An Analysis of the Financing Decisions of REITs: The Role of Market Timing and Target Leverage

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Joseph T. L. Ooi [1], Seow-Eng Ong[1] & Lin Li[1]

Abstract

This paper examines the role of capital market conditions and target leverage on the marginal financing decisions of Real Estate Investment Trusts (REITs), which include both capital raising and capital reduction activities. We investigate the relevance of a hybrid hypothesis whereby REITs have target leverage, but they also choose and time their marginal financing decisions according to the capital market conditions. The empirical results suggest that target leverage behavior plays a secondary role to market timing behavior in the financing decisions of REITs. In particular, we find strong and consistent evidence that REITs exhibit market timing behavior in terms of when and what type of capital to issue or reduce. Such market timing practices, motivated by attempts to take advantage of

capital market conditions, may shift the firms away from their target leverage. However, we observe that in the long run, most REITs do move their capital structure towards the target debt level.

Notes

1. Interest charges account for between 30% and 70% of the total expenses

incurred by REITs in our study sample.

2. Firstly, REITs do not pay corporate tax; consequently, the tax benefit associated with using debt, which is central to the trade-off models, is not so applicable in the REIT context (Jaffe 1991). Secondly, equity REITs buy and hold properties, which are tangible and not firm-specific assets (Gentry and Mayer 2002). Consequently, they are less exposed to bankruptcy and agency costs as compared to firms in other industries. Third, the transparent nature of REITs' operations implies lower information asymmetry between the insiders and outsiders. REITs also operate under more stringent corporate governance and reporting rules. Fourth, due to the high distribution requirement, REIT managers have less discretion to engage in managerial opportunism or over-investment activities. Even successful REITs have to raise capital externally and are, hence, subjected to frequent monitoring and disciplining in the capital market (Ghosh et al. 1997).

3. Titman and Wessels (1988) further argue that small firms rely less on equity issues because they face a higher per unit cost. Consequently, they have no choice but to rely more on debt capital.

4. Baker and Wurgler (2002), in contrast, contend that this relationship reflect the practice of firms timing their equity issuances to periods when their M/B ratios are high because managers believe that shares of such firms are overvalued.

5. Using data of repurchase from 1997 to 1999, Ghosh et al. (2008) estimate a logistic model of the decision to repurchase. Whilst the main focus of the study was on the role of executive stock options, they find that REIT uses repurchase announcements to signal undervaluation. Brau and Holmes (2006) also observe that REIT managers initiate repurchases when they perceive that the stocks are undervalued.

6. Ghosh et al. (1997) also observe that REITs issued equity three times more frequently than debt and raised almost twice as much through equity than debt between 1991 and 1996.

7. Whilst REIT stock returns and general stock returns have moved in tandem in the earlier years, they have started to diverge from each other in the mid 1990s. The divergence allows an examination of the correlation between the level of REIT equity issues and the broader stock market condition. Interestingly, the pattern exhibited in Fig. 3 appears to indicate that the aggregate dollar amount of equity offerings by REITs tend to follow more closely to the general stock market performance than to the REIT sector performance. For instance, the equity offering surge observed between 1995 and 1998 corresponded with above 20% annual return in S&P 500, whilst a sharp drop in the REIT sector's performance in 1998 did not slow the pace of REITs equity offerings. On the other hand, the sharp decline in equity issuance activities during 2000–2002 coincided with below -10% returns in S&P 500, whereas the NAREIT equity-REITs Index registered healthy returns during the same period.

8. Since NAREIT and COMPUSTAT do not provide data on bank commitment of REITs, we employ the flow-of-fund data published by Federal Reserve to provide an overview of the aggregate private bank versus public debt fund flow into the REIT sector.

9. Prior to the legislation, REITs functioned primarily as passive income-producing asset owner and operator under a third-party management structure. However, after 1986, REITs were allowed to self-manage. Since then, equity REITs have increasingly become like real estate operating corporations that engage in a wide range of real estate activities, including leasing, development of real property and tenant services.

10. Although the statements of cash flow do not pick up any non-cash transactions, such as exchange offers, this limitation does not detract us

from focusing on the normal financing activities of REITs, instead of exceptional equity or debt issuance events related to major mergers or corporate restructuring. The main advantage of adopting the cash flow-approach is that private debt, which constitute a significant proportion of REITs' debt structure, is included in the study sample.

11. This classification is consistent with Baker and Wurgler (2002) and Fama and French (2002). Boudry et al. (2007) also find that REITs view preferred equity as a substitute for debt.

12. The filtering criteria for debt issues is less restrictive than equity issues because debt issues are reported as "net" amount as compared to "gross" amount in the case equity issues. For illustration, the cash flow statement of Equity Office Properties Trust recorded that it drew $5.169 billion from its lines of credit, whilst paying back $ 5.987 billion in 2000. In our classification, the financing activities would be categorized as a net reduction in debt amounting to $ 818 million. Note that the distinction between 'net" and "gross" is less critical for equity financing because seasoned equity offerings and stock repurchases are often made separately.

13. Hovakimian et al. (2001), Baker and Wurgler (2002), Frank and Goyal (2003), Huang and Ritter (2004) and Leary and Roberts (2005) adopted similar classifications and filtering criterion.

14. Recent studies which have employed MNL models to examine the financing choices of firms include Guedes and Opler (1996), Huang and Ritter (2004), and Boudry et al. (2007).

15. The purpose of this first stage regression is to provide an estimate of each firm's optimal or target leverage ratio, which is define as the debt ratio that firms would choose in the absence of information asymmetries, transaction costs, or other adjustment costs (Hovakimian et al. 2001).

16. Several authors have pointed out that M/B is both a proxy for mispricing and growth opportunity (Pagan et al. 1998; Kayhan and Titman 2007).

17. To interpret coefficients of the MNL model, it is helpful to bear in mind that the probability of each marginal financing activity is measured against the base alternative, which in our case is the “passive” option. Thus, a significantly positive coefficient estimate in the equity issuance equation would indicate that high values of the variable increase the probability of an equity issue against the no transaction alternative.

18. Whilst we appreciate that the net effect of a dual issue is actually dependent on the relative size of new equity and debt capital issued, our classification of dual issues as leverage-neutral assumes that the mix of new debt and equity raised is similar to the existing leverage of the individual REITs (see Gentry and Mayer 2002).

19. If firms, on average, experience a positive drift in their equity values, Leary and Roberts (2005) argue that leverage has a natural tendency to decline. Thus, they posit that to counteract this tendency, firms will lever up more often than down if they are rebalancing their debt ratios.

20. As highlighted by Boudry et al. (2007), an implicit assumption of the MNL model is the Irrelevance of Independent Alternative, which tends to be violated when alternatives are close substitute of each other. Thus, by condensing the financing choices faced by REITs, our subsequent analysis reduces the likelihood of this assumption being violated.

21. Using partial adjustment models, Jalilvand and Harris (1984) and Fama and French (2002) note that debt ratios adjust slowly towards the firms’ targets. In a recent study, Leary and Roberts (2005) show that the speed with which firms reverse deviations from their target debt ratios depends on the trade-

off between costs of adjusting leverage and the costs of operating with suboptimal leverage. They show that in a frictionless world, firms would always maintain their target leverage.

22. We also estimated the corresponding MNL model embracing the three decisions with the dependent variables coded 1 for equity issuers and 2 for dual issuers with the base alternative being debt issuers. Since the results are similar to the logistic models, they are not reported here.

23. The pre-and post-event deviation from target leverage of dual issuers, as exhibited in Fig. 6, also follows a time path pattern that is more consistent with equity issuers rather than debt issuers.

24. Note that profitability is, nevertheless, included in the first-stage regression to derive the firm's target leverage.

25. As pointed out by one of the referees, it seems important to know whether the firm purchased or sold assets in a particular quarter. Thus, we also re-estimate the regression with an additional variable to proxy capital expenditures of the individual REITs. The results, which are not presented, confirm that firms which raised capital in the current quarter experienced higher asset growth rate in the next quarter. This is consistent with the finding of Leary and Roberts (2005) that firms with large anticipated investment expenses are more likely to use external financing.

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Author information

Authors and Affiliations

Department of Real Estate, National University of Singapore, 4 Architecture Drive, Singapore, 117 566, Singapore

Joseph T. L. Ooi, Seow-Eng Ong & Lin Li

Corresponding author

Correspondence to Joseph T. L. Ooi.

Additional information

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