2019) propose that there is a direct correlation between REIT operational efficiency and overarching operational performance as measured by credit risk, total risk, and stock return. Such performance outcomes are evaluated in relation to specific indicators including return on equity (RoE) which is calculated as funds from operations divided by total equity in the previous period and return on assets (RoA) which represents the funds from operations divided by total assets in the previous period (Beracha et al., 2019). By comparing US-based REITs from a sample period of 1995-2016, the researchers demonstrated that those REITs that were classified as more efficient were associated with higher operational performance during this period according to their return on assets and their return on

equity (Beracha et al., 2019). The problem with such findings, as exemplified by Dolde and Knopf (2010) is that entrenchment of REIT ownership and the strategic use of opacity in risk and asset reporting standards creates high-leverage conditions that are not only unsustainable, but could artificially expose the REIT to future market vulnerabilities and an escalating debt burden.

2.4 Asymmetric Information and REITs Flexible Reporting Standards

For REIT management, asymmetric information represents a critical competitive advantage that can be leveraged to structure complex investment vehicles and diversify holdings across multiple sectors and industry segments (Danielson and Harrison, 2000). Whilst real estate investments would be traditionally valued according to their market price, REIT guidelines allow these holdings to be treated as financial assets, creating opacity in financial reporting that obfuscates market risks and pricing shocks (Ben-Shahar et al., 2011). By reclassifying segments of a mixed-performance portfolio as sale-pending, managers shift the asset valuation and create non-cash earnings advantages that smooth out earnings reports and mitigate the effects of adverse market movements (Ben-Shahar et al., 2011). Whilst, Kim and Jang (2012, p.596) argue that the 'stock value of a REIT should be equal to the value of its underlying real properties', the time and market opacity of REIT earnings management and financial structuring can create a lack of transparency, increasing the potential risks in spite of forward-looking reports.

For investors, the opacity of REIT reporting can have significant implications over the long term, potentially minimising the appearance of risks and vulnerabilities at the expense of the REIT during a market downturn or recession. For example, REITs can acquire and employ short term debt in order to manage their dividends, effectively increasing their rate of return to attract new investors (Hardin and Hill, 2008). This approach obscures the actual IRR, whilst creating performance outcomes that are artificially enhanced to increase investor confidence and expand fund performance under varying market conditions (Riddiough and Steiner, 2017). Further, when REIT risk profiles are diversified according to market instruments or proxies such as fixed-income securities and equities, Liu and Liu (2012) observe that the ability to evaluate the true risk profile of the issuance is difficult and often opaque. From an analyst's perspective, as the REIT market proxy expands in diversity, empirical comparisons suggest that the mean REIT beta rises simultaneously, expanding the overall risk profile of the REIT (Liu and Liu,

2012; DeLisle et al., 2013). The result is a performance evaluation that may not consider the true scope of REIT risk, and as a result, the vulnerability of the REIT holdings to market shocks across varying segments (Liu and Liu, 2012; De Lisle et al., 2013).

At the core of the REIT strategy is what An et al. (p.528) describe as a 'myopic approach' to short-term emphasis, relying upon stock price as a barometer of investor support. As a result, REIT managers are 'more likely to conceal adverse information if institutional investors will dump their stocks at the first sign of declining performance' (An et al., p.528). The weight and potential influence of this informational influence has been demonstrated by Jin and Myers (2006) in relation to investor pressures and further extended by Ambrose and Bian (2010) in relation to the effects of 'idiosyncratic stock return volatility' on REIT earnings management strategies. Whilst Ambrose and Bian (2010) predict that investors will be able to detect REIT earnings management strategies and the implications of these approaches on firm value; the evidence suggests that greater volatility associated with adverse investor responses is negatively correlated with REIT earnings management, resulting in a higher degree of reporting opacity.

2.5 Agency Theory and REIT Governance

2.5.1 Agency Theory

Agency theory introduced by Jensen and Meckling (1976) proposes that managers are confronted with decision making that often positions their own interests and anticipated benefits against those of organisational stakeholders. Whilst REITs are inherently constrained in their investment decisions by a range of regulatory forces, Capozza and Seguin (2003) acknowledge that the management team is able to select from a range of risk levels associated with the underlying property (e.g. diversified, focused), its locations (e.g. urban, rural), and its renter profile (e.g. low credit, high credit). By actively modifying the risk profiles of the REIT investments, these managers may seek to reduce agency costs and increase overall fund performance; at the same time, the distinction between ownership structure and personal financial interests in the REIT investment structure can lead to inefficient decision-making that exposes REITs to greater systemic risks (Capozza and Seguin, 2003). Extending such research to consider the effects of ownership percentages on REIT risk profiles, Dolde and Knopf (2010)

acknowledge that between ownership levels of 0 and 36%, entrenchment of outside owners is potentiated, but incomplete, creating a basis for lower systematic risk and decreasing leverage. At levels greater than 36%, the evidence suggests that institutional ownership is 'negatively, significantly associated with leverage' and as a result, financial risks are further decreased, a process that leads to a loss of competitive advantage and as a result, a higher rate of return (Dolde and Knopf, 2010). The findings presented by Capozza and Sequin (2003) and subsequently replicated by Dolde and Knopf (2010) along a later timeline reveal a similar phenomenon: improvements in insider investment in REITs can significantly reduce risk and financial leverage, creating stabilising conditions, whilst potentially limiting the scope and rate of returns over time.

2.5.2 REIT Governance

Anglin et al. (2013, p.513) argue that within the REIT management structure, 'corporate governance, in particular board size, independence, number of board meetings, and audit committee financial expertise, are essential for constraining' opportunistic reporting activities. At the centre of this governance-transparency equation is what Ooi et al. (2009) observe as an increasingly focused role of REIT management in strategy development and implementation as markets grow increasingly competitive and positioning requires experience, foresight, and investment competency. During periods of higher economic volatility, therefore, the pressure to intervene in REIT strategy-making and amend market positioning can lead to higher exposure to idiosyncratic risks as managers strive to improve performance outcomes (Ooi et al., 2009). Whilst modern portfolio theory suggests that idiosyncratic risk can be 'completely diversified away', evidence captured from more than a decade of REIT performance by Ooi et al. (2009) reveals that the idiosyncratic effects of management interference or strategic intervention can significantly increase portfolio volatility, exposing REITs to adverse market risks under future systemic downturns or structural changes.

2.6 Summary

This literature review has accomplished both the first and second research objectives in order to assess REIT financial reporting, determine the extent of flexibility and opacity, and

analyse the role of these tactics in enhancing REIT attractiveness in the marketplace.. These findings have uncovered a direct agency conflict in REIT governance that results in the opacity of financial reporting and risk-prone accounting methods that could potentially expose investors to greater risks and vulnerabilities over the long-term position. With key conditions such as flexibility and leverage leading to higher levels of risk exposure, investors are challenged to critically assess and monitor REIT performance by mitigating the effects of asymmetric information. The following chapter provides the logic of the inquiry and the techniques chosen to assess this phenomenon in relation to specific REITs listed on the LSE which highlights the implications of informational opacity and flexibility on performance and investor risk exposure.

3 Chapter 3: Methodology

3.1 Introduction

The range of methods employed across the literature reviewed in the preceding chapter is narrow, adopting predominately quantitative techniques to assess causal relationships and temporal patterns that shape REIT reporting standards. At the centre of such empiricism is an emphasis on factor-based replicability that elevates the importance of methodological rigour and consistency. Accordingly, for the current study, transparency and rigour have formed the basis the selection and application of these analytical techniques. The central research question has remained constant over the course of this investigation, as are REITs misusing their reporting flexibility and opacity to deceive investors by unfairly minimise the impact of their market risk. The following sections will outline the methodological considerations for this study and highlight the sources of evidence that were captured through a selective and pragmatic exploration of REIT reporting standards and accounting practices.

3.2 Research Paradigm

At the core of epistemological reasoning and methodological design is an underlying belief system or paradigm which orients researchers towards specific empirical expectations and techniques (O'Reilly and Kiyimba, 2015). Figure 1 provides a visual representation of what Saunders et al. (2015, p.124) have identified as the 'research onion', a multi-layered representation of the factors shaping the methodological selection process. The outer edge of this model represents the range of paradigms which predict research approaches and methodologies, guiding the empiricism towards either inductive or deductive solutions (Saunders et al., 2015). In spite of the breadth of paradigmatic considerations highlighted in this model, Bryman (2015) argues that there are two dominant philosophies that shape most modern research: the positivist and the constructivist. The positivist paradigm was widely represented throughout the literature review (e.g. Baik et al., 2008; Beracha et al., 2019) and is characterised by a pursuit of knowledge through replicable, predominately quantitative procedures that apply deductive reasoning to causal, factor-based analysis. Although this approach yields a valuable basis for

quantification of performance factors or predicting the risk profiles of REITs over time, the current study includes a broader range of considerations which relate to corporate reporting, promotion, and strategic earnings management.

The constructivist paradigm represents the acknowledgement of the affective influences of situational and contextual forces on behavioural outcomes, thereby constructing an evolving, phenomenological outcome (Jonker and Pennink, 2010). Typically applied to social research through interviewing or field-based studies, the constructivist approach to empiricism relies heavily upon the perspectives and interpretations of those individuals directly influenced by a given phenomenon (Bryman, 2015). The current study is not directly concerned with the motivations of investors; but it is focused on the tactics and strategies employed by REIT managers to influence the attractiveness and perceived value of annual financial results. Accordingly, there is both a constructed understanding of the underlying investment strategies and risk-based tolerances applied to the consortia, and a quantitative indication of fiscal responsibility and accountability. Accordingly, Morgan's (2015) pragmatic approach to empiricism which combines multiple methods and sources of evidence into a single, comparative output was identified as the most appropriate paradigmatic application for the current study. This approach ensured that the central strategies and motives of the earnings management strategies and the tangible, performance-influencing numerical indications of the data itself could be compared and analysed across multiple REIT issuances.

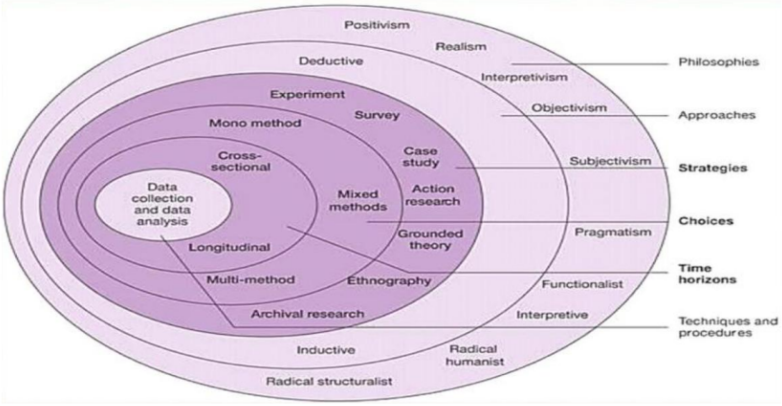

Figure 1: Research Onion (Source: Saunders et al., 2015, p.124)

3.3 Research Methodology

By combining both quantitative and qualitative elements of the REIT business model into a single study, this research approach has considered several critical determinants of financial flexibility (performance over time) and reporting opacity (stated versus realised results) that were identified over the course of the literature review. Highlighting the challenges of charting REIT financial flexibility and debt structuring, Riddiough and Steiner (2017) acknowledge that cyclical effects can shape capital structure and business objectives relative to the weight of secured and unsecured debt. Based upon these financial performance and stability indicators, this investigation involved a three-stage methodology:

1. Identify Appropriate Cases: Apply selection criteria to identify 5 cases to be compared.
2. Analyse Annual Reports: A minimum of three separate annual reports for each of the 5 companies were identified via online resources and key line items were then extracted and entered into a single spreadsheet for comparison purposes.
3. Analyse Findings: By comparing the performance and reporting opacity of these REITs over the 5-year sample period (2015-2019), this study applied quantitative and qualitative techniques to the critical analysis of these reporting practices.

In order to ensure that the results of this study were representative of a broader trend in REIT reporting flexibility and opacity, a multiple case study approach was adopted based upon Yin's (2014) representative model of structured comparison. This approach focused on the analysis of reporting tactics and approaches adopted by five LSE-listed REITs with similar, comparable financial characteristics. Initially it was predicted that accounting flexibility and opacity would be self-evident within the individual annual reports (e.g. glowing statements about performance versus real time performance gaps). However, during this comparative research process, it was revealed that the opacity used to improve REIT performance outlooks not only affects their reporting transparency, but the ability to identify areas of manipulation or flexibility within the earnings management strategy. For this reason, comparing time-series data across the individual cases provided the strongest basis for tactical interpretation and reporting opacity strategies. The comparative case study technique adopted for this research was the only method that would have allowed for these insights to be extracted without adopting more subjective or inductive analysis.

The inclusion/exclusion process emphasised comparability from a random sample of 5 REITs listed on the LSE that met similar basic criteria. Firstly, they needed to have reported at least 6 years of annual results, with years 2015 through 2019 forming a comparable basis (no market entry or exit) for their performance. This was important, because when reviewing the LSE listing of 50 REITs, potential funds such as Urban Logistics PLC were found to have incorporated in 2016, thereby eliminating the potential for comparability. Secondly, they needed to fall within a mid range revenue category with five-year annual revenues averaging less than £100 million. This was important because following the full financial analysis of LandSecurity, one of the largest REITs on the LSE, it was determined that the comparability of the findings was skewed by the scale of the REIT itself. Finally, any included REIT needed to include investments from a variety of property sources (e.g. hotels, hospitals, office buildings). This was important because several REITs listed on the LSE (e.g. Warehouse REIT, Workspace Group PLC) have limited their investment strategies to a specific industry sector. By applying this inclusion/exclusion criteria to the random identification of 5 (out of 50) REITs listed at the LSE (2020), five primary funds were identified and selected for inclusion in this study.

3.4 Indicators and Proxies

This study was designed to critically analyse earnings management strategies adopted by REITs to determine whether REITs are misusing their reporting flexibility and opacity to deceive investors by unfairly minimise the impact of their market risk. Accordingly, key **indicators** were identified in order to provide the basis for cross-comparison of reporting opacity and REIT performance including FFO, Revaluation of Assets, Asset/Liability Ratio, Gearing/LTV, Adjusted Net Debt (Borrowing), and Increase/Decrease in Cash and Cash Equivalents (Baik et al., 2008). These variables served as proxy indicators for the relative opacity of the financial reporting, whereby efforts to report positive revenue gains and positive operating income were identified as a flexible and opaque interpretation of financial performance outcomes that neglected higher gearing ratios, declining cash reserves, and higher borrowing expenses or requirements. This approach emphasised a broad analysis of the range of factors associated with earnings management and the potential risk exposure confronting these organisations as they navigate the effects of reporting flexibility on strategy implementation and diversification. Multiple quantitative charts were developed from the data extrapolated from these annual reports, tracing time-series performance from 2015 to 2019. Through a line-by-line analysis of the consolidated financial reports for each company in each year of publication, efforts to manipulate the positive/negative orientation of the results could be identified and comparative time-series performance for each organisation could be assessed relative to its peers in the same, multi-industry investment corridor..

3.5 Ethical Statement

Regardless of the sources of evidence, Bryman (2015) argues that ethical integrity is a critical antecedent to the reliability and validity of any social research. Despite basing the scope of this study on secondary sources of evidence, the potential for ethical irresponsibility was significant, with key considerations relating to opacity and corporate reporting standards potentially vulnerable to subjective interpretations (Punch, 2014). Accordingly, the structured orientation of this research process, coupled with the grounded theoretical basis for interpretation and analysis was employed to maintain ethical integrity and preserve the overall transparency of

the findings (Punch, 2014; Babbie, 2015). In addition, by applying the triangulated techniques associated with Morgan's (2015) pragmatic research paradigm, this study has drawn upon prior academic research to critically explore the overall validity of the findings from the current study, thereby linking this output to comparative evidence that can be used to draw recommendations that were derived from multiple perspectives and models.

3.6 Limitations and Bias

This investigation has drawn heavily upon secondary evidence accessed from purely public online sources including annual reports, investment statements, and industry analysis. Accordingly, this research has been fundamentally limited in its ability to extract empirical, insider feedback or insights regarding the reporting practices adopted by the case study organisations. As a result, there is intrinsic qualitative bias within this research in relation to the interpretation and justification of opacity as a potential abuse of REIT reporting practices. Whilst efforts were made to ensure objectivity during this process, the concerns regarding flexibility and opacity in corporate reporting identified in the literature review have been applied to the interpretation of these findings, resulting in an expectation of elevated risk and vulnerability across all investment scenarios.

3.7 Summary

This chapter has specified the empirical research methods that were used to answer the central research question and research objective three in order to capture evidence related to REIT financial reporting standards and the complex relationship between flexibility and opacity. Although this phenomenon represents a complex tension between fiscal responsibility and corporate governance, the challenges confronting investors seeking a more transparent interpretation of REIT value and performance are directly linked to risk-related considerations. Accordingly, the pragmatic lens applied to this methodological approach has allowed for both quantitative and qualitative considerations to be extrapolated from REIT annual reports, thereby drawing upon both idiosyncratic and financial information to understand how reporting practices can shape the risk profiles of the case study issuances. The following chapter presents these

findings in their entirety and analyses the evidence by applying a conceptual and critical lens to the interpretation of the outcomes.

3.8 Research Risk Assessment

In addition, to ensure recognising all the possible risks are considered, a Risk Assessment Form has been completed and approved by the supervisor.

4 Chapter 4: Data Results and Analysis

4.1 Introduction

As outlined in the preceding chapter, a mixed methods approach has been adopted which considers both quantitative and qualitative indicators related to corporate reporting opacity and financial flexibility. The following sections critically compare and analyse these funds, assessing performance and transparency over time, and highlighting key areas of obfuscation that could threaten the validity and legitimacy of REIT forward-seeking claims in future investment analysis. All raw data presented in this chapter can be found in Appendices A-E, with comparative emphasis placed upon time-series outputs and line-by-line accounting reviews.

4.2 Comparative Analysis of REIT Reporting

As outlined in the methodology, the assessment of opacity and flexibility in REIT reporting was based upon a critical comparison of primary performance indicators such as revenue and profit against secondary indicators with a higher degree of predictive potential for long-term performance such as FFO, Asset/Liability Ratio, Revaluation Expenses, and Cash at End of Year. Figure 2 presents a revenue performance summary for each of the five case study REITs from 2015 to 2019. For each of these five organisations, revenue streams were predominately associated with rents and impacted by marginal rent-related expenses (e.g. promotions, discounts, offers) that diluted net rental income over this four year period. From this model, the performance for AssuraPLC, Custodian, and CapReg is indicative of an upwardly mobile growth profile, with Picton and RDI experiencing recent term declines in performance due to varying REIT-specific challenges.

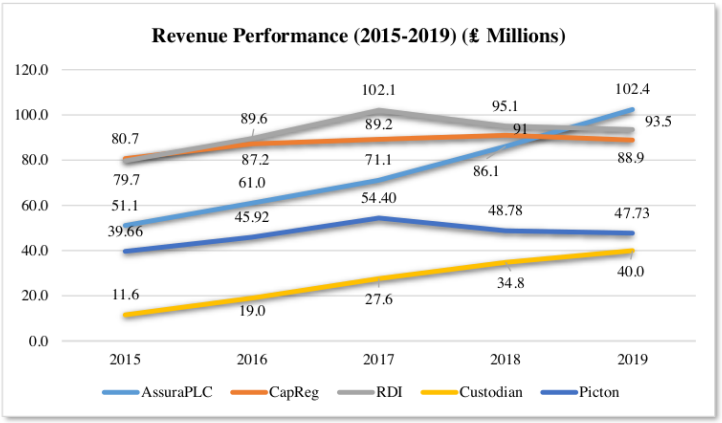

Figure 2: Revenue Performance (2015-2019) (Millions)

More important to the assessment of REIT performance, FFO visualised in Figure 3 deducts depreciation and amortisation from net income. Mirroring the revenues modelled in Figure 2, this chart describes significant FFO growth at Assura during this period, yet at the same time, it reverses RDI's revenue trend and highlights a persistent increase in FFO for four of these five years. At the same time, Picton's FFO in this model highlights a revenue-matched trendline which increased until 2017 and then declined in both of the two years since. For RDI, its FFO of £49.4 million in 2018 represents 53.46% of its gross profit, suggesting that the majority of the company's 'earnings are high quality and recurring' (SWS, 2018, p.1). A review of the FFO performance of CREI reveals a 2019 realisation of £25 million or 104% of the company's gross profit of £23.6 million, a figure which suggests high-quality, recurring earnings (SWS, 2019).

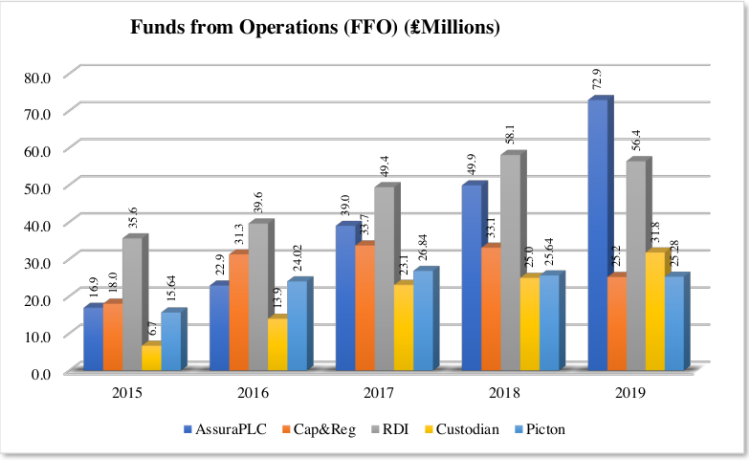

Figure 3: Funds from Operations (£ Millions)

To assess the fiscal responsibility and stability of these REITs, several indicators were identified including the asset to liability ratio visualised in Figure 4. This model reveals a quantitative variation in the normative ratio maintained by these REITs as evolves towards a state of regularity over time. Indicated by Custodian's early-phase investment initiatives in 2015, the discrepancy visualised in this model suggests a period of pre-investment or excessive capital holding that may have reflected a highly conservative investment position with limited dependence upon borrowing. Over this four-year period, however, the asset-liability ratio has merged towards a 2018-2019 mean of 281% for all five REITs.

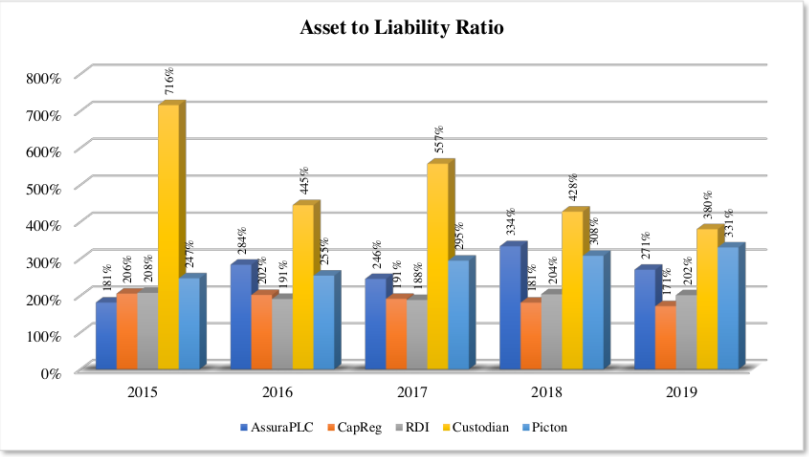

Figure 4: Asset to Liability Ratio (2015-2019) (%)

A central problem in REIT opacity and reporting flexibility is the dependency placed upon revaluation of properties to create a balanced balance sheet and demonstrate consistent performance over time. Figure 5 highlights the net surplus or deficit associated with investment revaluation for each of these REITs since 2015. The model reveals several significant declines at CapReg, RDI, and Custodian in the past year. Whilst Assura's performance in terms of revenues and FFO remained high in the preceding figures, a revaluation cost in 2018 interrupted an intra-period pattern of surplus. As a strategy supporting reporting flexibility and opacity, revaluation is based upon fair market value indicators that are determined by a range of external indicators and, whilst indicative of intra-period changes in the property market, do not reflect the long-term value of the property (Haslam et al., 2015). For this reason, REITs are dependent upon extracting gains from revalued property assets that can then be marked to market in order to achieve and maintain their desired gearing ratios (Haslam et al., 2015).

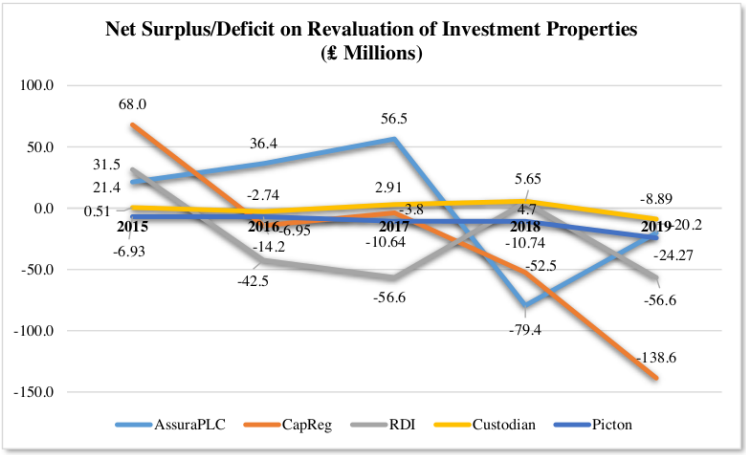

Figure 5: Net Surplus/Deficit on Revaluation of Investment Properties (£ Millions)

Revaluation, as both a mechanism of accounting flexibility and a potential threat to REIT stability has been shown to severely impact REIT borrowing and financial leverage opportunities during periods of socio-economic decline (See Haslam et al., 2015). Figure 6 visualises the net gearing reported by each of these REITs as the loan to value ratio (LTV), the most consistent indicator of both investor-facing gearing measurement and REIT investment strategy development. Gearing varied across these funds, with a mean LTV rate of 35.4 which was elevated by AssuraPLC, CapReg, and RDI, all of which set gearing targets of between 35 and 45%. However, Custodian and Picton have established targets of 25%, maintaining gearing levels that were not only much more consistent, but they demonstrated much lower volatility in terms of property revaluation (Figure 5). In addition, both Custodian and Picton have retained a very consistent asset to liability ratio in spite of changing patterns reflected across the other three REITs.

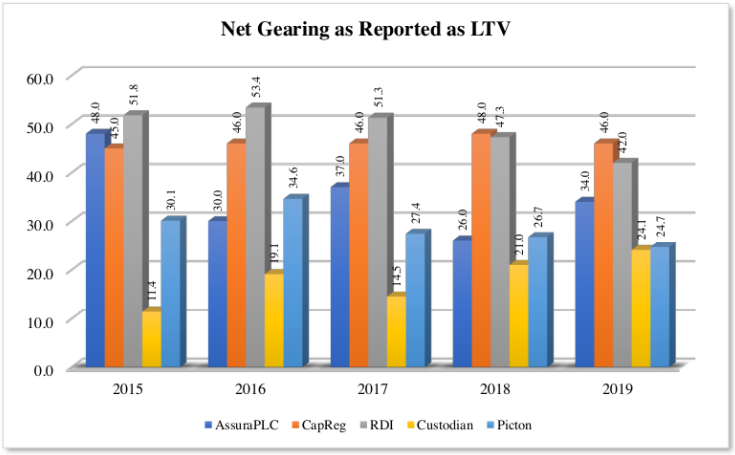

Figure 6: Net Gearing as Reported as LTV (%)

Figure 7 visualises the significant financial impact of revaluation on organisational closing cash as each of these REITs were forced to reconcile intra-period valuation declines through expanded financing, debt instruments, or property liquidation. CapReg, for example, demonstrated the most significant increase in closing cash following a significant annual revaluation of properties due to changing market demand, whilst similar declines in valuation at RDI and Picton were also mirrored by less significant, but substantial declines in cash on hand in 2019. At the centre of flexible REIT reporting are a range of leverage-driven strategies that allow these firms to amend borrowing terms and adopt new loans in order to address changing marketing conditions.

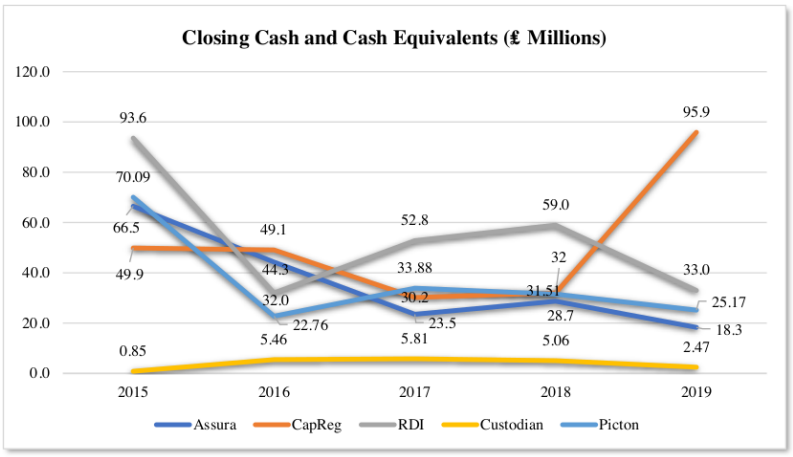

Figure 7: Closing Cash and Cash Equivalents (£ Millions)

The result of significant property revaluation can be visualised in Figure 8, a critical figure that accounts for much of the opacity reflected in these annual reports. The significant increase in debt as a form of buffer or hedging mechanism for REITs like RDI and Assura not only mirrored substantial changes in investment revaluation, but it followed alongside FFO as expanded operational returns signalled a more stable, and thereby, more investment-worthy or lender-worthy institution. In fact, Zhu et al. (2010) demonstrated that REITs will often manipulate their financial results in order to make seasoned equity offerings more attractive to investors, drawing upon discretionary accruals to encourage investment. At the same time, as leverage increases, cash flow grows more volatile, and corporate governance is challenged, there is a greater likelihood of leveraging reporting flexibility and opacity to manipulate and present more positive financial results (Zhu et al., 2010). The central purpose of this manipulation is to increase the flow of investment capital in order to increase liquidity at a lower cost during SEOs and thereby reduce long-term expenses from traditional lending sources (Deng and Ong, 2018).

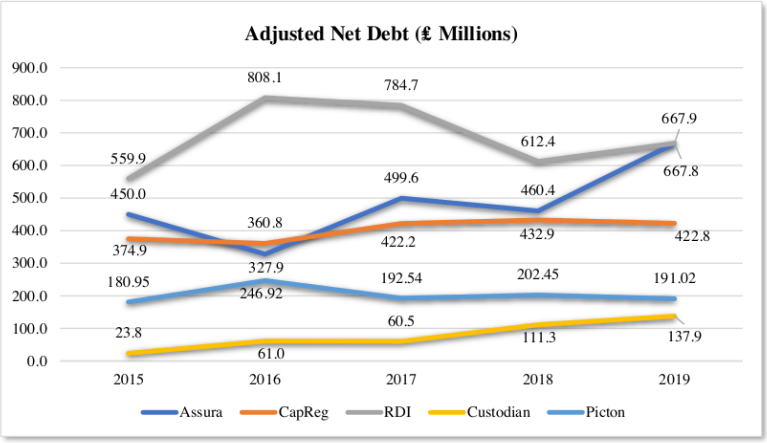

Figure 8: Adjusted Net Debt (£ Millions)

4.3 Summary

The third research objective formed the basis for this chapter and the comparison of REIT reporting standards amongst 5 LSE listed funds in order to assess the degree of flexibility and opacity in their standards. The findings have revealed short term flexibility through tactical earnings management related to property valuation and investment write-offs. Report weighting towards short-term performance variables such as EPS and EBITDA was also used to obscure other long term challenges such as declining cash reserves, increasing financing expenses, and improper investment strategies (e.g. retail versus industrial). The following chapter will discuss these findings.

5 Chapter 5: Analysis

5.1 Overview of Findings

The primary question answered over the course of this research was whether REITs are exploiting their reporting flexibility and opacity to deceive investors by unfairly minimising the impact of their market risk. Whilst each of these REITs were outwardly thriving financially within their annual reports prior to the immediacy of this commercial rental crisis, their strategic pursuit of sector-restricted, rent-producing real estate has followed similar investment arcs in the past five years. However, evidence from a recent shift in liquidity and the increased volatility of the debt and cash on hand profile of these organisations suggests that they remain vulnerable to a significant regional downturn in property values or rental agreements. The GGP case introduced by Riddiough and Steiner (2017) is an important example of the failure to adequately diversify and maintain reporting consistency, as vulnerability to systemic shocks such as the 2008 financial crisis or Brexit or Covid-19 have direct implications for the debt capacity of the REIT and its options under duress.

Whilst a comparative review of these five REITs was able to identify similar financial indicators, it was evident from variations in phrasing, factor, and reporting structure that IFRS guidelines only apply to the consolidated element in each financial report. Therefore, the large majority of these reports focus on positive performance results and forward-seeking statements that reflect risk management and strategy implementation in future periods. Deng and Ong (2018) have demonstrated how such strategies seek to attract investor capital through the obfuscation of potentially volatile risk areas such as leverage or liquidity, cash on hand, and FFO in changing rent conditions. Institutions such as the EPRA (2016) provide a critical foundation for shaping and stabilising reporting measures, ensuring reporting transparency, and creating industry-spanning best practices that can be used by investors to compare REITs according to similar measures (e.g. EPRA NIY). At the same time, establishing an ownership structure with sufficient non-executive representation and a financial basis that is not predicated upon short-term performance is critical to meeting long-term investment objectives. In fact, Capozza and Seguin (2003) have confirmed that REITs with higher levels of inside ownership are more likely to trade at a premium to NAV than those with lower levels of inside ownership. At the same

time, an increase in inside ownership is typically associated with REIT holdings represented by less risky assets and less leverage, creating a more flexible, fiscally sound foundation for investment selection and funding (Capozza and Seguin, 2003).

losses during market downturns. RDI has experienced such a shift in performance between 2017 and 2019 as retail sectors shift downward in terms of real rent values and property valuation, whilst other segments such as industrial facilities and shipping processing plants gain significant value and rent premiums.

5.3 Analysis of Corporate Exposure in Selected Sample

Whilst all five of these REITs utilise some form of standard reporting mechanism to account for changing market forces, fund positioning, investment strategies, and risk profiles, the structure and targeting of these reports have direct implications for the inside interpretation and flexibility of the annual reporting practices. The following will focus on two of these five cases in order to draw comparisons in the use of categorical specifics and risk profiling to systematically outline risks, whilst leveraging ongoing performance to reduce their perceived likelihood and potentiality via reporting opacity

Underscoring the opacity of the RDI (2019) annual reporting is a limited degree of transparency regarding the principle risks facing the company in spite of corporate leadership identifying four core categories including strategic, financial, operational and legal, and regulatory and human resources. Figure 9 outlines the risks identified by RDI (2019) and the underlying scope of categorical affectation that could potentially result in organisational decline. In spite of acknowledging these risks, SWS (2020b) reports that RDI's investor returns have averaged a -55.5% over the past five years, compared with an industry benchmark of around -0.8% during the same period and a market return of around 18.3%. The result of this underperformance is a price to earnings ratio that is around -3.6x, in comparison with an industry average of 16.9x. Whilst SWS (2020b) forecasts RDI to achieve profitability in the coming three years, negative growth in 2020 and 2021 suggest that debt mitigation and leverage management could play critical roles in the realisation of this medium-term objective.

Strategic Risks	Financial Risks
Uncertainty in the political and economic climate	Decline in market conditions such as occupier demand for UK real estate
Sustainable investment strategy and income returns	Adverse interest rate movements

Business interruption or physical threat	Adverse foreign currency movements
Change in investment strategy or partnerships	
Operational Risks	**Legal, Regulatory, and Human Resources Risks**
Failure to anticipate changing property cycle	Health, safety, and environmental risks
Reduced occupier demand for space	Changes in regulatory or legislative requirements
Inappropriate/deficient construction materials	Failure to recruit, develop, and retain employees
Reliance on third party service providers	

Figure 9: Four Categories of REIT Risk (Source: RDI, 2019)

Focusing on the broadening spectrum of risks confronting CREI in the coming financial period, Figure 10 distils forward-seeking considerations into seven categorical headings and their associated risk factors. A review of CREI's (2020) annual report indicates that the likelihood of these risks affecting operational performance is high across five of the seven categories, with internal controls protecting against operational and acquisition risks. At the same time, the predicted business impact of these risks is high as well, reflecting an emergent period of high volatility and vulnerability that will likely impact upon future performance. Acknowledging the long-term impacts of Covid-19, CREI (2020, p.49) reports that the current dividend payments will not be 'fully supported by net rental receipts going forward', requiring reliance on 'prior years undistributed reserves', with deferred rents restoring the dividend to a 'sustainable long-term level akin to previous years'.

Loss of Revenue	**Financial**
Tenant default due to COVID-19	Reduced availability or increased cost of arranging or servicing debt
Increasing number of contractual breaks	
Enforced reduction in contractual rents due to legislative changes	Breach of borrowing covenants
Inability to re-let void units	Significant interest rate increases
Low UK economic growth impacting commercial property market	**Operational**

Decreases in Portfolio Valuation	Inadequate performance controls or systems operated by investment managers
Decrease in sector-specific ERVs	**Regulatory and Legal**
Market pricing affecting value	Adverse impact of new legislation or regulations
Change in demand for space	Non-compliance with REIT regime or changes to company's tax status
Geographic concentration or sector	**Business Interruption**
Lack of transactional evidence (for valuation purposes)	Cyber-attacks and IT system corruption
Acquisitions	Terrorism or pandemics
Liabilities associated with acquisition of new properties	Operational interruptions

Figure 10: Business Risks and REIT Performance Impacts (Adapted from CREI, 2020)

5.4 Assessment Matrix

To attract new investors at both the institutional and market levels, REITs leverage informational advantages to communicate risk models and profiles that are inherently positive, oftentimes weighing current risk standards with future investment objectives and strategies. Demonstrating the need for more critical, comprehensive analysis, Huston et al. (2011) have proposed that REIT risk management must consider a range of strategic and performance-based influences which range from the appropriateness of the portfolio mix to the overall financial resilience of the consortia itself. These variables, when coupled with the evidence presented over the course of this chapter support the need for a diversified application of risk assessment and performance analysis to the interpretation and validation of forward-seeking statements. Figure 11 provides a visual representation of a proposed transparency assessment matrix that is designed to critically assess the likelihood of key internal reporting factors on REIT performance impacts over short, medium, and long-term periods. By assessing the volatility of these results (e.g. will higher leverage lead to less available funding), it is possible to forecast a performance impact. Similarly, by evaluating the low, medium, or high-risk level, investors can determine whether they should be more or less concerned about performance in one or more of these variables.

Factor	Performance Impact	Sustained	Volatility	Risk
FFO	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High
Governance	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High
Leverage	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High
Restatement	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High
Liquidity	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High
Risk Profile	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High

Figure 11: Transparency Assessment Matrix (Created for Study)

Figures 12 and 13 provide exemplary analyses of this transparency assessment matrix and the results for two of the five cases analysed over this study (See Appendix F). Each of these charts demonstrates key sectors of vulnerability (e.g. Risk Profile for RDI and Liquidity for Custodian) that can be used to further assess reporting transparency and consistency over time. The weighted consideration of other dimensions such as whether the impact is sustained, the volatility of the threat to that particular category, and the level of risk to organisational performance in each category further assist in deciphering the overall risk profile of the REIT at any given point in time. For example, in 2015 liquidity would have been a low-impact consideration for CREI, have a short-term impact, low volatility, and low risk.

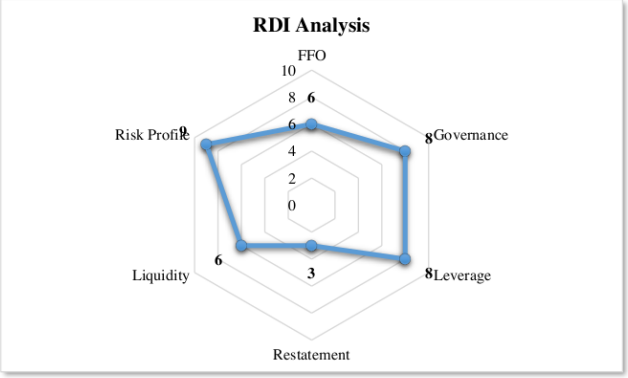

Figure 12: RDI Analysis

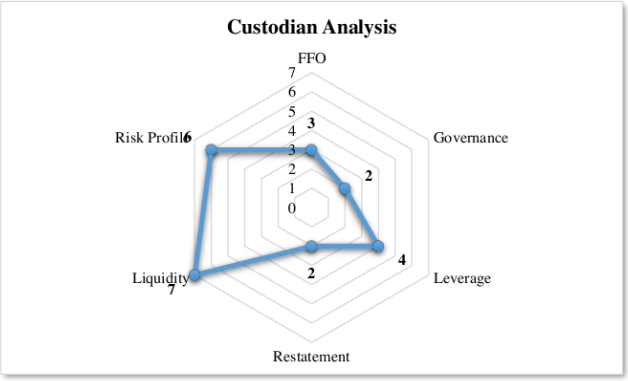

Figure 13: CREI Analysis

5.5 Summary

This chapter has summarised the findings from the case study comparison of the REIT reporting standards adopted by five representative REITs currently listed on the LSE. The findings have revealed the potential obfuscation effects of reporting flexibility and obscurity, particularly when REITs are confronted with declining lease performance and property valuations. To achieve research objective four in regards to a reporting assessment matrix, a theoretical model has been introduced that can be used to compare six critical indicators of REIT stability and risk in changing market conditions. The following chapter will conclude this research and answer the central research question regarding REIT reporting flexibility and opacity.

6 Chapter 6: Conclusions

For REITs, recent market shocks and uncertainties highlight the importance of an effective, diversified investment strategy capable of mitigating fund risks and overcoming sectoral downturns. Whilst expert knowledge and clearly defined risk mitigation strategies characterise those best practices that make some REITs profitable under any market conditions, the reliance upon reporting flexibility and opacity to transfer risks and threats across fiscal periods has become a common dimension of strategic earnings management. Accordingly, the primary aim of this study was to critically assess the degree to which REIT opacity and reporting flexibility is being used to inaccurately mitigate market risk and REIT exposure in order to predict the likelihood of investor vulnerability. Through a comparative case study of five REITs listed on the LSE, it is concluded that strategic earnings management not only relies heavily upon reporting flexibility to obscure under-performing short-term strategies, but it adopts exploitative accounting practices that can expose investors to significant systemic and market risks over the long term.

The central research question that was answered over this study asked whether REITs are exploiting their reporting flexibility and opacity to deceive investors by unfairly minimising the impact of their market risk. The findings have revealed that as a part of the flexible reporting scheme which includes revaluations and restatements as well as opaque measures of financial performance, REITs are indeed relying heavily upon reporting flexibility to improve their investor outlook. Although comparisons across the UK REIT industry could likely be drawn between any two strategies, the evidence captured over the course of this study has revealed that depreciation and leverage have been adopted by all five of these organisations to meet their yield and dividend objectives in spite of significant declines in property valuation across key sectors. The findings reveal that even before the 2020 Covid-19 crisis, each of these REITs had been exposed to market tumult and changing patterns of commercial leasing that required targeted strategic refocusing and a restructuring of debt instruments capable of meeting longer-term coverage requirements.

A central objective of this study was to critically review literature regarding REIT financial reporting, through which it was revealed that flexibility, earnings management, and

opacity are known practices that have been widely adopted by this industry to prioritise higher performance outcomes over periods of valuation decline or rental volatility. Subsequently this research undertook to fulfil a second objective of assessing how REITs utilise flexible reporting to enhance their attractiveness and mitigate the appearance of market risks. The findings revealed that each of the five REITs have relied heavily upon accounting flexibility and regular financial returns to maintain their high standard and position in REIT investment analysis. By avoiding reporting poor investment decisions or declining asset values, REIT governance seeks to displace risks and concerns by liquidating underperforming assets and applying depreciation or surplus to those line items needed to bolster fund attractiveness.

The final objective in this study focused on comparing the behaviours of LSE listed REITs to assess the scope of reporting practices. The evidence revealed widespread consistency in reporting best practices which ranged from positive strategy discussion to in-depth risk analysis to a standard form IFRS-based consolidated income statement. At the same time, the obfuscation of increased risks and liquidity hurdles through creative accounting practices and amortisation or depreciation was widely used to improve overall performance consistency and meet investor expectations of returns. The implications of these findings are significant, as they could potentially expose investors to both market and idiosyncratic risks as these REITs are managed towards desirable returns, but unsustainable long-term growth objectives. The matrix developed in the preceding chapter highlights the core segments of analysis and interpretation that are needed to fulfil the central goals of a responsible investor. By targeting greater transparency, exploring the strategic optimality and efficiency of REIT investment decisions, and negating the potential effects of earnings management and flexible reporting, fund selection will become a function of informational advantage, rather than the current standard of accounting flexibility and reporting opacity.

This research concludes the following critical findings. Firstly, REITs are exploiting flexibility and opacity to improve the short-term outlook of their performance and obscure the potential risks related to leverage, cash flow, and market changes. Secondly, these techniques are widely adopted within this field of investment, and therefore, they form the normative backbone for REIT reporting. Finally, this study demonstrated that the severity of the agency conflict in REIT reporting has had a direct impact on the earnings management strategies used to

make REITs attractive to investors regardless of their continued performance declines and outcomes. These findings reveal a direct, sustained motivation for executives to achieve positive results and to encourage higher issuance subscription rates in order to continue to fund REIT growth in spite of the significant financial consequences of annual valuation write-offs and losses. Where REITs should be measured by the soundness of their investment strategies, in their current stage of flexible accounting, these institutions have developed techniques that improve the attractiveness of their offerings without exposing the full spectrum of risks likely to affect long-term investor performance.

7 Chapter 7: Recommendations

This study has revealed several critical challenges related to REIT reporting and the effects of flexibility and opacity on risk assessment and investor interpretation. Firstly, REITs have extreme flexibility in terms of market value reporting, and by leveraging this positive-negative cycle, they are able to increase their access to capital under changing market conditions. Secondly, REITs incorporate governance measures into their prospectus which link the underlying bonus structure to persistent growth and positive returns. This pay-for-performance structure exacerbates the agency conflict and creates challenges for investors seeking returns based upon strong fundamentals and risk-adverse investments. Finally, sector-based risks related to declining property values and changing market conditions (e.g. from retail to industrial warehousing) can lead to the obfuscation of REIT risks and market vulnerabilities. Accordingly, there are several recommendations that were extrapolated from these findings that could be used to improve both investor REIT monitoring practices and regulatory oversight as this industry evolves towards a more traditional standard of accounting best practices.

Recommendation 1: Critically Assess the Antecedents to Report Restatements and Results Modifications: Whilst restatements are a function of REIT earnings management strategies, their threat to investor decision-making and fiscal transparency is significant. Analysing the underlying causes of restatement and prioritising deeper market analysis regarding restatement triggers can illuminate whether such practices are negligent or justified. For investors this means comparing year over year performance data and determining where restatements are originating, if any. For regulators, this means determining whether REIT leaders exploited restatements for short-term gains and holding them accountable to fair reporting practices.

Recommendation 2: Monitor Executive Remuneration and Analyse Weighted Returns Over Time Against Other Key Indicators such as Revenue and Asset Ratio: The blanket reward for performance achievement may provide a simplified solution for rewarding and retaining executive directors; however, the risk of agency conflicts is significant, and as a result, short term performance may become a priority. Investors should weigh both short and long-term

objectives, comparing planned versus realised investment outcomes over time to confirm or reject the justification for the remuneration. By acknowledging the agency conflict surrounding executive remuneration and determining the fairness of the annual payment structure, investors can determine whether REIT performance incentives may be causing restatements and data manipulation.

Recommendation 3: Target Diversification and Comprehensive Risk Assessment Practices: At the centre of the market shock recovery process is a diversified investment strategy that allows REITs to rely upon higher-performing assets in one category to refinance or liquidate their investments in other, under-performing segments. Regardless of shocks, diversification should be weighted over a long-term plan, not measured against short-term returns; therefore, consideration should be given to the rent-seeking strategies employed by REIT executives. From property market diversification to financial leverage instruments, these findings suggest that diversification is a critical antecedent to positive REIT performance and long-term gains.

7.1 Future Research

As guidelines for investors, these recommendations target key areas where REIT earnings management could potentially obscure weaknesses and vulnerabilities within the financial fundamentals of these consortia. As the same time, each of these recommendations supports a more rigorous standard of REIT earnings assessment that negates the flexible and opaque tactics currently being used to offset the perception of risk. Future research in this field should critically explore the range of tactics that REITs are using to exploit flexibility and opacity to deceive investors by unfairly minimising the impact of their market risk. In addition, an assessment of sound investment practices and a critical analysis of REIT assessment techniques relative to REIT performance could add additional insights that would illuminate the pathways to more effective governance and investment planning in the future.

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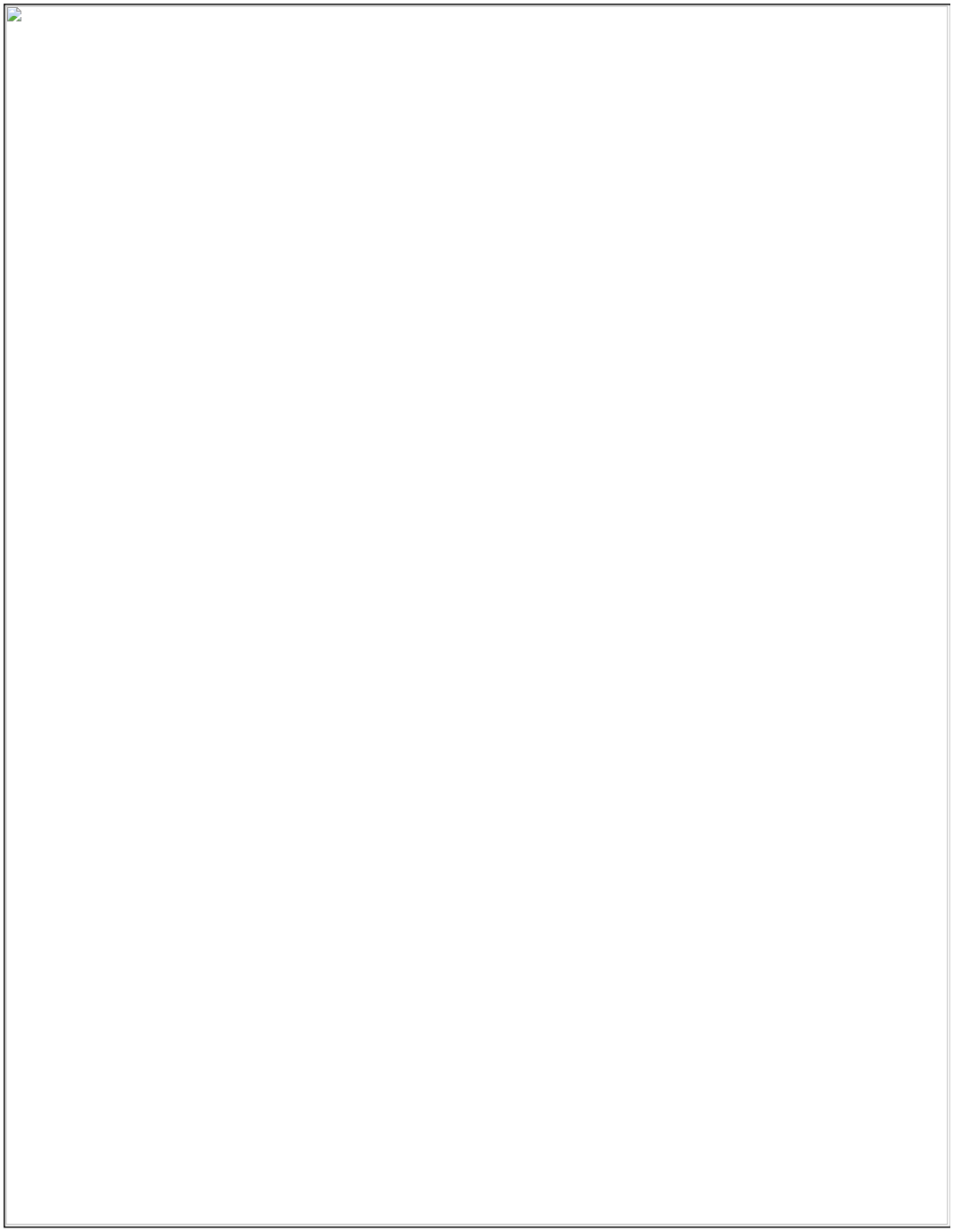

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9 Appendices

Appendix A: RDI Financial Results

	RDI (Millions) (Gearing 30-40%)				
	2015	2016	2017	2018	2019
Revenue (Gross Rental Income)	79.7	89.6	102.1	95.1	93.5
Rental Expense	-5.3	-6.2	-9.0	-8.6	-10.0
Net Rental Income(Gross Profit)	55.8	72.0	77.6	73.1	70.3
Net Operating Income (Profit before Taxation)	84.0	8.6	73.5	64.2	-79.8
FFO (Net Cash Inflow from Operating Activities)	35.6	39.6	49.4	58.1	56.4
In/Decrease in Cash and Cash Equivalents	3.0	-59.3	22.4	7.2	-26.6
Adjusted Net Debt(Borrowing)	559.9	808.1	784.7	612.4	667.9
Net Gearing (Gross borrowing less unrestricted cash, divided by portfolio value) or LTV	51.8	53.4	51.3	47.3	42.0
Closing Cash and Cash Equivalents	93.6	32.0	52.8	59.0	33.0
Total Finance Costs	-24.0	-26.4	-25.0	-26.3	-25.4
Non-Current Assets	994.0	1480.0	1529.0	1627.8	1176.9
Current Assets	232.8	58.7	95.6	66.1	298.1
Total Assets	1226.8	1538.8	1624.6	1693.9	1475.0
Non-Current Liabilities	526.1	768.8	837.1	796.8	677.7
Current Liabilities	63.9	36.6	25.3	34.3	54.3
Total Liabilities	590.9	805.4	862.4	831.1	732.0
Asset to Liability Ratio	208%	191%	188%	204%	202%

Net Surplus/Deficit on Revaluation of Investment Properties (Net losses/gains on investment properties)	31.5	-42.5	-56.6	4.7	-56.6
(EPS) Earnings Per Share	41.0	40.0	185.5	213.8	185.5

Appendix B: Custodian Financial Results

	Custodian (Millions) (Gearing 25%)				
	2015	2016	2017	2018	2019
Revenue (Gross Rental Income)	11.6	19.0	27.6	34.8	40.0
Rental Expense	3.0	3.9	5.5	6.0	7.3
Net Rental Income(Gross Profit)	8.5	15.2	22.1	28.8	32.7
Net Operating Income (Profit before Taxation)	8.7	11.2	24.2	32.4	23.6
FFO (Net Cash Inflow from Operating Activities)	6.7	13.9	23.1	25.0	31.8
In/Decrease in Cash and Cash Equivalents	0.8	4.6	0.4	-0.7	-2.6
Adjusted Net Debt(Borrowing)	23.8	61.0	60.5	111.3	137.9
Net Gearing (Gross borrowing less unrestricted cash, divided by portfolio value) or LTV	11.4	19.1	14.5	21.0	24.1
Closing Cash and Cash Equivalents	0.85	5.46	5.81	5.06	2.47
Total Finance Costs	-0.29	-1.27	-2.41	3.66	4.37
Non-Current Assets	207.29	318.97	415.81	528.94	572.75
Current Assets	1.92	9.97	13.00	12.94	6.15
Total Assets	209.21	328.94	428.81	541.89	578.89
Non-Current Liabilities	23.81	65.71	64.36	113.93	138.11
Current Liabilities	5.41	8.17	12.57	12.76	14.16
Total Liabilities	29.22	73.88	76.93	126.68	152.27
Asset to Liability Ratio	716%	445%	557%	428%	380%

Net Surplus/Deficit on Revaluation of Investment Properties (Net losses/gains on investment properties)	0.51	-2.74	2.91	5.65	-8.89
(EPS) Earnings Per Share	6.0	5.5	8.1	8.9	6.0

Appendix C: Assura Financial Results

	Assura PLC (Millions) (Gearing 40-50%)				
	2015	2016	2017	2018	2019
Revenue (Gross Rental Income)	51.1	61.0	71.1	86.1	102.4
Rental Expense	-2.9	-2.6	-3.2	-5.9	-7.2
Net Rental Income(Gross Profit)	48.2	58.4	67.9	80.2	95.2
Net Operating Income (Profit before Taxation)	36.6	28.8	95.2	71.8	84.0
FFO (Net Cash Inflow from Operating Activities)	16.9	22.9	39.0	49.9	72.9
In/Decrease in Cash and Cash Equivalents	-27.9	-22.2	-20.8	5.2	-10.4
Adjusted Net Debt(Borrowing)	450.0	327.9	499.6	460.4	667.8
Net Gearing (Gross borrowing less unrestricted cash, divided by portfolio value) or LTV	48.0	30.0	37.0	26.0	34.0
Closing Cash and Cash Equivalents	66.5	44.3	23.5	28.7	18.3
Total Finance Costs	26.9	58.3	22.1	79.4	22.5
Non-Current Assets	927.1	1110.4	1345.8	1733.6	1979.5
Current Assets	90.2	53.5	33.8	5.8	50.6
Total Assets	1007.3	1163.9	1379.6	1784.4	2030.1
Non-Current Liabilities	515.7	374.6	524.6	494.8	680.4
Current Liabilities	39.7	35.0	37.0	39.2	69.8
Total Liabilities	555.4	409.6	561.6	534.0	750.2
Asset to Liability Ratio	181%	284%	246%	334%	271%

Net Surplus/Deficit on Revaluation of Investment Properties (Net losses/gains on investment properties)	21.4	36.4	56.5	-79.4	-20.2
(EPS) Earnings Per Share	44.9	46.1	49.4	52.5	53.4

Appendix D: Picton Financial Results

	Picton Property (Millions) (Gearing 25%)				
	2015	2016	2017	2018	2019
Revenue (Gross Rental Income)	39.66	45.92	54.40	48.78	47.73
Rental Expense	10.00	9.32	12.01	10.34	9.43
Net Rental Income(Gross Profit)	30.24	35.92	42.39	38.45	38.30
Net Operating Income (Profit before Taxation)	69.20	65.06	43.25	64.68	31.41
FFO (Net Cash Inflow from Operating Activities)	15.64	24.02	26.84	25.64	25.28
In/Decrease in Cash and Cash Equivalents	37.74	-47.33	11.12	-2.37	-6.34
Adjusted Net Debt(Borrowing)	180.95	246.92	192.54	202.45	191.02
Net Gearing (Gross borrowing less unrestricted cash, divided by portfolio value) or LTV	30.1	34.6	27.4	26.7	24.7
Closing Cash and Cash Equivalents	70.09	22.76	33.88	31.51	25.17
Total Finance Costs	10.93	11.42	10.82	9.75	12.33
Non-Current Assets	536.90	649.41	618.39	670.68	676.13

Current Assets	84.11	37.41	39.96	50.64	39.48
Total Assets	621.01	686.81	668.35	721.31	715.60
Non-Current Liabilities	233.56	222.16	205.26	211.67	192.85
Current Liabilities	17.48	47.52	21.17	22.29	23.34
Total Liabilities	251.04	269.68	226.43	233.96	216.19
Asset to Liability Ratio	247%	255%	295%	308%	331%
Net Surplus/Deficit on Revaluation of Investment Properties (Net losses/gains on investment properties)	-6.93	-6.95	-10.64	-10.74	-24.27
(EPS) Earnings Per Share	15.40	12.00	7.9	11.9	5.7

Appendix E: CapReg Financial Results

	Capital & Regional (Millions) (Gearing 35-45%)				
	2015	2016	2017	2018	2019
Revenue (Gross Rental Income)	80.7	87.2	89.2	91	88.9
Rental Expense	29.1	-32.5	-33.5	-34.3	-35.3
Net Rental Income(Gross Profit)	51.6	54.7	55.7	56.1	53.6
Net Operating Income (Profit before Taxation)	97.6	-7.3	-9.6	-25.5	-121
FFO (Net Cash Inflow from Operating Activities)	18.0	31.3	33.7	33.1	25.2
In/Decrease in Cash and Cash Equivalents	7.3	-0.8	-18.9	1.8	63.9
Adjusted Net Debt(Borrowing)	374.9	360.8	422.2	432.9	422.8

Net Gearing (Gross borrowing less unrestricted cash, divided by portfolio value) or LTV	45.0	46.0	46.0	48.0	46.0
Closing Cash and Cash Equivalents	49.9	49.1	30.2	32	95.9
Total Finance Costs	-19.9	-33.0	-18.8	-18.9	-23.9
Non-Current Assets	915.7	869.5	956.1	919.5	789
Current Assets	63.6	76.4	51.8	47.3	111.3
Total Assets	979.3	945.9	1007.9	966.8	900.3
Non-Current Liabilities	442.4	92.0	487.5	496.7	489.5
Current Liabilities	29.9	376.3	39.0	37.1	35.7
Total Liabilities	476.1	468.4	526.5	533.8	525.2
Asset to Liability Ratio	206%	202%	191%	181%	171%
Net Surplus/Deficit on Revaluation of Investment Properties (Net losses/gains on investment properties)	68.0	-14.2	-3.8	-52.5	-138.6
(EPS) Earnings Per Share	72.0	68.0	67.0	59.6	36.1

Appendix F: Matrix Model Outputs for Case Studies

Factor	Performance Impact	Sustained	Volatility	Risk
FFO	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High
Governance	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High
Leverage	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High
Restatement	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High
Liquidity	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High
Risk Profile	Range 1-10	Short/Med/Long	Low/Med/High	Low/Med/High

RDI Analysis				
Factor	**Performance Impact**	**Sustained**	**Volatility**	**Risk**
FFO	6	Long	Med	Med
Governance	8	Long	Low	High
Leverage	8	Medium	Low	High
Restatement	3	Short	Low	Low
Liquidity	6	Medium	Med	High
Risk Profile	9	Long	High	High

CREI Analysis				
Factor	**Performance Impact**	**Sustained**	**Volatility**	**Risk**
FFO	3	Medium	Medium	Medium
Governance	2	Long	Low	Low
Leverage	4	Short	Low	Medium

Restatement	2	Short	Low	Low
Liquidity	7	Long	Medium	High
Risk Profile	6	Medium	High	High

Appendix G: Risk Assessment Form

RISK ASSESSMENT FORM
FIELD / LOCATION WORK

The Approved Code of Practice - Management of Fieldwork should be referred to when completing this form

http://www.ucl.ac.uk/estates/safetynet/guidance/fieldwork/acop.pdf

DEPARTMENT/SECTION THE BARTLETT SCHOOL OF PLANNING: INTERNATIONAL REAL ESTATE & PLANNING MSC

LOCATION(S) N/A

PERSONS COVERED BY THE RISK ASSESSMENT N/A

BRIEF DESCRIPTION OF FIELDWORK No field/location work will be carried out as a part of this study.

Consider, in turn, each hazard (white on black). If **NO** hazard exists select **NO** and move to next hazard section.

If a hazard does exist select **YES** and assess the risks that could arise from that hazard in the risk assessment box.

Where risks are identified that are not adequately controlled they must be brought to the attention of your Departmental Management who should put temporary control measures in place or stop the work. Detail such risks in the final section.

ENVIRONMENT	**The environment always represents a safety hazard. Use space below to identify and assess any risks associated with this hazard**
e.g. location, climate, terrain, neighbourhood, in	Examples of risk: adverse weather, illness, hypothermia, assault, getting lost.

outside organizations, pollution, animals.	Is the risk high / medium / low ? Low risk. No field work, nor location work, is to be carried out in accordance with the study.

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**

	work abroad incorporates Foreign Office advice
	participants have been trained and given all necessary information
	only accredited centres are used for rural field work
	participants will wear appropriate clothing and footwear for the specified environment
	trained leaders accompany the trip
	refuge is available
	work in outside organisations is subject to their having satisfactory H&S procedures in place
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

N/A

EMERGENCIES	**Where emergencies may arise use space below to identify and assess any risks**
e.g. fire, accidents	Examples of risk: loss of property, loss of life

As per the answer given above (in “ENVIRONMENT”).

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**

	participants have registered with LOCATE at http://www.fco.gov.uk/en/travel-and-living-abroad/
	firefighting equipment is carried on the trip and participants know how to use it
	contact numbers for emergency services are known to all participants
	participants have means of contacting emergency services
	participants have been trained and given all necessary information
	a plan for rescue has been formulated, all parties understand the procedure
	the plan for rescue /emergency has a reciprocal element
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

N/a

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EQUIPMENT	**Is equipment used?**	**NO**	**If 'No' move to next hazard** **If 'Yes' use space below to identify and assess any** **risks**
e.g. clothing, outboard motors.	Examples of risk: inappropriate, failure, insufficient training to use or repair, injury. Is the risk high / medium / low ?		

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**

	the departmental written Arrangement for equipment is followed
	participants have been provided with any necessary equipment appropriate for the work
	all equipment has been inspected, before issue, by a competent person
	all users have been advised of correct use
	special equipment is only issued to persons trained in its use by a competent person
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

LONE WORKING	**Is lone working a possibility?**	**NO**	**If 'No' move to next hazard** **If 'Yes' use space below to identify and assess any risks**
e.g. alone or in isolation *lone interviews.*	Examples of risk: difficult to summon help. Is the risk high / medium / low?		

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	the departmental written Arrangement for lone/out of hours working for field work is followed

	lone or isolated working is not allowed
	location, route and expected time of return of lone workers is logged daily before work commences
	all workers have the means of raising an alarm in the event of an emergency, e.g. phone, flare, whistle
	all workers are fully familiar with emergency procedures
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

ILL HEALTH	**The possibility of ill health always represents a safety hazard. Use space below to identify and assess any risks associated with this Hazard.**
e.g. accident, illness, personal attack, special personal considerations or vulnerabilities.	Examples of risk: injury, asthma, allergies. Is the risk high / medium / low? Low risk. I have a nut allergy, specifically: peanuts, macadamia (nut), and almonds. I have not had an allergic reaction since discovering I was allergic at the age of 2.

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	an appropriate number of trained first-aiders and first aid kits are present on the field trip
	all participants have had the necessary inoculations/ carry appropriate prophylactics
	participants have been advised of the physical demands of the trip and are deemed to be physically suited
	participants have been adequate advice on harmful plants, animals and substances they may encounter
	participants who require medication have advised the leader of this and carry sufficient medication for their needs
X	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

Carry an EpiPen.

TRANSPORT	**Will transport be**	**NO**	**X**	**Move to next hazard**

	required	**YES**		**Use space below to identify and assess any risks**
e.g. hired vehicles	Examples of risk: accidents arising from lack of maintenance, suitability or training Is the risk high / medium / low?			

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	only public transport will be used
	the vehicle will be hired from a reputable supplier
	transport must be properly maintained in compliance with relevant national regulations
	drivers comply with UCL Policy on Drivers http://www.ucl.ac.uk/hr/docs/college_drivers.php
	drivers have been trained and hold the appropriate licence
	there will be more than one driver to prevent driver/operator fatigue, and there will be adequate rest periods
	sufficient spare parts carried to meet foreseeable emergencies
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

DEALING WITH THE	**Will people be**	**NO**	**If 'No' move to next hazard**
PUBLIC	**dealing with public**		**If 'Yes' use space below to identify and assess any**
			risks

e.g. interviews, observing	Examples of risk: personal attack, causing offence, being misinterpreted. Is the risk high / medium / low?

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	all participants are trained in interviewing techniques
	interviews are contracted out to a third party
	advice and support from local groups has been sought
	participants do not wear clothes that might cause offence or attract unwanted attention
	interviews are conducted at neutral locations or where neither party could be at risk
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

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WORKING ON OR NEAR WATER	**Will people work on or near water?**	**NO**	**If 'No' move to next hazard** **If 'Yes' use space below to identify and assess any risks**
e.g. rivers, marshland, sea.	Examples of risk: drowning, malaria, hepatitis A, parasites. Is the risk high / medium / low?		

CONTROL MEASURES	Indicate which procedures are in place to control the identified risk
	lone working on or near water will not be allowed
	coastguard information is understood; all work takes place outside those times when tides could prove a threat
	all participants are competent swimmers
	participants always wear adequate protective equipment, e.g. buoyancy aids, wellingtons
	boat is operated by a competent person
	all boats are equipped with an alternative means of propulsion e.g. oars
	participants have received any appropriate inoculations
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

MANUAL HANDLING (MH)	Do MH activities take place?	NO	If 'No' move to next hazard If 'Yes' use space below to identify and assess any risks

e.g. lifting, carrying, moving large or heavy equipment, physical unsuitability for the task.	Examples of risk: strain, cuts, broken bones. Is the risk high / medium / low?

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	the departmental written Arrangement for MH is followed
	the supervisor has attended a MH risk assessment course
	all tasks are within reasonable limits, persons physically unsuited to the MH task are prohibited from such activities
	all persons performing MH tasks are adequately trained
	equipment components will be assembled on site
	any MH task outside the competence of staff will be done by contractors
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

SUBSTANCES	Will participants work with substances	NO	If 'No' move to next hazard If 'Yes' use space below to identify and assess any risks
e.g. plants, chemical, biohazard, waste	Examples of risk: ill health - poisoning, infection, illness, burns, cuts. Is the risk high / medium / low?		
CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**		
	the departmental written Arrangements for dealing with hazardous substances and waste are followed		
	all participants are given information, training and protective equipment for hazardous substances they may encounter		
	participants who have allergies have advised the leader of this and carry sufficient medication for their needs		
	waste is disposed of in a responsible manner		
	suitable containers are provided for hazardous waste		
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:		

OTHER HAZARDS	Have you identified any other hazards?	NO	If 'No' move to next section If 'Yes' use space below to identify and assess any risks
	Hazard:		

i.e. any other hazards must be noted and assessed here.	Risk: is the risk	

CONTROL MEASURES	**Give details of control measures in place to control the identified risks**

Have you identified any risks that are not adequately controlled?	**NO**	**X**	**Move to Declaration**
	YES		**Use space below to identify the risk and what action was taken**

Is this project subject to the UCL requirements on the ethics of Non-NHS Human Research?	**NO**
If yes, please state your Project ID Number	

For more information, please refer to: http://ethics.grad.ucl.ac.uk/

DECLARATION	The work will be reassessed whenever there is a significant change and at least annually. Those participating in the work have read the assessment.

Select the appropriate statement:

X	I the undersigned have assessed the activity and associated risks and declare that there is no significant residual risk

☐ I the undersigned have assessed the activity and associated risks and declare that the risk will be controlled by

the method(s) listed above

NAME OF SUPERVISOR

SIGNATURE OF THE SUPERVISOR DATE