Real Estate Investment Trusts (REITS):
A New Business Model in the FTSE100

Abstract

This paper is about the Real Estate Investment Trust (REIT) business model. REITs benefit from tax concessions and Fair Value Accounting (FVA) practices. REITs distributing over 90 percent of profits can obtain tax concessions for their shareholders. This encourages profit distribution at the expense of accumulating retained earnings in shareholder equity. The financial viability of REITs depends upon FVA because this records holding gains when property values are increased. These holding gains can be employed to generate additional financial leverage. However REITs are exposed to property market volatility and this can quickly undermine solvency, credit ratings and financial stability.

Key Words: Fair Value Accounting, Business Model, Real Estate Investment Trusts, Financial Stability and Solvency

Highlights

- REITs are a relatively new business model in the FTSE 100
- REITs investors qualify for tax concessions so long as 90 percent of profits are distributed.
- Fair value accounting (FVA is a key element governing a REITs financial viability
- Fair value accounting (FVA) triggered significant financial instability in UK REITs.

1. Introduction

This article constructs a descriptive business model for Real Estate Investment Trusts (REIT's) to reveal how changes and adjustments to stakeholder networks facilitate new ways of making money. That is, the ability of firms to make money is not simply how they capture value from selling products and services but can make money in its' broadest sense, in credit based economies, out of opportunities presented by changes in legal, regulatory and institutional arrangements. REITs invest in property assets both commercial and private real estate and this market is estimated to have an overall value of £647 billion in 2011 (Property Industry Alliance (PIA), 2012, page 1) and £683 billion in 2014 but still below its peak of £867 billion in 2006[1]. Changes in legislation, regarding the operation of REITs, promoted their expansion enabling individuals to invest in large-scale income-generating real estate (SEC Office of Investor Education and Advocacy, 2011). A REIT is a company that acts in a similar way to a mutual fund but in this case it owns and operates income-producing real estate or real estate related assets and these can include office buildings, shopping malls, apartments, hotels, resorts, self-storage facilities, and warehouses. The investment objective of a REIT is to provide investors with dividend income, usually from rental income, and generate financial leverage from capital gains on real estate assets[2]. Often REITs will specialise in a single type of real estate but the key distinguishing factor of a REIT is that it should acquire and develop its real estate properties primarily as an investment portfolio. To qualify as a REIT two major conditions need to be met: first the bulk of its assets and rental income should derive from real estate investment. The London Stock Exchange (LSE) website notes that: 'At least 75% of the (group's) profits must derive from that property rental business and at least 75% of the group's gross assets must comprise assets or cash involved in the property rental business.[3]' The second qualifying condition is that at least 90% of a REIT's taxable income should be distributed annually to shareholders as dividends the so-called Property Income Distribution (PID). Because dividends are tax deductible most REITs will pay the majority of their taxable income to shareholders, thereby avoiding

[1] http://www.indirex.com/uploads/Size_and_Structure_of_UK_Property_Market_2013_-_A_Decade_of_Change_Summary_Report.pdf
[2] http://www.moneysense.gov.sg/Understanding-Financial-Products/Investments/Types-of-Investments/Real-Estate-Investment-Trusts.aspx
[3] http://www.londonstockexchange.com/specialist-issuers/reits/reits.htm

entirely the payment of corporation tax. Thus the after tax returns to investors are generally enhanced from a REIT because of this tax exempt status (see table 1)

The academic literature on REITs is broad and focuses on changes in property ownership structures and how this facilitates institutional investment in property, complex funding, and securitisation of assets, dividend distribution strategies, tax structure arrangements and corporate governance of REITs (Howe and Shilling, 1988; Jaffe 1991; Kemsley and Maye, 2003; Hartzell, Kallberg and Liu, 2008).

Table1: £100 return pre-tax relative to the property rental business

	After Tax return from UK Company	After Tax return from UK REIT	Enhancement of return
	%	%	%
UK pension fund/ISA	77	100	30
Overseas Investors (Tax treaty)	77	85	10
Overseas Investors (No Tax treaty)	77	80	4
Individual basic rate taxpayer	77	80	4
Individual higher rate taxpayer	58	60	4
Individual additional rate taxpayer	53	55	3
UK Company	77	77	nil

Deloitte Real Estate (2013b: 3)[4]

In this article our focus is with revealing the financial operating characteristics the REITs business model in the UK which, in terms of its corporate development, lagged behind that of the US (Kallberg et al 2000; Deloitte Real Estate, 2013b). Changes in legislation in 2007 permitted firms to convert to REITs status such that by 1st April 2013, there existed around 60 main market listed REITs in the UK. According to Sapphire Capital Partners (2012) proposed adjustments to existing legislation provided further opportunities for varied classes of investor with Deloitte Real Estate (2013a) commenting that the REIT investment vehicle 'is now known and understood by investors and analysts worldwide'. The operating characteristics of REIT's can be described and accounted for within a 'business model' framework of analysis. Our argument is that a firm's business model can be understood in terms of how stakeholder relations underwrite the business model 'value proposition' which

[4] http://www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/Industries/Real%20Estate/uk-re-reits-summary-of-the-regime-april-2012.pdf

itself can be deconstructed into three elements: value creation, value capture and value manipulation for windfall gains (Zott and Amit, 2010; Jacobides, 2009; Haslam et al, 2012). We then turn to consider the financial operating characteristics of the REIT's business model employing four major UK main market listed REITs to generate insight. In a final section we discuss the extent to which financial instability is heighted in the REITs business model because property values, when impaired, quickly erode shareholder funds threatening: solvency, gearing ratios and credit ratings. Findings from this evaluation of the REIT business model raise broader questions about the implications of fair value accounting (FVA) of assets when this also combines with a high earnings distribution to shareholders. In the US and across Europe major listed firms are distributing more of their profits (Lazonick, 2013) and this has an impact on the accumulation of shareholder funds relative to asset values setting these financial line items on different trajectories. FVA adjusts asset values in present time based on future financial expectations about earnings that have yet to be realised with the result that there is considerable value at risk if judgements about future values turn out to be optimistic. If, and when, asset values are impaired these adjustments need to be absorbed by shareholder funds which may or may not be sufficient to dampen financial instability and prevent insolvency.

2. Constructing a business model framework of analysis

Zott and Amit (2010) observe that: 'Given the vital importance of the business model for entrepreneurs and general managers, it is surprising that academic research (with a few exceptions) has so far devoted little attention to this topic. We need a conceptual toolkit that enables entrepreneurial manager's to design their future business model, as well as to help managers analyze and improve their current designs to make them fit for the future' (Zott and Amit, 2010:217).

The conceptual toolkit for structuring our understanding of business models is based on analysis of how a business model generates a viable business proposition. Chesbrough (2010) argues that a business model serves a variety of functions but that in general terms it (the firm's business model) articulates the value proposition. The value proposition (of a business model) is itself the sum of its parts and these are generally deconstructed into the notion of value creation and value capture. Baden-Fuller and Morgan (2010) observe that a

business model (as a model) connects up the 'workings inside the firm' to elements outside of the firm, 'the customer side' as a means to create value (from the application of innovation and new technologies). The firm is deploying its own capabilities and resources to generate new product and services which Magretta (2002) characterizes as 'value creating insight.' Zott and Amit (2010) stress the importance of locating a firm's value-creating initiatives within an activity network whereby the business model describes both intra- and external firm relations. This introduces the notion of an architecture that involves establishing and locking in partners through product and service novelty where governance arrangements distribute financial rewards. This framing of business models draws on resource based theories of the firm (Barney, 1991; Conner, K.R. and Prahalad, 1996; Prahalad, C.K. 1990) but combines with a transactional view of the firm whereby the relationships established by these transactions form an integral part of the value creating process of a business model. A business model is geared toward total value creation for all parties involved. It lays the foundations for a firm's value capture by co-defining (along with the firm's products and services) the overall 'size of the value pie,' or the total value created in transactions, which can be considered the upper limit of the firm's value capture potential (Zott and Amit 2010: 218). Thus, a focal firm's business model is driven by value creating initiatives that involve the deployment and articulation of resources, technologies and capabilities to generate new innovative products and services. And, because this involves transactions between firms and other 'partners,' it is the collective efforts or this value network that matters in a business model. In contrast to value creation, a business model also describes the nature of a firm's capacity to *capture* value. This process of value capture involves articulating the firm's location within a value chain in terms of how this linking up of the individual firm with its suppliers and customers in the transactions network translates into revenue streams, costs and profitability.

There is also a developing interest in business models reporting from an accounting and financial reporting standpoint (ICAEW, 2010; IIRC, 2013; EFRAG, 2013). The accounting bodies argue that a reporting entity should employ its business model as a means of selecting appropriate methods to disclose financial data.

> The need to understand an entity's business model is further increased by development of integrated reporting, which suggests that investors need to rely on a

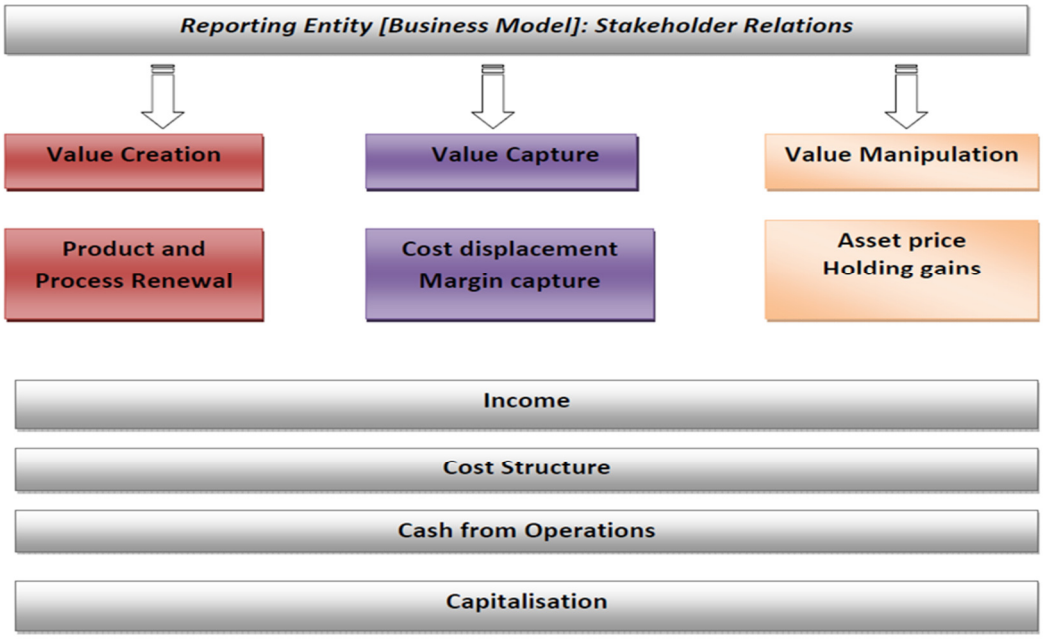
> cohesive set of information, encompassing more than only - financial statements. One of the elements to be disclosed under the proposed framework is the business model. If financial reporting is not consistent with an entity's business model, the required level of cohesiveness in integrated reporting would not be achieved.
>
> EFRAG (2013: Para B:19)
> http://www.efrag.org/files/EFRAG%20Output/131218_Business_Model_Research_Paper.pdf

Page (2012) observes that: 'As far as I am aware there is no generally agreed set of business models for the financial sector. This is not to deny that there are well understood industries and businesses—such as life assurance, pension funds, property investment and so on. But within industries there is a considerable (and sometimes bewildering) range of 'value propositions' and there are hybrids at the margins of different industries. It follows that managers have a great deal of latitude in describing the business model of particular parts of their organisation, and, as we know, where an inch of latitude exists managers will take a mile, when occasion demands. (Page, M, 2012: 4).

Haslam et al (2012, 2015) argue that from an analytical perspective, rather than accept what managers simply say about their business model, a firm's business model can be structured out of key and materially significant stakeholder relations. Firms share a broadly defined business model because they are located within a similar matrix of stakeholder relationships. These stakeholders also help to sustain the value proposition of a business model which Haslam et al argue can be deconstructed into three elements: Value Creation [product innovation and process renewal], Value Capture [recalibration of value chain with suppliers and customers] and Value Manipulation [recapitalisation and financial leverage arising from capital market windfall gains] (Jacobides, 2009; Haslam et al, 2012)

These three elements of a firm's value proposition, within its business model, are described in figure 1. From an accounting perspective the income, cost structure and balance sheet capitalisation of a firm within its business model, are the product of on-going stakeholder interactions. However, the balance of emphasis between value creation, capture and manipulation are variable and changes in stakeholder relations can either promote or disrupt a firm's value proposition within its business model.

Figure 1: Business Model Value Proposition



Source: Haslam et al, 2015

Figure 2: Business Model Financial Typologies

Value Creation		Value capture			Value manipulated	
Cash from balance sheet- Depletion		Cash to Balance Sheet: Augmentation			Balance Sheet- Holding Gains	
Cash Burn	Cash Burn + Income	Cash generative	Strong Cash Generation	Very Strong Cash Generation	Cash Positive	Cash Limited
Cash from operations negative	Cash from operations neutral	Cash from Operations +	Cash from operations ++	Cash from operations +++	Cash from Operations + holding gains from asset trades ++	Cash from operations limited holding gains from assets +++
External funding draw down	External funding draw down	External funding draw down for some projects	External funding. High cash distribution	Limited external funding. High cash distribution	High levels of Debt external funding	
Balance sheet depletion	Some signs of balance sheet augmentation	Balance sheet augmentation	Balance sheet augmented	Balance sheet augmented	Debt to equity ratio inflating	High levels of Debt to equity ratios
					Leverage +	Leverage ++
Business Models –Cash from operations ---Balance Sheet Capitalization						

Source: EFRAG, 2013. Adapted by authors

On the balance of emphasis between value creation, capture and manipulation these elements can be described along a spectrum of financial typologies that describe the financial operating characteristics of business models (EFRAG, 2013; Haslam et al, 2012). Within the spectrum of typologies shown in figure 2 on the left hand side we have firms within business models are 'cash burning,' that is they are raising cash and drawing this down from the balance sheet to cover expenses. Moving to the centre of Figure 2, we encounter business models that generate substantial cash surplus and have relatively clean balance sheets in terms of debt financing. Moving further to the right, we encounter business models that generate relatively thin margins out of revenues and are dependent recapitalising balance sheets to extract windfall gains. These business models tend also to be financially leveraged, operating with relatively high debt to equity ratios for example, REITs, private equity and investment banking.

The REIT business model is located towards the right hand side of Figure 2, a business model that contains firms which generate relatively thin income margins on assets and dependent upon extracting holding gains from asset trades or their periodic revaluation (see Brown, 2000). A typical REIT will generate a net income margin on assets in the range 5-7 per cent.

> The net equivalent yield (after notional purchaser's costs) on the portfolio at 7.4% has moved out 40bps over the quarter and 183bps for the year.[5] (British Land, annual report 2009:23)
>
> For the continuing portfolio at the end of 2012, the net initial yield, based on the gross portfolio value, was 5.3%, unchanged since 31 December 2011 (Hammerson, Annual Report 2012:30)[6]

Firms in the REITs business model are, as we have argued, dependent upon their ability to revalue assets and account for these changes in financial statements. FVA permits REITs to revalue their property portfolios to a market value based on external advice from valuation experts and consultancies. This process of adjusting asset values to their market value is legitimised by extant accounting standards and regulations. Article 6(i) of EU Directive 2013/34 observes that items recognised in the financial statements can be measured in

[5] http://www.britishland.com/~/media/Files/B/British-Land/reports-and-presentations/reports-archive/2009_annual_report.pdf
[6] http://b2de0febdea80fa78eb4-5cad31df697fe43d78c0459eba68b1d4.r36.cf3.rackcdn.com/wp-content/uploads/2013/04/1208BF-hammerson_ar_2012-original.pdf

accordance with the principle of purchase price or production cost. However, article 7 paragraph 1 permits fixed asset revaluation with the difference between fair value and cost or purchase price shown in a revaluation reserve. Whilst Article 8 also opens up the further opportunity to account for the fair value of financial instruments (EU Directive 2013/34 Article 8a) and that fair value adjustments can also be applied to 'specified categories of assets other than financial instruments at amounts determined by reference to fair value' (EU Directive 2013/34, Article 8b)[7]

International Financial Reporting Standard (IFRS) 13 'Fair value Accounting' describes a 'fair value hierarchy' which permits: a] asset values based on quoted prices in active markets for identical assets or liabilities, b] asset prices based on quoted prices for similar assets or liabilities in active markets, or c] asset prices based on modelling using unobservable inputs, to generate a valuation (using the best information available in the circumstances). Thus at the top of the hierarchy asset values can be adjusted against similar assets traded in active markets. Or at the bottom of the hierarchy values adjusted on the basis of estimates about anticipated future returns discounted by an appropriate cost of capital.

> The main issue with fair value accounting is whether firms can and do estimate fair values accurately and without discretion. When identical positions trade in liquid markets that provide unadjusted mark-to-market values, fair value generally is the most accurate and least discretionary possible measurement attribute, although even liquid markets get values wrong on occasion. Fair values typically are less accurate and more discretionary when they are either adjusted mark-to-market values or mark-to-model values. (Ryan, 2008:4)

In this paper we are concerned with the nature of the REIT business model, both in terms of its emergence and its financial operating characteristics. The REIT business model depends upon raising debt finance with covenants that are often conditional on gearing ratios being maintained. Raising additional debt finance, in turn, depends upon extracting holding gains from re-valued property assets which can be 'marked to market'. A combination of inflated property values and additional paid-in shareholder equity (or both) enables favourable gearing ratios to be maintained. Leveraging additional debt against shareholder equity

[7] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013L0034&from=EN

facilitates the financing and expansion of a REITs property portfolio which, in turn, generates additional rental income to finance the payment of tax-free dividends to shareholders. To boost rental income (and hence tax free returns) a REIT needs to generate windfall gains and/or secure new equity funds to finance an expanded property portfolio.

3. The financial characteristics of the REIT business model in the UK FTSE 100

Our analysis focuses on Real Estate Investment Trusts (REITs) that are listed continuously on the UK main market during the period 2007-2013. The growth in firms listing as REITs increases after 2007 coincident with changes in legislation with the number moving up from 31 to 65 firms and a market capitalisation rising from £5.5bn in 2000 rising to £37bn as at December 2007 (see Table 2).

Table 2: Real Estate Investment Trusts (REITs) on UK Main Market 2000 to 2013 (December)

	2000	2007	2013
No. companies listed	31	62	65
Market value £bn	5.5	37.1	36.7

Source:
http://www.londonstockexchange.com/statistics/historic/company-files/company-files.htm

The year 2007 marked a new opportunity for the REIT business model because legislative changes combined with FVA accounting offered attractive growth potential and financial returns to property investors. However, the environment within which this business model operated was seriously compromised in 2008 during the financial crisis when commercial property values collapsed by roughly 50 per cent.

> The IPD all property index shows that capital values have already fallen 28% from their June 2007 peak. The market expects them to bottom out in 2010-11, with a peak-to-trough capital value decline of 51%[8]"

This collapse in property values was mirrored by an equivalent fall in the stock market value of this group of firms in 2007-8 (see table 3)

[8] http://www.theguardian.com/business/2008/dec/08/housingmarket-houseprices-creditcrunch-recession

Table 3: REITS Continuously Listed on the UK Main Market 2007 to 2012 (December)

	2007	2008	2009	2010	2011	2012
Market Value £bn	25.8	14.3	24.2	24.8	22.7	28.2

Source:
http://www.londonstockexchange.com/statistics/historic/company-files/company-files.htm

In order to explore the key financial and operating characteristics of the REITs business model we turn to review the financial performance of four key companies listed in the main London market: Land Securities, British Land, Hammerson, and Derwent London which together accounted for 48 percent of the total market value of REITs listed on the main London market at 31st December 2012. We refer to these four companies collectively as the Big4 REITs. Our financial analysis reveals that the REIT's business model depends upon generating holding gains from property values appreciating. Information on property values is supplied by independent real estate advisers/consultancy firms such as: DTZ Debenham Tie Leung, CBRE Indirect Investment Services Limited. The information provided by these consultants about property values is employed to adjust the value of assets held by REITs on their balance sheet.

> Valuations were reported either on the basis of Market Value or Fair Value and our opinion of the Market Value and Fair Value of each of the properties has been primarily derived using comparable recent market transactions on arm's length terms.[9]

Holding gains (or losses) arising out of changes in property values are then recorded in a firm's income statement and this, in turn, either increases or reduces reported shareholder funds. Thus, in circumstances where property valuations are increasing this generates holding gains which also increase shareholders' equity and if shareholder equity inflates this serves to mechanically reduce a REIT's gearing ratio (debt to equity). The debt to equity ratio is a significant key performance metric for a REIT because it reveals the extent to which additional borrowing can be made within gearing limits set by a combination of internal management governance and financial market regulatory arrangements. In circumstances where the debt to equity ratio is reduced this sets up, at least, the possibility for additional

[9] http://b2de0febdea80fa78eb4-5cad31df697fe43d78c0459eba68b1d4.r36.cf3.rackcdn.com/wp-content/uploads/2013/07/1226TV-web-letter---for-inclusion-in-accounts-dec-2012-final-original.pdf

borrowing which would move the debt to equity level back to its 'acceptable' agreed norm. Any additional debt finance obtained from investment banks and other financial intermediaries generates investment funds that can be used to purchase new property assets for the REIT portfolio. The REIT business model is thus dependent upon extracting holding gains which under FVA conventions can be shown in the firm's balance sheet as an adjustment to property values and shareholder funds. Where property market values deteriorate holding gains turn into holding losses and these are recorded as reducing the asset value and shareholder equity (revaluation reserves). A reduction in reported shareholder funds will mechanically increase the firms reported gearing ratio and this may threaten to breach debt covenants which are often pegged to a pre-set debt to equity ratio. If the gearing ratio increases above these agreed levels this will have a negative impact upon a REIT's credit ratings and may even breach debt covenants that are tied into gearing ratios forcing the repayment of debt to bondholders.

> Gearing provides the capacity for outperformance but also magnifies the impact of underperformance. An increase in the gearing level increases the risk of a breach of financing covenants and may increase borrowing costs.
>
> British Land (2013:46)[10]

> The property portfolio is the most significant component of the value of the Hammerson Group. A worsening of the economic situation may put downward pressure on property values, which would increase gearing and could ultimately result in the breach of borrowing covenants.
>
> Hammerson (2012:38)[11]

To explore these interconnected financial aspects of the REITs business model we consider the financial performance of the big4 UK REITs (by market value of assets) listed on the London main market: Land Securities, British Land, Hammerson, and Derwent London. Table 4 reveals that the invested assets in property portfolios account for a steady 80-85 percent of total assets held on the balance sheet.

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[10] http://www.britishland.com/~/media/Files/B/British-Land/downloads/2013/British-Land-Annual-Report-2013.pdf

[11] http://b2de0febdea80fa78eb4-cad31df697fe43d78c0459eba68b1d4.r36.cf3.rackcdn.com/wp-content/uploads/2013/04/1208BF-hammerson_ar_2012-original.pdf

Table 4: Big 4 REITs' Asset Structure 2006 to 2013

	Total Assets	Investment Assets	Investment as share of total assets
Year	£bn	£bn	%
2006	35.9	30.5	84.9
2007	45.7	35.7	78.1
2008	37.8	30.2	79.8
2009	26.4	20.5	77.7
2010	24.4	19.9	81.5
2011	26.9	21.8	81.1
2012	28.3	22.0	77.8
2013	29.8	23.8	79.7

Source: Company annual report and accounts, various years
Note: Investment assets are those held as commercial and real estate assets

Table 4 also indicates that before the financial crisis the Big4 UK REITs held investment assets valued at £36bn in 2007 but by 2010, after the financial crisis, the value of these property real assets had dropped to approximately £20bn a reduction in value of 43%. This reduction in property investments of £13 billion from their peak had a severe impact on reported shareholder funds (see table 6). The annual financial statements of a REIT will distinguish between profits earned from rental income and windfall holding gains and losses from property revaluations.

Table 5: Big 4 REITs Earnings Structure 2006 to 2013

	Rental profit	Windfall holding Gains	Accumulated profit
Year	£bn	£bn	£bn
2006	1.1	3.8	4.9
2007	1.2	2.6	3.8
2008	1.2	-5.4	-4.2
2009	1.1	-9.0	-7.8
2010	1.1	2.4	3.4
2011	1.1	1.7	2.8
2012	0.8	0.5	1.3
2013	1.1	0.5	1.6
Total	8.6	-2.8	5.8

Source: Company annual report and accounts, various years
Note: Accumulated profit is defined as rental profit plus holding gains.

Table 5 shows that profit from rental income (after expenses) is a relatively stable component at £1.1bn and that the accumulated profits from rental income for our Big4

REITs amounted to £8.6bn over the period 2006 to 2013. Holding gains and losses are a far more volatile component than rental income and overall aggregate holding losses from the revaluation of property assets amounted to £2.8 billion over the period 2006 to 2013.

During the financial crisis REITs experienced a serious deterioration in the market value of their property assets and this, in turn, impacted negatively on their shareholder equity because revaluation reserves are also marked down (see Table 6). A material reduction in shareholder equity impacted negatively on reported gearing ratios prompting remedial restructuring. This included raising additional equity funds from investors and also the fire sale of property assets to reduce debt outstanding with the objective of restoring normality to debt to equity ratios. At British Land property sales and a rights issue were required to stabilise the gearing ratio.

> Management actions have been proactive: £6.6 billion of sales have been achieved over the last three years, including £1.9 billion this year, to bring gearing down and the balance sheet has been further strengthened by the Rights Issue.
> (British land, Annual Report, 2009:34)

During the period 2008-2010 the debt to equity ratio in the Big4 REITs increased from a 50-60 percent to over 100 percent by 2009. Thereafter a combination of funding raised from asset sales is used to deduce outstanding debt and rights issues raising funds from shareholders inflated shareholder funds so that, in combination, the leverage ratio is restored to pre-crisis levels.

Table 6: Big 4 REITS Equity to Debt Ratio

	Shareholder Equity	Long-term debt	Debt to Equity
Year	£bn	£bn	%
2006	18.3	11.5	62.9
2007	25.6	12.9	50.2
2008	20.4	14.0	68.5
2009	12.1	12.2	100.1
2010	14.9	7.7	51.5
2011	17.2	7.8	45.2
2012	18.0	8.6	47.5
2013	19.2	8.4	43.7

Source: Company annual report and accounts, various years

Table 7 reveals that for our Big4 REITs equity investors paid in an additional £1.8bn during the financial crisis to strengthen shareholder funds and debt outstanding was reduced by property sales.

> Four decisions defined the year: first, the landmark sale of the Willis building for £400 million in June, reducing debt with a view to redeploying capital later for greater growth. Next we deferred construction of 122 Leadenhall Street, reflecting heightened construction and letting risk. Thirdly, in February we sold half our interest in Meadowhall, realising our long held ambition to lighten our weighting to this high quality steady performer, whilst simultaneously removing £1 billion of debt from our balance sheet. Finally we raised £740 million from shareholders in a pre-emptive Rights Issue
>
> (British Land, Annual Report, 2009:7)

A significant component that underwrites the value proposition of the REITs' business model is the ability to revalue property and extract holding gain but this arrangement did not functioning during the financial crisis. In 2013 property values were still below peak levels in 2007 before the financial crisis.

Table 7: Big 4 REITs Equity funding and Long-term Debt

	Equity Invested	Long Term Debt
	£bn	£bn
2006	3.1	11.5
2007	3.4	12.9
2008	3.4	14.0
2009	4.9	12.2
2010	4.8	7.7
2011	4.8	7.8
2012	4.8	8.6
2013	4.9	8.4
Change £ bill	1.8	-3.1

Source: Company annual report and accounts, various years
Note: Equity funding is the increase in share capital that arises out of new stock issues.

The financial crisis resulted in a rapid and significant depreciation of property asset values and this triggered a rapid deterioration in reported shareholder funds. During and after the financial crisis firms within the Big4 UK REIT's have not been able to fully capitalise on holding gains from which to extract additional financial leverage and expand property portfolios. Investors injected an additional £1.5bn of capital into the Big 4 REITs after the

financial crisis (see table 8) but these firms were forced to downsize using funds raised from asset sales to reduce long term debt by fifty percent by 2010.

Table 8: Big 4 REITs Return on Equity Funding

	Equity Invested	Dividends Paid
	£bn	£bn
2006	3.1	0.4
2007	3.4	0.4
2008	3.4	0.6
2009	4.9	0.6
2010	4.8	0.6
2011	4.8	0.5
2012	4.8	0.5
2013	4.9	0.6
Increase/ Total	4.9	4.1

Source: Company annual report and accounts, various years
Note: Equity funding is the increase in share capital that arises out of new stock issues. Cash from operations taken from cash flow statements

4. Conclusion/Discussion

In this article we construct a descriptive business model within which to frame our understanding of how changes in legislation and FVA impact upon the financial operating characteristics of REITs. REITs generate relatively slim net income margins from their commercial real estate portfolios and are encouraged to distribute profits to take advantage of tax concessions for shareholders. In the UK the government's policy has been not to double tax dividends as long as 90 per cent of profits from property income are distributed. This arrangement helps investors generate a higher return on their equity investments in the REIT. Although this tax concession encourages REITs to distribute profits to shareholders this also reduces the growth of retained earnings which are a component of shareholder funds.

FVA records the market value of a REIT's property portfolio on the balance sheet after taking into account advice from external property valuation consultants. When property market conditions are favourable FVA will record the inflated value of assets on the firms balance sheet and holding gains are posted to the revaluation reserves contained in

shareholder funds. As shareholder funds inflate relative to existing debt outstanding this will improve a REITs reported debt to equity ratio, improve credit ratings, and capacity to raise further debt finance to expand the property portfolio. In this article we reveal that the revaluation component of the REIT business model is volatile and that during the financial crisis the Big4 UK REITs recorded holding losses of £2.8bn (see table 5). This triggered a substantial write down in shareholder equity and inflated debt to equity ratios. In order to avoid breaching loan covenants REITs were forced into aggressive restructuring selling off property assets and raising additional funds from shareholders. The objective of this restructuring was to stabilise debt to equity ratios, sustain credit ratings and maintain solvency.

There are broader lessons that we can draw from this analysis of the REIT business model. A number of IFRS now promote the application of FVA including: Business Combinations (IFRS3), Financial Instruments (IFRS9) and Property, Plant and Equipment (IAS16). Assets on balance sheet can be adjusted to a market value where the primary reference is a current market price (if available), or an estimate based on expected earnings. FVA de-temporalizes corporate balance sheets because it crystalizes future value into the present and this sets up the potential for financial instability. It is, for example, possible that the market value of assets can become impaired leading to a charge against shareholder funds as we have discussed in this article on REITs.

European and US firms have increased the share of earnings they distribute to shareholders and, on average, this is approaching the high distribution rates we find in a REIT. In the S&P500 dividends and share buy-backs distributed out of earnings have averaged roughly 80 percent over the last decade (Lazonick, 2013) and in 2015 the S&P 500 distributed, on average, over 100 percent of earnings as dividends and share buy-backs[12]. In Europe one-quarter of firms listed in the FTSEurofirst 300 are distributing over three quarters of their earnings in the form of dividends and share buy backs up from 8 percent in the year 2000 (Haslam, mimeo, 2015).

In the S&P 500 group of firm's goodwill recorded on a firm's balance sheet accounts for the difference between the market and book value of business combinations. This goodwill is

[12] http://www.bloomberg.com/news/articles/2015-06-26/s-p-500-spending-on-buybacks-dividends-exceeds-operating-profit

not depreciated or amortised but accumulated on balance sheet until it is deemed to be impaired. In the S&P 500 one-fifth of firms listed in the index had intangible goodwill equivalent to or above eighty percent of shareholder funds. FVA accounting for goodwill captures the difference between the market and book value of assets acquired but goodwill is an accumulating risk because if it is judged to be impaired this would need to be absorbed by shareholder funds.

FVA inflates the value of assets held on balance and a higher distribution of earnings slows down the accumulation of shareholder funds setting asset value and shareholder funds along a different trajectory. This discrepancy has the potential to be become a more serious problem if (and when) asset values are marked down and holding losses charged to shareholder funds. As we have seen with REITs asset write downs can compromise shareholder funds and impact adversely on credit ratings, leverage ratios and solvency test. In 2015 Tesco PLC, a UK grocery retailer announced fair value impairments to its property portfolio and other one off other impairment valuation adjustments totalling £6.2bn. This change to its asset values triggered a 42 percent decline in reported shareholder equity and a significant deterioration in the debt to equity ratio which increased from 0.6:1 to 1.24:1. Since 1995 GalxoSmithKline (GSK) generated £73.6 billion of net income and distributed £67.3 billion, that is, distributions accounted for 90 percent of net income. Goodwill arising out of business combinations is now equivalent to its shareholder funds and if we add in the market value of other intangibles such as patents and licenses these are equivalent to three times shareholder funds.

Although the analysis in this paper has focussed on describing the financial characteristics of the REIT's business model our findings have a broader salience in terms of understanding the impact of (FVA) when firms are also distributing a very high share of earnings to their shareholders. FVA de-temporalizes asset values because future value is crystalized into the present but there is the possibility that these values can become impaired if judgements about the future turn out to be faulty. The REITs business model reveals that FVA captures the impact of both holding gains or losses of property investments and that this is a volatile financial element which can compromise a firms reported shareholder funds, solvency and financial stability.

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