EARNINGS MANAGEMENT: A CASE OF NEW ZEALAND LISTED PROPERTY TRUSTS

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ABSTRACT

Existing literature of earnings management focuses on a wide range of firms and large corporations. However, LPTs are usually limited in the use of accruals for earnings management because of the characteristics of real estate investment. This paper examines earnings management strategies among New Zealand LPTs by using itemized contributing elements of total cash flow incorporating fundamental direct property data, such as average lease term and vacancy rates. Using White's heteroscedastic-correction estimate, the model specification using total cash flow rather than itemized elements revealed significant results for average lease term and accruals playing little role in future earnings. When itemized elements of total cash flow were analyzed, fundamental property variables were not significant, with contributory elements of total cash flow providing the best estimator of earnings next period. These findings suggest that New Zealand LPTs use different earnings management strategies than the literature dealing with a wide variety of firms would suggest. Additionally, this paper reveals that when contributory elements of cash flow are available to investors, that indicators of fundamental underlying direct property performance is of limited benefit for estimating earnings.

Keywords: Earnings management, accounting accruals, listed property trusts, average lease term, vacancy rate

INTRODUCTION

Earnings management is common for publically listed companies, since reported earnings in a particular period can influence share prices and the cost of capital for the firm (Healy and Wahlen, 1999; Leuz *et al*., 2003; Lo, 2008). As a result, advancing expenses with a corresponding reduction in earnings for a particular period allows fund managers and companies in most industries to smooth earnings over time and maintain a dividend during poor performance periods. For Real Estate Investment Trusts (REITs) in the US, this may become a serious issue since a large proportion of profits (95%) for these firms must be paid as dividends in order to receive tax-exemptions and benefits (Edelstein *et al*., 2008). However, REITs typically pay out in excess of the required earnings ratio because of market expectations and the

management information communicated to the market through earnings data (Wang, *et al*., 1993).

The functional equivalent of a REIT in New Zealand is known as a listed property trust (LPT). Unlike REITs in the US or A-REITs in Australia, LPTs do not share the same tax-exemption benefits and dividend payout requirements. New Zealand LPTs are taxed at corporate tax rates (currently 30%) and distributions of earnings are not taxable for unit holders, because they are considered a portfolio investment entity (PIE) for tax purposes. Other unique characteristics of LPTs when compared to A-REITs and REITs are provided in Table 1.

While it is plausible that a LPT manager does not have the same incentives to smooth earnings because of the lack of regulatory compliance issues, risk-averse investors should prefer more consistent expected returns resulting from managed earnings performance (Bradley *et al.*, 1998 and Ooi, 2001). Further, market expectations surrounding high payout ratios in other securitized property markets, such as the US or Australia, and the relative risk of securitized real estate as an asset class mean that a high payout ratio may still be required by investors.

Table 1: U.S., Australian REITs and New Zealand LPTs comparison

	U.S.	Australia	New Zealand
Management	Internal or external	Internal or external	External
Overseas investment	OK	OK	No restrictions
Development	OK	OK	OK
Gearing limit	No restrictions	No restrictions	No restrictions
Payout	>90% of taxable income	100% of taxable income	No restrictions
Close ended	Yes	Yes	Yes / No
Listed/unlisted	Both	Both	Listed
Tax transparency	Yes	Yes	No

Source: UBS and NZX

Within the finance and accounting literature, analysis of earnings management strategies tends to focus upon headline balance sheet items such as accruals and total cash flow (Sloan, 1996). This is understandable for many types of firms, particularly manufacturing firms, where cash flows usually arise from the sale of a particular set of products. LPTs and REITs are different in that income is usually derived from rents and the disposal of property assets that generate rents. As a result, LPTs and REITs use debt, operating leverage, and cash differently from manufacturing firms in order to generate returns. This suggests that their earnings management strategies should differ from traditional firms in order to smooth profits over time.

For both LPTs and REITs, the issue of earnings management is further complicated by the characteristics of property performance within a portfolio. Lease term structure and vacancy rates within a commercial property portfolio are two important indicators of future rental income for the portfolio. Unlike many industries, it is difficult for LPT managers to quickly change the supply of property in their portfolio and the demand for property is not directly linked to the property market. Furthermore, LPTs are different than most other companies in relation to their use of debt financing and use of financial leverage to acquire the 'goods' that are leased to the end user. Therefore, earnings management in the face of highly elastic demand and the reliance upon debt financing makes earnings management an important issue in regard to current performance and the future dividends that the LPT can deliver to unit holders.

Given the regulatory and structural differences between LPTs, REITs and traditional firms, issues of LPT earnings management incorporating direct property indicators remain relatively untested. Provided the lack of mandatory payout ratios and preferential tax treatment in the New Zealand context, an understanding of these earnings management issues combined with structural elements surrounding direct property performance can provide useful insights into LPT earnings performance over time. Further, modelling the contributory elements surrounding the differential impacts of balance sheet items for LPTs can provide a useful framework from which direct property performance can be linked to future earnings.

This paper examines the use of earnings management of LPTs in New Zealand, incorporating the characteristics of direct property performance within a portfolio. It is expected that LPTs will exhibit earnings management strategies that are influenced by both the direct property market and specific total cash flow sub-categories related to total cash flow. Following a review of the earnings management literature, a description of the New Zealand LPT market will be provided in order to place the issues surrounding earnings management into context. These sections will be followed by a discussion of direct property factors surrounding LPT earnings. Details of empirical tests will then be provided, with conclusions following.

LITERATURE REVIEW

The New Zealand LPT market

LPTs are a relatively recent phenomenon in the history of property investment in New Zealand and has attracted very little attention in the literature. Following financial deregulation in the mid-1980s, speculative development of commercial properties was at the forefront of property investment activities and was dominated by listed property companies. Following the 1987 stock market crash, office vacancy rates rose from approximately 5% at the time of the crash to approximately 25% in 1989. Corresponding rental declines averaging 30% led to many of these speculatively based listed property companies going bankrupt (Moricz and Murphy, 1997). Further

declines in rents in the early 1990s (upwards of 50% from 1989 levels) and the subsequent decline in capital values provided opportunities for investment in prime commercial space and opportunities to actively manage prime commercial properties that had relatively outperformed other properties during the market downturn. LPTs emerged as a new investment vehicle during this time.

The first of these LPTs was Kiwi Income Property Trust which was established in 1993. From that time to 2006, the market capitalization of LPTs in New Zealand reached NZ$3.6 billion, representing 4.9% of total New Zealand stock market capitalization (Murphy, 2008). Like many other funds internationally, LPTs in New Zealand are managed externally by a management group whose compensation is related to the growth in assets under management. Therefore, as the size of the portfolio increases, the compensation of the management group also increases, providing an incentive for fund managers to increase the size of the portfolio.

Many of the property trusts that have been established in New Zealand are stapled to a larger fund, usually in Australia, except for the 8 funds that are the primary focus of this study. The largest of these funds is Kiwi Income Property Trust, which is a diversified property fund with a 2006 market capitalization of approximate NZ$1.3 billion. This is followed by AMP New Zealand Office Trust with a 2006 market capitalization NZ$842 million and ING Property Trust with a 2006 market capitalization of NZ$810 million (Murphy, 2008). The property sectors covered by the LPTs, as well as information on market capitalization and the number of properties in 2010, is contained in Table 2. The vacancy rates included in Table 2 are for the sample period.

The New Zealand LPT market is of interest for several reasons. Firstly, the LPT market in New Zealand is rather small compared to other markets internationally, consisting of only 8 unstapled firms listed on the New Zealand Stock Exchange (NZX). This allows for funds to be examined closely in relation to their earnings management strategies, particularly as these strategies relate to fundamental property variables. Another reason for examining the New Zealand LPT market is the relative dominance of Auckland as a commercial investment property centre. With investment property markets dominated by Auckland because of its relative size compared to other major urban centres, it is possible to examine the influence of fundamental property variables in relative isolation.

Table 2: NZ LPT profile as in 2010 and the vacancy rate over sample period

Name	Market cap (NZD '000)	Net tangible assets (NZD '000)	Number of properties	Sectors	Vacancy rate over sample period
ANO (previously known as: AMP NZ Office Trust)	748,289	767,246	15	Office	Mean: 2.69% St. Dev.: 1.94%
Goodman Property	823,694	746,696	21	Office, industrial	Mean: 1.78% St. Dev.: 1.47%
VHP (previously known as: ING Medical)	152,307	145,410	12	Health support and care, surgical, medical	Mean: 1.37% St. Dev.: 1.06%
ARG (previously known as: ING Property Trust)	380,993	404,941	17	Retail, office, industrial	Mean: 0.90% St. Dev.: 1.21%
KERMADEC Property	40,920	53,850	7	Retail, office, industrial	Mean: 0.00% St. Dev.: 0.00%
Kiwi Income Property	953,130	900,611	14	Retail, office	Mean: 3.28% St. Dev.: 6.08%
National Property	99,152	113,539	11	Retail, office, industrial	Mean: 1.40% St. Dev.: 2.33%
Property For Industry	238,435	201,803	54	Industrial	Mean: 0.47% St. Dev.: 0.74%

Earnings and earnings management

Earnings are the profits of a company. For most companies, investors and analysts look to earnings to determine the relative attractiveness of a particular stock or business. Investors often use current earnings information in setting share prices and assessing the risk of a company paying debt into the future (Chan *et al*., 2006). Further, current earnings provide a basis from which stock market analysts target trading ranges for shares under the assumption that current earnings provide a good basis for determining future performance (Chan *et al.,* 2006). Bugshan (2005) argues that if reported earnings are considered by investors to be value relevant and useful in estimating future returns, then share total returns and earnings should be related. This is consistent with earlier findings that suggest unexpected earnings in a particular period are strongly correlated with share price variance (Collins *et al*., 1987). In that paper, Collins *et al*. further find that the size of the company has an important influence on the extent to which unanticipated earnings influence share price movements, with smaller companies having more share price variance associated with unanticipated earnings results.

Because of the relationship between earnings and price, it can be argued that the reliability of earnings reports is questionable when managers have an opportunity to manipulate reported earnings (Healy and Wahlen, 1999). This strategy may be employed when management has incentives to meet pre-determined targets or if management compensation is tied to the firm's profits (Chan *et al*., 2006). Conversely, Leuz *et al.* (2003) argue that managers and controlling owners may have incentives to manage reported earnings in order to mask true firm performance from share holders and regulators; thus concealing any private benefits that managers may receive. This suggests that firm insiders act to reduce the variability of reported earnings by altering the accounting components of earnings; namely accruals, for earnings smoothing purposes.

Graham *et al*. (2005) suggests that an underlying reason that management of current earnings is an important indicator of future earnings lie in the accrual and cash flow components of current earnings having different implications for future growth. The key difference between the accrual and cash flow components of earnings is that the accrual component involves a greater degree of subjectivity; typically incorporating estimates of future cash flows, deferrals of past cash flows, allocations and valuations, all of which involve higher subjectivity than simply measuring periodic cash flows. Because of this high degree of subjectivity, more recent evidence suggests that the accruals management component is the most common way that firms manage earnings (Roychowdhury, 2006).

Given the subjective nature of accrual based earnings management, there is also evidence that investors do not efficiently use available information in forecasting future earnings performance resulting from current earnings (Ou and Penman, 1989).

They analyzed earnings quality and found that investors are myopic in their focus on earnings and often fail to distinguish between the accrual and cash flow components of current earnings. One possible reason for this has been provided by Keenan (2008), who suggests that investors are too often fixated on how much a company's earnings are, rather than the actual quality of the earnings reported. Further to this evidence, Beneish and Nichols (2005) examined the relation between the probability of earnings manipulation, accruals and future returns. They found that firms which have a high likelihood of earnings manipulation tend to experience lower future earnings. Importantly, they also find that investors expect these firms to have higher future earnings.

From an alternative cash-flow perspective, Lo (2008) suggests that rather than having years of exceptionally good or bad earnings, companies may try to keep the earnings figures relatively stable by adding and removing cash from reserve accounts. This is likely, because accruals are less likely to recur in future periods' earnings. While both cash-flow and accrual components contribute to current earnings, current earnings performance is less likely to persist in future earning if it is attributable primarily to the accrual component of earnings, as opposed to the cash flow component. Thus, when the accrual component of earnings is unusually high or low, future earnings movements will be less persistent. This is consistent with Sloan (1996), who suggested that high earnings performance that is attributable to the cash flow component of earnings is more likely to persist in future earnings reports than high earnings performance that is attributable to the accrual component of current earnings.

There is scant research investigating REITs or LPTs in regard to earnings management. Only one recent paper explicitly addresses earnings management issues by REITs (Ambrose and Bian, 2010). Examining the relationship between REIT prices and earnings management, they found that REITs that are suspected of engaging in active earnings management have prices that are less closely tracked to the stock price of the REIT. Using idiosyncratic volatility as a measure of private information contained in the price, they further found that negative real earnings management was associated with greater information embedded in the REIT price. This research suggests that REIT managers may avoid regulatory costs in the form of dividend payout requirements by actively managing their earnings.

Within the New Zealand context, the regulatory costs concerning 95% earnings payout ratio do not exist for LPTs. LPTs in New Zealand are not afforded special tax treatment in exchange for a high dividend payout ratio. The earnings management literature suggests that differences exist between predominantly cash-flow based and accrual based earnings management methods. Since the options for accrual losses are somewhat limited within the direct property market, it is thought that earnings management by New Zealand LPTs may be associated with fundamental variables measuring the direct property investments held. Furthermore, it is suggested that

because debt is a means of producing revenue more directly for LPTs, that a breakdown of total cash flows within the earnings statement will yield specific earnings management strategies that are employed. Because its unique size and structure, particularly in relation to Australia, a description of the New Zealand LPT market is provided in the following section.

Fundamental direct property influences on LPTs earnings

Capital value growth and rental income provide the means by which LPTs generate earnings. While this appears rather intuitive, the impact of these fundamental variables on earnings performance and the reporting of earnings have some importance. Fund manager compensation is tied to the value of the assets under management, with significant pressure to increase the size of their portfolio either through acquisitions or an increase in capital values. Because capital value growth is a function of rental income over a market capitalization rate, periodic valuations can often depend on the judgement of the valuer and therefore subject to smoothing and possible bias (Levy, 2005). Of the variables used to estimate market value, the influences on rent are possibly less subject to possible valuation bias, since these are often based upon the cash flow performance of individual properties in the preceding year.

Provided that rental cash flows are less subject to bias in earnings reporting or asset valuation, the influences on rental cash flows are of particular importance with examining earnings management by LPTs. As the supply of property is relatively fixed, the vacancy rate of properties in a portfolio is likely to have a significant impact on current rents and future earnings periods (DiPasquale and Wheaton, 1992). If vacancy rates are low, then typically market rents will be increasing, making a significant contribution to earnings of the fund. Alternatively, if vacancy rates are high, then not only will the immediate cash flow of the portfolio be impacted, the future possibility of rental growth will likely be adversely affected.

Similarly, the lease terms for properties held in a portfolio are likely to influence rental income. If leases a portfolio are predominantly long term and agreed in the past, then rental rates within the portfolio may be significantly lower (or higher) than the current market rate, influencing the rental income attributable to the portfolio (Geltner, 1990). Alternatively, if leases are predominantly short term in the portfolio, then the possibility of rents adjusting to market rates more often may increase the volatility of cash flows in the portfolio into the future (Tse, 1999).

With both vacancy rates and lease terms determined by market mechanisms and less subject to influence by the fund manager, the impact of length of lease and vacancy rate on cash flow based earnings management strategies can be examined. While there are differences between accrual based and cash flow based earnings management strategies, the unique nature of LPTs and the role of fundamental

variables in determining cash flow may limit the ability of fund managers to employ these methods effectively.

DATA AND EMPIRICAL METHODOLOGY

This paper utilizes publically available financial reports for the 8 New Zealand LPTs listed on the New Zealand Stock Exchange between the years 1993 and 2007. These financial reports are used because the data contained in them is observable by both investors and analysts. Further, these reports are often used as the basis for the fund manager's compensation. The 8 LPTs were launched in different years. The earliest IPO was in 1993 by Kiwi Income Property Trust. This study includes the earliest financial year after IPO for each LPT because we try to incorporate as many number of observations as possible. The available data gives 66 observations for the test. Data after 2007 is not used because of possible bias in relation to the international financial crisis in 2008 and 2009. There are not sufficient observations to conduct a test that distinguishes the separate period from 2008 to 2009. The test, incorporating data after 2007, can be conducted in future when there are more observations.

Within these reports, earnings reflect after tax profits. Accruals represent transitory earnings for the LPT. It should be noted that these accruals may disappear in one or more financial years, because they may not become realized as cash or cash equivalents (Sloan, 1996). Consistent with the earnings management literature, the accrual component of earnings is computed using information from the balance sheet and income statement (Dechow *et al.,* 1995). Following the Sloan (1996) method for computing accruals, the following specification is:

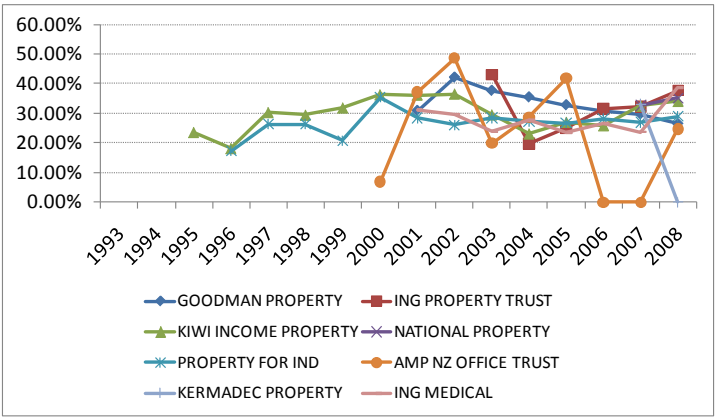
$$\text{Accruals} = (\triangle CA - \triangle Cash) - (\triangle CL - \triangle TP) \qquad (1)$$

where $\triangle CA$ represents the change in noncash current assets, $\triangle Cash$ is the change in cash and cash equivalents, $\triangle CL$ indicates the change in current liabilities, and $\triangle TP$ is the change in income taxes payable. For LPTs, depreciation is not deducted from accruals, because it does not constitute a cash expense in the income statement. Similarly, any change of debt included in current liabilities is not part of the accruals specification for LPTs, because debt is not counted as a current liability. As specified above, increasing accruals have a negative impact on earnings and can be used by the fund manager as a tool for smoothing earnings that may not become a cash expense in the future.

The cash flow component of earnings is partitioned into three streams, operation cash flows, financial cash flow and investment cash flow. The sum of the three streams is the total cash flow. LPT cash flows differ from most industries studied in the existing literature because investment cash flows and financial cash flows are important

sources of earnings. As a result, acquisition, development or disposal of investment properties should impact the investment cash flows and resultant earnings. Similarly, any change in debt influences cash flow. NZ LPTs have differing levels of long-term debt, with the ratio of long-term debt over total assets ranging from 20% to 40% (see Figure 1).

Figure 1: Ratio of long-term debt over total assets for NZ LPTs



Vacancy rate is the average vacancy rate for a LPT portfolio and is obtained through the annual reports from the LPT. As vacancy rates increase, less income is received from rents and a negative effect on earnings is expected. Alternatively, low vacancy rates are associated with more stable to increasing rental income and a positive impact on earnings is expected.

The average lease term is the value weighted average lease term in a LPT portfolio and is derived from information contained in annual reports. The effect of retail anchor tenants is taken into account by the value weighted average lease term, because it is assumed that valuation data for commercial properties incorporating rental income streams in the future. The lease term with larger or more stable rental income streams will have a larger weighting in determining the value weighted average lease term, ceteris paribus. Even though the value of retail properties may vary from one to another, such variation won't violate the consistency between the volatility of rental income and the weighting for the average lease term. For example, a retail property with anchor tenants and long lease term has smaller volatility in rental income, and thus a larger value, than a retail property with short lease tenants. The lease term of the property with anchor tenants will have a larger weighting than the lease term of the property with short lease tenants in the portfolio.

For a mixed-property type portfolio, the lease term of a sector with larger and more stable rental income will have a larger weighting than the lease term of another sector with smaller and less stable rental income. The effect of value weighting on the lease term is consistent with the effect of value weighing on the portfolio return. In addition, the weighted average lease term is also one of the important factors, which is explicitly reported annually in annual reports.

Longer average lease terms are associated with more stable rental income for the LPT portfolio than one with a shorter average lease term. However, market conditions can have a dramatic influence on cash flows for the portfolio in relation to current market rents. On the one hand, long leases can be expected to have a positive effect on earnings when demand for commercial property is sluggish or relatively weak. On the other hand, long lease terms can adversely impact earnings compared to market competitors when demand is high and vacancy rates are low. This is because the LPT with longer leases will be forced to forgo rent review or renewal when there are opportunities to increase rents. A LPT having short average lease terms will have more rental review opportunities and renewals than a LPT having long average lease terms. It is anticipated that longer average lease terms will have a negative effect on earnings, particularly when low vacancy rates are present. As a result, accrual based earnings management strategies should be more prevalent in LPTs with longer average lease terms than those with shorter average lease terms.

In order to explain earnings, Sloan's (1996) additive model is utilized as follows:

$$Earnings_{t+1} = \alpha_0 + \alpha_1(Accruals_t) + \alpha_2(Total\ Cash\ Flow_t) + \varepsilon_{t+1} \qquad (2)$$

In order to analyse the cash flow component of earnings, the Sloan (1996) model is modified as:

$$Earnings_{t+1} = \alpha_0 + \alpha_1(Accruals_t) + \alpha_2(Operation\ Cash\ Flow_t) + \alpha_3(Investment\ Cash\ Flow_t) + \alpha_4(Financial\ Cash\ Flow_t) + \varepsilon_{t+1} \qquad (3)$$

In order to incorporate the unique characteristics of LPTs and the direct property influences on earnings, two additional fundamental direct property variables are included to reveal the two following specifications:

$$Earnings_{t+1} = \alpha_0 + \alpha_1(Accruals_t) + \alpha_2(Total\ Cash\ Flow_t) + \beta_1(Average\ Lease\ Term_t) + \beta_2(Vacancy\ Rate_t) + \varepsilon_{t+1} \qquad (4)$$

$$Earnings_{t+1} = \alpha_0 + \alpha_1(Accruals_t) + \alpha_2(Operation\ Cash\ Flow_t) + \alpha_3(Investment\ Cash\ Flow_t) + \alpha_4(Financial\ Cash\ Flow_t) + \beta_1(Average\ Lease\ Term_t) + \beta_2(Vacancy\ Rate_t) + \varepsilon_{t+1} \qquad (5)$$

Pooled regressions are conducted. The time effect is implicitly controlled by the lagged time varying cash flows as in Sloan's (1996) study. While Sloan (1996) controlled for heterogeneity by normalizing earnings, accruals and operating cash flow using the average total assets of a company, this research controls for LPT size by using White's heteroskedasticity-consistent estimates (HCE), because normalization using average total assets would reduce the number of observations available.

RESULTS

Descriptive statistics of the variables utilized are presented in Table 3. The negative median of *Accruals* suggests that in over half of the observations, LPTs incur more liabilities than receivables in accruals over a financial year. This negative median combined with the relatively low proportion of earnings attributable to accruals suggests that LPTs may be limited in advancing future expenses and that the cash flow components dominate in the computation of earnings. Alternatively, it may suggest that most LPTs might not be able to manage earnings using accruals, particularly if they have been active investors such as acquiring properties in their portfolios requiring a large amount of cash. The idea that investment activities influence the ability to use accruals for earnings management is further supported by the negative mean and median of *Investment Cash Flow*. The positive mean and median of the variables *Financial Cash Flow* and *Operating Cash Flow* indicates that the majority firms generate profits through their property management and finance activities. The mean and median of *Average Lease Term* for all LPTs is about 6 years. Due to the strong demand for commercial and industrial space in New Zealand during the sample period, *Vacancy Rate* is low as indicated by the 2% mean and 1% median. The low standard deviation of *Vacancy Rate* between LPTs suggests that this variable may not be found significant in further estimates.

Table 3: Descriptive statistics of variables

	Mean	Maximum	Minimum	Std. Dev.	Median
Accruals ('000)	-7,574.17	150,601.00	-364,412.00	61,281.86	-1,108.00
Earnings ('000)	26,487.35	216,418.00	2,711.00	36,024.30	12,519.00
Financial cash flow ('000)	19,893.12	235,304.00	-40,143.00	52,814.98	8,049.50
Investment cash flow ('000)	-36,883.09	19,519.00	-256,920.00	54,337.52	-19,172.00
Average lease term	6.42	12.20	3.60	2.32	5.75
Operation cash flow ('000)	17,822.27	60,527.00	-453.00	14,627.95	13,387.50
Total cash flow ('000)	832.30	67,441.00	-21,784.00	9,959.91	7.00
Vacancy rate	2.15%	18.60%	0.00%	3.29%	0.01

Table 4: Pearson correlation matrix of variables

	Accruals	Earnings	Financial cash flow	Investment cash flow	Average lease term	Operation cash flow	Total cash flow	Vacancy rate
Accruals	1.000							
Earnings	-0.412	1.000						
Financial cash flow	-0.026	0.343	1.000					
Investment cash flow	0.020	-0.502	**-0.944**	1.000				
Average lease term	0.032	-0.154	-0.085	0.111	1.000			
Operation cash flow	-0.102	0.612	0.001	-0.279	-0.209	1.000		
Total cash flow	-0.183	-0.018	0.157	0.043	-0.157	-0.045	1.000	
Vacancy rate	0.005	0.118	-0.015	-0.079	-0.179	0.223	-0.186	1.000

It is important to note in Table 4 that a significant negative correlation was found between *Investment Cash Flow* and *Financial Cash Flow.* While the relationship between these two variables is intuitive, provided that an LPT is likely to raise capital when it has large investment expenditures pending, only one of these variables is included in each of the model specifications to follow in order to avoid problems with multi-collinearity.

Table 5: Estimate results for models (4) and (5)

66 Observations														
Dependent Variable: $Earnings_{t+1}$														
Independent Variable	Model (4)		Model (4)		Model (5)		Model (5)		Model (5)		Model (5)		Model (5)	
Intercept	37,436.05	***	40,840.05	***	-5,541.60		-5,638.88		21,598.36	***	2,107.19		31,647.56	***
	3.831		*4.445*		*-0.525*		*-0.727*		*3.042*		*0.306*		*4.104*	
$Accruals_t$	-0.25		-0.25		-0.20	***	-0.20		-0.23		-0.21		-0.23	
	-1.292		*-1.322*		*-4.241*		*-1.276*		*-1.346*		*-1.283*		*-1.248*	
Total cash flow $_t$	-0.38		-0.44											
	-1.348		*-1.835*											
Operation cash flow $_t$					1.43	***	1.42	***			1.41	***		
					6.852		*5.955*				*4.718*			
Investment cash flow $_t$									-0.32	***				
									-2.661					
Financial cash flow $_t$					0.23	***	0.23	**					0.22	
					4.121		*2.488*						*1.827*	
Average lease term $_t$	-2,227.80	**	-2,476.41	***	97.76		104.98		-1,360.60		-356.20		-1,763.83	**
	-2.258		*-2.721*		*0.075*		*0.145*		*-1.719*		*-0.551*		*-2.033*	
Vacancy rate $_t$	82,069.17				-3,610.31									
	0.779				*-0.039*									
R-squared	20.85%		20.33%		60.96%		60.96%		42.10%		49.89%		29.28%	
Adjusted R-squared	15.66%		16.47%		57.71%		58.40%		39.30%		47.47%		25.86%	
*** 1% Significance Level; ** 5% Significance Level.														
The underlined value is White's t-statistic.														

Estimates for earnings results are presented in Table 5. It is interesting to note that *Accruals* is only significant in the model specification that excludes *Total Cash Flow*, but includes *Operating Cash Flow and Financial Cash Flow*, as well as the insignificant variables of *Average Lease Term and Vacancy Rate.* This suggests that

LPTs may not typically use accruals in earnings management, contrary to the existing literature based upon a broad range of firms. However, the negative coefficient for *Accruals* when *Total Cash Flow* is excluded suggests that while difficult, LPTs may attempt to use accruals where possible as an earnings management strategy.

In both model specifications (Model 4) where *Total Cash Flow* is not divided into contributory elements, *Average Lease Term* is significant and negative. This suggests that shortening of lease terms would have added to earnings over the sample period, particularly in light of low observed *vacancy rates* throughout the period. With the *vacancy rate* variable found to be insignificant (and in light of the evidence provided in Table 3, possibly due to the low vacancy rate variance throughout the sample period), the finding regarding *Average Lease Term* is consistent with expectations. Interestingly, neither of these fundamental variables is significant in the model specifications that include the contributory elements of total cash flow, except in the case where *Operating Cash Flow* or *Financial Cash Flow* are excluded. This finding suggests that the contributory elements of *Total Cash Flow* are important in earnings management strategy, particularly as the *Average Lease Term* can be difficult to change quickly across a large portfolio.

The three sources of cash flows have significant effects on the next period earnings in all model specifications except for the specification that excludes both *Operating Cash Flow* and *Investment Cash Flow*. Consistent with the literature, *Operating Cash Flow* appears to have a larger impact on the next period earnings than *Investment Cash Flow* and *Financial Cash Flow*. Further, this finding illustrates that managing commercial or industrial properties and providing commercial and industrial property service is the major source of earnings for LPTs. The impact of *Operating Cash Flow* on earnings is about 4 times of the impact of *Investment Cash Flows* and 6 times of the impact of *Financial Cash Flow* on earnings. Cash flows from investment and financial activities constitute minor contribution to earnings. LPTs are suggested to focus on promoting the efficiency of management and quality of service in order to sustain high level of earnings.

CONCLUSIONS

The findings above suggest that LPTs are more limited than traditional firms in their use of accruals for earnings management. This finding is somewhat contrary to the existing finance and accounting literature, but is not surprising provided the dominant position of cash flows in LPT earnings, both in regard to rental returns and investment activities. The role of fundamental property variables in estimating earnings is peculiar in that average lease term was significant and negative in model specifications excluding breakdowns in total cash flow. While the sign of this variable was in the expected direction, the finding that this variable was not significant when contributory elements of total cash flow were incorporated suggests that the

operating cash flow is a more important driver of earnings. While there was no significant correlation between average lease term and operating cash flow, this finding implies that assessing total cash flow alone in estimating future earnings could be misleading in the case of LPTs and that fundamental direct property information may provide more valuable insight into future performance.

Provided that accruals were not found to be significant in estimating future earnings, it appears that total cash flow and their contributory elements are key drivers of earnings management strategies employed by LPTs. This is somewhat inconsistent with the accounting literature, but suggests that LPT managers must be more focused on the persistent influence of cash flow elements on future earnings performance (Sloan, 1996). Given the influence that earnings can have on unit price (Bugshan, 2005), these findings also suggest that LPT managers are torn between two possibly conflicting objectives. The persistence of cash flow on future earnings may present problems on the sale of assets within the property portfolio unless the income is reinvested within a short period. Since the income of LPT managers are based upon earnings, any short term boost in earnings for the LPT may result in the fund manager underperforming in future periods. This means that LPT managers are perhaps better off holding onto properties in a portfolio in order to minimize the variance in cash flow on the balance sheet and to avoid the problems with future earnings, particularly given that all of the LPTs in the sample are externally managed funds. In turn, this may force these managers to hold onto relatively underperforming properties in a portfolio in order to maintain overall fund earnings into future periods. Provided that the influence of investment cash flows was found to be much less than the influence of operating cash flows on earnings, this indicates that a long term hold and acquire strategy in direct property markets is the most prudent way to stabilize earnings for LPTs. Further, this finding implies that disposal of assets in a portfolio can have a detrimental effect on earnings over a relatively long time, because changes in cash flow reverberate through future earnings for a longer period of time than accruals. This implies that LPT managers in New Zealand have an incentive to hold onto properties, unless they can acquire another property very shortly afterwards, even if that property is not performing as well as other properties in the portfolio. This further suggests that in order to avoid such conflicts, that LPT managers should possibly be compensated on the basis of both earnings and the price of the units on the market.

While it is understood that the sample size for this paper is relatively small and that the LPT market in New Zealand is rather limited in scope, the findings provide some evidence that LPT managers are more restricted than their counterparts in other industries in the use of accruals for earnings management purposes and in the strategies that they can employ to smooth earnings over time. However, it is thought that these findings would be consistent if a larger sample were available in another market, such as Australia. These findings may also prove useful in the analysis of

REITs, given their regulatory constraints and earnings payout requirement. Since the study of relationships between the contributory elements of total cash flow and direct property indicators is in the early stages, an assessment of these characteristics on current and future earnings performance may prove useful in the pricing of REITs and LPTs. While this represents one of the few papers examining the New Zealand LPT market in detail, it is suggested that further assessment of the differences between NZ LPTs and their counterparts in Australia and the US are warranted.

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