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Measuring economic performance of Real Estate Developers in Australia: (A Longitudinal Study)

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Abstract

Purpose: *This paper examines the economic performance of real estate property developers listed on the Australian Stock Exchange using the performance measure construct derived from the economic value added (EVA) model.*

Design/methodology/approach: *Data was obtained from database sources for the purpose of calculating the EVA of the major property developers in Australia for the years 2005 to 2014. The research was concerned with calculating the economic profit of each firm to determine the extent to which real estate assets (investment property portfolio) contribute to covering their cost of capital (shareholder wealth).*

Findings: *The results indicate that most property companies did not generate sufficient annual profit to cover their cost of capital. This finding was consistent with prior research which also found.*

Research limitations/implications: *This study did not test for differences in returns due to diversity of real estate portfolio investments or the nature of risk inherent in the different sectors. However, a further adjustment to the EVA model is recommended to allow for any revaluation of real estate embodied in the other comprehensive income section of the financial statements.*

Keywords: *Economic value added; real estate; property development firms.*

JEL Classifications: G10; M40

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Introduction

Real estate is claimed to be a valuable form of investment providing potential for both capital gains (from growth in value) and income (from rental of the property). It is therefore not surprising that real estate assets are viewed as a less risky form of investment. Thus the possibility of investing in the shares of a real estate developer listed on the stock exchange could seem to be alluring to the public. The fact that a real estate developer has a large and potentially diversified portfolio of real estate assets does not necessarily mean that the annual profit (returns) are superior to other sectors. Traditional accounting reports and performance measures derived from them such as return on assets (ROA) fail to consider the cost of capital (Jackson, 1996). Thus the evaluation of profit performance in determining the growth in shareholder wealth may be viewed as misleading.

To better measure the earnings performance in terms of value relevant to the asset base of a firm the economic value added model (EVA) model makes allowances for the cost of capital (Stern & Stewart, 1993; Chen & Dodd, 2001). The economic value added (EVA) model was developed by Stern Stewart & Company and is a metric used to measure residual income (Biddel, Bowen & Wallace, 1999). Residual income considers that a firm creates shareholder wealth by earning more from its total invested asset base than the cost of capital. This overcomes the limitations inherent in traditional accounting measures where net profit is net of interest expense on debt capital (Biddel, Bowen & Wallace, 1999).

Literature Review

Research employing EVA has not been conclusive and although there are studies which have reported finding evidence that validates the use of EVA (Athanasakos, 2007; Kim, 2006; Zaima, Turetsky & Cochran, 2005; Worthington & West, 2004; Lehn & Makhija, 1997; O'Bryne, 1996, 1997; Grant, 1996; Yyemur, Kantor & Pettit, 1996; Walbert, 1994) other studies have reported that EVA is not superior to traditional accounting measures (Palliam, 2006; Tsuji, 2006; Griffith, 2004; Chen & Dodd, 2001; Clinton & Chen, 1998; Ray, 2001; Biddle, Bowen & Wallace, 1997). Chari (2009) attributed the conflicting results to the use of linear models and methods to assess returns and earnings which are not linear, ignoring inflation and failing to isolate the EVA effect when controlling for the economic consequence of the market.

Support for EVA is most commonly derived from research which focuses on comparisons against traditional accounting measures (Laing & Dunbar, 2015; Dunbar, 2013; Worthington & West, 2004) or to determine alternative measures of performance (Ratnatunga & Montali, 2008). Grant (1996) compared the EVA to company valuation and found that EVA had a significant relationship to market value. This was further supported by Uyemura et al (1996) which showed a strong correlation between EVA and market value the reported correlations of which were: EVA 40%, return on assets (ROA) 13%, return on equity (ROE) 10%, net income (NI) 8% and EPS 6%. The research by O'Bryne (1996) focused on the comparison against net operating profit after tax (NOPAT) and found that EVA was superior in explaining a firm's market value than the NOPAT. Laing and Dunbar (2015) reported finding a strong correlation between EVA and market value in the banking industry but the results did not point to EVA being superior to traditional accounting measures. These results indicate that both EVA and market value added (MVA) are somewhat more relevant long-term measures than traditional accounting measures. This may be explained by the way in which accounting profit is derived by merely deducting interest charges in contrast to economic profit which subtracts the cost of all capital employed (Ooi & Liow, 2002). Subsequently, higher accounting profits are not indicative of

an efficient use of capital and therefore may understate the actual cost of conducting business.

Ooi and Liow (2002) applied the EVA model to investigate the concept of economic performance in the firms that were operating in the real estate market. The underlying argument being that firms are or at least are expected to be committed to generate returns for shareholders and in order to assess performance in terms of achieving this goal EVA would seem to provide a means for measuring outcomes than traditional accounting methods. A major factor for the adoption of EVA was that it provided a more realistic cost of capital which in turn was argued to provide a better means of determining whether an investment was profitable or unprofitable. This relates to the distinction between economic profit and accounting profit. For firms with extensive investments in real estate, otherwise known as their investment portfolio, the traditional approach to satisfying shareholders need for returns has been reliant upon development and sale of the real estate. This focus is considered to carry consequences on profits especially in times of economic down-turn and low demand for property. According to Ooi and Liow (2002) the countervailing argument that should be considered by management is whether holding of a particular investment portfolio does or does not increase wealth for shareholders.

Subsequently, the need to calculate the Weighted Average Cost of Capital (WACC) was viewed as a significant benefit to management since it would improve their decision-making capacity. The results of the research (Ooi & Liow, 2002) showed that the real estate property firms had failed to generate sufficient income to cover the cost of capital, which indicates that rather than creating wealth they were eroding the firm's capital.

The primary purpose of this study is to replicate the study of Ooi and Liow (2002) within the Australian market relative to the Real Estate firms listed on the Australian Stock Exchange. The study is intended to provide a comparison between the two distinct real estate markets in terms of the economic performance of the firms in the industry and their ability to create wealth from the real estate portfolio of assets.

Method

This study examines the performance of the seven major Australian real estate property developer firms over a ten-year period from 2005 to 2015. The firms were chosen from the companies listed with the Australian Stock Exchange (ASX) as they provide readily available financial data. A longitudinal study was selected on the basis that any variation due to real estate market trends would be less problematic in arriving at an assessment of economic profitability and would alleviate possible distortions due to any possible outliers.

The data was obtained primarily from the database of Bloomberg Terminal, with further clarification obtained from the databases of Data Analysis Premium, Risk Measurement Services and the Reserve Bank of Australia. The names and their abbreviation of the seven firms are provided in Table 1.

Table 1:
List of Australian Property Companies in the Study

Abbreviation	Name of Firm
AVJ	A.V. Jennings Ltd
DVN	Devine Limited
DXS	Dexus Property Group
LLC	Lendlease Group
MGR	Mirvac Group
SGP	Stockland Corporation Ltd
WFD	Westfield Corporation

The formula for calculating EVA (Biddel, Bowen & Wallace, 1999) has been identified as being embodied by the following formula:

$$\text{EVA} = (\text{ROIC} - \text{WACC}) \times \text{IC}$$

where the abbreviations stand for:
 ROIC = return on invested capital
 WACC = weighted average cost of capital
 IC = invested capital (at the beginning of the year)

The formula may be further decomposed to derive the basic components and reveal the relationship between the underlying constructs (Stewart, 1991; Langfield-smith, Thorne & Hilton, 2009):

- Starting with the premise that the *rate of return on invested capital is equal to the net operating profit after tax **divided by** the invested capital*;
- This leads to the next formula which is that the *rate of return **multiplied by** the invested capital is equal to the net operating profit after tax*;
- Therefore, *EVA is equal to net operating profit after tax **minus** (invested capital **multiplied by** weighted average cost of capital)*
- In this model, the *weighted average cost of capital is averaged* between the *various sources of capital* utilised by a business. This assumes that the cost of equity relates to the opportunity cost to investors while the cost of bonds or debentures is more appropriately derived as the after-tax value of the interest rate.

Intermingled in the EVA model is the traditional concept of economic profit, which is explained as being the margin that exists between operating profit and the cost of capital used in order to produce the income (Ooi & Liow, 2002). The formula for calculating economic profit was broken down into its components by Ooi and Liow (2002) as economic profit is equal to *net operating profit after tax **minus the result of** the capital employed **multiplied by** the average cost of capital*.

$$\text{EP} = \text{NOPAT} - (\text{CE} \times \text{WACC})$$

where the abbreviations stand for:
 EP = economic profit
 NOPAT = net profit after tax
 CE = capital employed or invested
 WACC = weighted average cost of capital

To achieve a more closely realistic measure of economic profit the EVA literature recommends a variety of adjustments to eliminate the distortions that are inherent in the traditional accounting profit (Dunbar, 2013; Ooi & Liow, 2002). These are considered to be necessary on the grounds that traditional accounting profit does not necessarily identify whether capital has been used efficiently by the firm. This concept of efficiency is a matter of conjecture especially when investigating the returns for real estate assets that may impact on capital growth which represents any increase in their value.

Results

The rates of return on invested capital (ROIC) for each of the firms are reported in Table 2. The Lendlease Group is ranked number 1 with an average return on invested capital of 6.37%, in second place is the Dexu Property Group with an average 5.47%. Over the period, the total average return on invested capital for the sample was 4.55%, and this ranged from a low of -1.62 in 2009 to a high 7.31 in 2007.

Table 2:

Returns on Invested Capital (ROIC) of Australian Property Companies (2005 – 2015)

<i>Company</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>Average</i>	<i>Rank</i>
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
AVJ	14.14	4.83	8.61	3.25	1.07	4.09	4.55	-12.99	-6.29	6.35	10.51	3.47	6
DVN	1.28	13.39	14.65	14.55	6.16	5.59	7.35	-4.60	-0.28	4.91	-10.30	4.79	3
DXS		6.46	5.63	5.28	4.16	6.37	5.92	5.22	5.78	4.97	4.93	5.47	2
LLC	8.76	8.81	5.22	3.80	-14.38	6.17	6.32	7.45	10.37	15.55	11.95	6.37	1
MGR	6.01	6.65	5.58	1.28	-11.16	3.17	1.34	6.38	2.62	6.61	7.14	3.24	7
SGP	7.39	5.43	6.61	5.56	-2.57	5.06	5.32	5.11	0.88	5.10	5.14	4.46	4
WFD	5.97	5.51	4.83	4.77	5.37	6.16	4.21	3.87	3.79	-2.11	1.96	4.03	5
Average	7.26	7.30	7.31	5.50	-1.62	5.23	5.00	1.49	2.41	5.91	4.48	4.55	

(note: no value was provided in the database for the 2005 ROIC percentage for DXS)

The weighted average cost of capital (WACC) is derived from the averaging the various sources of capital utilised by a business. Specifically, the cost of debt or borrowings and the cost of equity each of which have their own distinct costs. This distinction recognises that the cost of equity relates to the opportunity cost to investors while the cost of bonds or debentures is an expense item derived from the after-tax value of the interest rate. The weighted average cost of capital (WACC) for each of the firms are reported in Table 3. Over the period, the total average WACC for the sample was 8.46%, and this ranged from a low of 6.32 in 2007 to a high 12.53 in 2010. The Lendlease Group is ranked number 1 with an average WACC of 9.74%, in second place is the Stockland Corporation Ltd with an average 9.51%.

Table 3:

Weighted Average Cost of Capital (WACC) of Australian Property Companies (2005 – 2015)

<i>Company</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>Average</i>	<i>Rank</i>
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
AVJ	5.42	5.49	6.30	5.66	8.14	11.81	11.03	5.58	7.48	8.31	5.42	7.33	6
DVN	5.31	5.46	7.93	5.77	7.75	9.94	9.16	6.72	7.18	4.77	2.68	6.61	7
DXS	7.19	7.19	7.39	7.30	13.69	12.79	11.38	8.59	8.00	6.90	8.14	8.96	4
LLC	6.63	6.81	7.54	8.85	14.15	12.91	13.15	9.26	8.88	10.03	8.89	9.74	1
MGR	6.04	6.71	8.32	7.76	13.31	13.76	11.87	8.41	8.31	7.73	8.60	9.16	3
SGP	6.85	7.06	7.52	9.22	16.30	15.41	12.21	7.54	7.30	6.95	8.24	9.51	2
WFD	6.79	6.81	8.63	9.89	9.40	11.08	8.03	6.39	6.19	6.56	7.39	7.92	5
Average	6.32	6.50	7.66	7.78	11.82	12.53	10.97	7.50	7.62	7.32	7.05	8.46	

With the economic profit of a firm being the *net operating profit after tax minus the result of the capital employed multiplied by the average cost of capital* it is therefore not surprising that the sample has a negative residual income for the period (Table 4). Since, the average rates of return on invested capital (4.55%) are lower than the weighted Average cost of capital (8.46%) the result of 4.55 minus 8.46 is a negative.

The results indicate that the Australian sample of property firms have failed to generate sufficient income to cover their cost of capital. The periods 2009 and 2010 were clearly the worst.

Table 4:
Residual Income of Australian Property Companies (2005 – 2015)

Company	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average	Rank
AVJ	- 2,410	- 2,458	- 2,454	- 2,834	- 3,378	- 4,714	- 4,364	- 2,263	- 2,877	- 3,352	- 2,573	- 3,062	2
DVN	- 3,106	- 3,298	- 2,374	- 3,182	- 4,150	- 4,453	- 4,436	- 3,083	- 3,149	- 1,519	- 746	- 3,045	1
DXS	- 47,677	- 56,773	- 66,945	- 64,519	- 104,424	- 91,540	- 84,763	- 59,103	- 58,207	- 61,425	- 77,157	- 70,230	5
LLC	- 22,557	- 27,772	- 35,955	- 37,242	- 53,730	- 63,787	- 73,324	- 50,187	- 55,796	- 71,127	- 66,093	- 50,606	3
MGR	- 29,955	- 37,376	- 55,603	- 51,735	- 93,255	- 99,804	- 96,971	- 61,549	- 65,908	- 66,566	- 75,866	- 66,781	4
SGP	- 52,847	- 61,292	- 85,439	- 110,214	- 190,934	- 176,310	- 136,829	- 83,138	- 74,510	- 75,898	- 98,272	- 104,153	6
WFD	- 195,624	- 239,332	- 338,480	- 335,976	- 354,701	- 359,841	- 265,336	- 194,468	- 169,625	- 106,174	- 118,878	- 243,494	7
Total	- 354,177	- 428,299	- 586,351	- 605,703	- 804,572	- 800,450	- 666,023	- 453,792	- 430,072	- 386,062	- 439,586	- 541,372	

The EVA results for the firms are presented in Table 5 and are consistent with the argument that the firms failure to generate sufficient income to cover the cost of capital indicates that they are not adding economic value to the firm. However, as Ooi and Liow (2002) pointed out the income figure upon which the economic profit is derived does not take into consideration the capital growth in the value of the real-estate assets. This argument is to some extent moderated under the accounting standard AASB 116 which does in fact allow for the revaluation of property assets at their fair market value (exit price). However, it is not clear whether all of the firms had adopted the revaluation model and to what extent they had either increments or decrements on the property (real-estate) assets.

Table 5:
Economic Value Added (EVA) of Australian Property Companies (2005 – 2015)

Company	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average	Rank
AVJ	15	- 6	- 13	3	- 38	- 34	- 29	- 72	- 55	- 10	19	- 20	2
DVN	- 36	29	20	14	- 19	- 25	- 17	- 52	- 33	- 12	- 37	- 15	1
DXS	- 193	- 221	- 308	- 348	- 811	- 605	- 425	- 226	- 233	- 290	- 203	- 351	4
LLC	- 34	86	- 127	- 289	- 1,217	- 404	- 425	- 204	- 57	115	48	- 228	3
MGR	- 30	- 6	- 253	- 433	- 1,727	- 789	- 887	- 117	- 464	- 127	- 150	- 453	5
SGP	17	- 96	- 21	- 418	- 2,590	- 1,253	- 722	- 252	- 1,082	- 255	- 46	- 611	6
WFD	9	- 361	- 1,801	- 2,536	- 2,819	- 2,377	393	- 97	165	- 1,097	- 241	- 978	7
Total	- 252	- 574	- 2,502	- 4,007	- 9,221	- 5,488	- 2,113	- 1,020	- 1,758	- 1,675	- 610	- 2,656	

Discussion

The study has shown that the real-estate property firms in Australia do share similar problems to the Singapore firms as identified by Ooi and Liow (2002). For the purpose of comparison, the averages of the key elements are presented in Table 6, with the notable exclusion of an Average EVA since this was not produced in the Ooi and Liow (2002) study. It is a notable omission in their paper since there is a great deal of discussion and debate regarding the validity of the EVA without actually providing the EVA for the firms or an average for the period of their study.

Table 6:

Summary of Averages of Australian Property Companies compared to Singapore Property Companies

Category	Australian Average	Singapore Average
<i>Returns on Invested Capital (ROIC)</i>	4.55%	3.43%
<i>Weighted Average Cost of Capital (WACC)</i>	8.46%	7.46%
<i>Residual Income</i>	-541,372 (AUD)	-1,549,030 (SGD)

A possible explanation for the decline in the property sector during the period under investigation is the global financial crisis which began in 2007 as a result of collapse of the subprime mortgage market in the US, and then with the collapse of the investment bank Lehman Brothers on September 15, 2008 developed into a full-blown international banking crisis. This crisis was subsequently followed by a global economic downturn, which may explain the decline in the residual income and the increase in the weighted average cost of capital for the two years 2009 and 2010.

To return to the argument raised by Ooi and Liow (2002) regarding the missing value of capital growth from the calculation of economic profit. The assumption being that the traditional accounting profit figure would not include this and that the figure would therefore be distorted and not a more realistic economic profit from which to judge efficiency of performance. As raised earlier the accounting standard AASB 116 *Property, Plant & Equipment* does in fact allow for the fair value of such assets to be included should a firm choose to adopt the revaluation model, as opposed to the cost model. Subsequently, where there is a capital growth the accounting treatment would be to recognise the increase in the value of the asset (or more correctly the class of assets) as an increment. This would be included in the new Statement of Profit or Loss and Other Comprehensive Income in which the profit figure is now extended to include revaluations in producing what is now referred to as Total Comprehensive Income. Any further argument that land or property held for resale would be missed by AASB 116 because it would fall under AASB 102 *Inventories* and therefore be subject to the valuation under that standard which requires the use of value derived from “*the lower of cost or net realisable value whichever is the lower*” may at first sound compelling. However, this argument is flawed since inventories can only be current assets (that is expected to be sold within 12 months from acquisition) and that is a less likely scenario in the case of property firms. It is less likely because most real estate developments tend to take longer than 12 months from date of acquisition to the final release of a development whether they are residential housing, industrial areas, or offices.

By way of explanation, the revaluation model under AASB116 refers to increases in the value of assets as increments and decreases in the value of assets as decrements. It also stipulates very different approaches to recording increments and decrements: increments are included in the Profit & Loss and Other Comprehensive Income Statement as a revaluation under other comprehensive income and then through the Statement of Changes in Equity go to the revaluation reserve. However, should the assets in question have previously been the subject of a decrement then the increase is adjusted against the decrement and any remaining amount is recorded to the revaluation reserve. Decrements are treated differently, a decrement is recorded as a loss or expense much like any other normal expense and only if there is a prior increment on the asset is it adjusted against the revaluation reserve, should there be any remaining portion of the decrement then that amount would be recorded as the expense. For a more in-depth discussion on the intricacies of AASB16 and in particular the origins of the revaluation model readers are directed to the paper by Laing & Perrin (2014).

Conclusion

To reject the EVA model as a means for evaluating investment in real estate property decision by property firms or for that matter as a performance measure of efficient use of capital would be counterproductive. What is required is a further adjustment to the model to better incorporate capital growth or in the case of investment decisions potential capital growth. The adjustment for firms that are heavily involved in real estate assets should therefore have the ROIC modified to accommodate any revaluation amounts in the financial year. The proposed modification to the EVA formula would effectively be concerned with the calculation of the ROIC so whilst the basic formula would remain virtually the same the ROIC would probably be better expressed as ROICr. Where the lower case “r” is intended to signify the inclusion of revaluation amounts. The modified model would then appear in the following terms:

$$\text{EVA} = (\text{ROICr} - \text{WACC}) \times \text{IC}$$

ROIC is effectively the after tax operating profit or net operating profit after tax (NOPAT). The adjustment proposed is to accommodate the revaluation amount for the real estate assets by adding this to the NOPAT figure. This modification to the EVA would provide a more appropriate metric for assessing the performance efficiency of property firms. Future research could examine the sensitivity of real estate investments particularly comparing the impact of increases compared to decreases in real estate values on shareholder value.

References

- Biddle, G.C., Bowen, R.M. & Wallace, J.S. (1999). Evidence on EVA, *Journal of Applied Corporate Finance*, 12(2), 69-79.
- Bloomberg. (2017). Bloomberg Terminal. [Online]. Available at: QUT (Accessed: April 2017).
- Brailsford, T., Heaney, R. & Bilson, C. (2006). *Investments: Concepts and Applications 3rd Edn.*, Cengage Learning Australia: South Brisbane.
- Brailsford, T., Handley, J. & Maheswaran, K. (2006). *A Re-examination of the Historical Equity Risk Premium in Australia*, Working Paper, University of Melbourne.
- Brealey, R., Myers, S. & Allen, J. (2006). *Principles of Corporate Finance 8th Edn.*, Irwin McGraw-Hill: Boston, NJ.
- Chen, S. & Dodd, J. (2001). Operating Income, Residual Income and EVA™: Which Metric is More Value Relevant?, *Journal of Managerial Issues*, 13(1) 65-86.
- Copeland, T., Koller, T. & Murrin, J. (1995). *Valuation: Measuring and managing the Value of Companies 2nd Edn.*, John Wiley and Sons: New York.
- DataAnalysis Premium. (2014). *Price History and Financial Data*, Morningstar.
- De Villiers, J. & Auret, C. (1998). A comparison of EPS and EVA as explanatory variables for share price, *Studies in Economics and Econometrics*, 22(2), 47-63.
- Dunbar, K. (2013). Economic Value Added (EVA™): A Thematic-Bibliography, *Journal of New Business Ideas & Trends*, 11(1), 54-66.
- Feltham, G., Grant E., Isaac, G., Mbagwu, C., & Vaidyanathan, G. (2004). Perhaps EVA Does Beat Earnings - Revisiting Previous Evidence, *Journal of Applied Corporate Finance*, 16(1), 83-88.

- Grant, J. (1996). Foundations of EVA for Investment Managers, *Journal of Portfolio Management*, 23(1), 41-48.
- Hair, J., Black, W., Babin, B. & Anderson, R. (2010). *Multivariate Data Analysis 7th Edn.*, Prentice Hall: Upper Saddle River, NJ.
- Ibbotson Associates, (2005). *Stocks, Bonds, Bills and Inflation Yearbook*, Ibbotson Associates: Chicago.
- Jackson, A. (1996). The How and Why of EVA® at CS First Boston, *Journal of Applied Corporate Finance*, 9(1), 98-103.
- Kim, W. (2006). EVA and Traditional Accounting Measures: Which Metric is a Better Predictor of Market Value of Hospitality Companies?, *Journal of Hospitality & Tourism Research*, 30(1), 34-49.
- Laing, G. & Dunbar, K. (2015). EVA, EPS, ROA and ROE as measures of Performance in Australian Banks: A Longitudinal Study, *Journal of Applied Management Accounting Research*, 13(1), 41-48.
- Laing, G. & Perrin, R. (2014). Deconstructing an accounting paradigm shift: AASB 116 non-current asset measurement models, *International Journal of Critical Accounting*, 6(5/6), 509-519.
- Langfield-smith, K., Thorne, H. & Hilton, R. (2009). *Management Accounting: information for creating and managing value 5th Edn.*, McGraw-Hill Australia: North Ryde.
- Lehn, K. & Makhija, A. (1997). EVA, accounting profits, and CEO turnover: Empirical examination, 1985-1994, *Journal of Applied Corporate Finance*, 10(2), 90-97.
- Milunovich, S. & Tsuei, A. (1996). EVA in the computer industry, *Journal of Applied Corporate Finance*, 9(1), 104-115.
- O'Byrne, S. (1996). EVA and market value, *Journal of Applied Corporate Finance*, 9(1), 116-125.
- O'Byrne, S. (1997). EVA and shareholder return, *Financial Practice and Education*, 7(1), 50-54.
- Ooi, J. & Liow, K. (2002). Real estate corporations: the quest for value, *Journal of Property Investment & Finance*, 20(1), 23-35.
- Ratnatunga, J. and Montali, L., (2008). Performance Management Measures that Enhance Organisational Value: A Review, *Journal of Applied Management Accounting Research*, 6(2): 1-16.
- Ray, R. (2001). Economic value added: Theory, evidence, a missing link, *Review of Business*, 22(1/2), 66-70.
- Stewart, G. B. (1993). Reform your governance from within. *Directors and Boards*, 17(3), 48-48.
- Stern, J., Stewart, G. & Chew, D. (1995). The EVA Financial System, *Journal of Applied Corporate Finance*, 3(2), 38-55.
- Turvey, C., Lake, L., van Duren, E. & Sparling, D. (2000). The Relationship between Economic Value Added and the Stock Market Performance of Agribusiness Firms, *Agribusiness*, 16(4), 399-416.
- Uyemura, D., Kantor, C. & Pettit, J. (1996). EVA® for banks: value creation, risk, management, and profitability measurement, *Journal of Applied Corporate Finance*, 9(2), 94-113.
- Walbert, L. (1994). The Stern Stewart performance 1000: Using EVA® to build market value, *Journal of Applied Corporate Finance*, 6(4), 109-120.

Yee, K. (2007). Using accounting information for consumption planning and equity valuation, *Review of Accounting Studies*, 12 (), 227-256.