

Classification Shifting: Impact of Firm Life Cycle

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Classification Shifting: Impact of Firm Life Cycle

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Abstract

Purpose - This paper examines whether firms in the decline stage of life cycle manipulate core or operating income through misclassification of operating expenses as income-decreasing special items.

Design/methodology/approach - Our sample comprises of firms from an emerging market, India with data from 1996-2011. We use the methodology given in McVay (2006) and multiple regressions.

Findings - Managers of Indian firms also engage in classification shifting, primary incentive being desire to avoid reporting of operating losses. Further, the use of classification shifting is dependent upon the stage of life cycle in which firm is in. Specifically, firms in the decline stage of life cycle are more likely to use classification shifting to avoid reporting of operating losses.

Practical implications - The paper sheds light on a critical phase of the firm life cycle – decline, which increases the possibility of use of classification shifting – an earnings management technique which auditors, investors and regulators find tough to detect.

Originality/value - We extend the literature on classification shifting, and present first evidence that such shifting is more likely to take place during the decline phase of firm life cycle.

Key words Classification shifting, Earnings management, Special items, Life Cycle.

Paper type Research paper

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I. INTRODUCTION

Earnings management has been an active topic of discussion amongst the accounting researchers. This literature has primarily focused on accruals-based earnings management (Dechow and Schrand, 2004; Dechow et al., 2010) and real activities manipulation like cutting discretionary spending on research and development, selling, general and administrative expenses, giving price discounts to increase sales, and overproduction to reduce cost of goods sold expense (Roychowdhury, 2006; Gunny, 2010).

McVay (2006) discusses about a third tool to manage earnings: classification shifting - shifting of operating expenses to special items in order to inflate core or operating earnings. When managers shift operating expenses to income-decreasing special items (like restructuring costs), operating earnings increase keeping net income unchanged.

Empirical evidence on the use of this earnings management tool by the managers of firms in the United States (U.S.) was first given by McVay (2006). Her finding has been supported by Fan et al. (2010) who find that classification shifting is more likely to happen in the fourth quarter than in the first three quarters. Further, there is evidence on expense shifting by firms in East Asian countries (Haw et al., 2011).

Primary incentive to engage in classification shifting comes from managers' desire to meet or beat earnings benchmarks like zero core earnings, prior-period core earnings (Fan et al., 2010), and analysts' forecasts (McVay, 2006; Fan et al., 2010; Athanasakou et al., 2011; Lin et al., 2006; Haw et al., 2011). Managers also engage in classification shifting prior to seasoned equity offerings (Siu and Faff, 2013).

Managers' preference for pro-forma or core earnings is due to the exclusion of non-recurring special items by analysts (Philbrick and Ricks, 1991) and higher persistence of operating income than non-operating income and special items (Fairfield et al., 1996). Further, pro-forma earnings are primary determinants of stock prices (Bradshaw and Sloan, 2002) and firms which meet or beat earnings benchmarks earn higher stock returns than those which fail to do so (Bartov et al., 2002). Thus, firms have incentives to engage in classification shifting and the U.S. Securities Exchange Commission (SEC) has accused several firms of engaging in it.¹

Such instances of classification shifting are unheard in India. Biggest instance of an accounting fraud in India involved Satyam Computers, where earnings and asset values were overstated and no expense shifting seemed to have happened. The country is characterized by weak corporate governance and investor protection (Narayanaswamy et al., 2012). Further, family firms and business groups dominate the corporate landscape. Founding owners and controlling shareholders have a lot of say in the internal decision making of the firm. Since there are instances of use of classification shifting in a developed country - U.S. and emerging East Asian countries, it is more likely that managers of Indian firms engage in this kind of earnings management.

Hence, in this paper we raise some pertinent questions. Do managers of Indian firms shift core expenses to income-decreasing special items in order to inflate core or operating earnings? Do they use this earnings management tool to meet or beat earnings benchmarks like zero core earnings and prior-period core earnings? We do find evidence

of use of expense shifting by the Indian firms. These firms also use expense shifting to avoid reporting of operating losses.

We also carry out a systematic study on expense shifting by the Indian firms in different stages of their life cycle. Using Dickinson's (2011) cash flow patterns based life cycle proxy, we posit and find that firms in the decline stage of their life cycle are more likely to have incentives to engage in expense shifting. Further, these firms are more likely to use expense shifting to avoid reporting of operating losses.

In the next section, we discuss motivation for this study and our hypotheses. Section III details sample selection and descriptive statistics. In Section IV, we discuss our research design. Section V contains results and Section VI concludes the study.

II. MOTIVATION AND HYPOTHESES

The literature on classification shifting is evolving since 2006, when McVay (2006) presented first evidence on the use of this earnings management tool by firms in the United States (U.S.). She develops a model to estimate expected and unexpected core earnings and finds that managers shift operating expenses to income-decreasing special items in order to inflate core earnings.

Fan et al. (2010) modify her model and arrive at the similar conclusion. They observe that classification shifting is more likely to happen in the fourth quarter than in the first three quarters. They also find that managers are more likely to engage in classification shifting when their ability to engage in accruals earnings management is limited due to

prior accrual manipulations. Barua et al. (2010) posit and find that managers shift operating expenses also to income-decreasing discontinued operations.

There is limited evidence on whether classification shifting is also prevalent in developing countries. Haw et al. (2011) examine and find that expense shifting is also used in East Asian countries (Hong Kong, South Korea, Thailand, Taiwan, Singapore, Malaysia, Indonesia and Philippines) and such an earnings management tool is preferred over accruals manipulation.

In India, no firm has been accused of engaging in classification shifting in the income statement yet. Recently, Housing Development Finance Corporation (HDFC) has been accused by brokerage firm – Macquaire Securities Research, of netting loan provisions and implied interest on zero-coupon bonds with reserves rather than showing these items in the income statement.² However, such a practice involves shifting of expenses or provisions from income statement to balance sheet which is not a subject of discussion in this paper. Similarly, Satyam Computers has also been accused of inflating earnings and asset values.³

Earnings management is more likely in countries (like India) with weak legal enforcement and investor protection (Leuz et al., 2003). Weak corporate governance and investor protection in the country (Narayanaswamy et al., 2012) is likely to encourage managers to resort to classification shifting, more so because it is less costly and tough to detect (McVay, 2006). Hence, we postulate that this earnings management tool is used by the Indian firms. Thus, our discussion leads us to our first hypothesis:

HI: Managers shift core expenses to income-decreasing special items.

Primary incentive to engage in classification shifting comes from managers' desire to meet or beat earnings benchmarks like avoiding zero core earnings or decline in core earnings (Fan et al., 2010) and achieving positive surprise to analysts' forecasts (McVay, 2006; Fan et al., 2010; Athanasakou et al., 2011; Lin et al., 2006; Haw et al., 2011). However, managers also engage in classification shifting prior to seasoned equity offerings in order to influence the investment decision of potential investors (Siu and Faff, 2013).

A conclusion that can be drawn from the above discussion is that managers value operating earnings and that's why, they manipulate these figures. Bradshaw and Sloan (2002) conclude so as street or pro-forma earnings are primary determinants of stock prices in their analysis. According to them, over the years number and magnitude of cases have increased where GAAP (Generally Accepted Accounting Principles) earnings and street earnings differ. Further, firms prefer to report a street earnings number that is higher than the GAAP earnings number. Bartov et al. (2002) also discuss importance of earnings benchmarks and find that firms which meet or beat earnings benchmarks earn higher stock returns than those which fail to do so. This preference for pro-forma earnings is also due to the exclusion of non-recurring special items by analysts (Philbrick and Ricks, 1991) and higher persistence of operating income than non-operating income and special items (Fairfield et al., 1996).

This discussion on significance of pro-forma earnings for the investors and managers, and incentives before managers to meet or beat earnings benchmarks⁴ leads us to our second hypothesis:

H2: Managers shift core expenses to income-decreasing special items in order to meet or beat zero or prior-period core earnings.

Use of classification shifting to manage earnings has also been linked to the life cycle stage in which firm is in. Using market-to-book ratio as a proxy for growth, McVay (2006) documents that the managers of high growth firms are more likely to use classification shifting than other firms in order to meet or beat analysts' forecasts. This tendency is because high growth firms suffer more negative price shocks, when these firms miss analysts' forecasts (Skinner and Sloan, 2002). Though McVay (2006) presents an interesting evidence, a systematic study on the use of classification shifting across firms' life cycle stages is surely missing from the literature. Specifically, using Dickinson's (2011) cash flow patterns based life cycle proxy⁵; we posit that firms in the decline stage of their life cycle are more likely to engage in expense shifting.

Firms in the decline stage are more likely to be small and young.⁶ Compared to firms in other life cycle stages, these firms are comparatively less profitable and efficient, have lower sales growth and negative book value of equity, and carry maximum business risk. As a result, these firms are likely to have negative operating cash flows. These are also likely to be in process of liquidating assets, repaying or renegotiating debt (Dickinson,

2011). In other words, firms in decline stage are more likely to be in financial distress as compared to the firms in other stages of life cycle.

There is no existing evidence on the use of classification shifting or incentives to engage in it for the distressed firms or for the firms in decline stage of their life cycle. Watts (1974), Barth et al. (1998) and Collins et al. (1999) emphasize that income statement (balance sheet) numbers are less (more) relevant for valuing the financially distressed firms. However, literature also suggests that rewards (future stock returns) for meeting or beating analysts' forecasts are higher for the financially distressed firms as compared to the financially sound firms. By meeting or beating this earnings benchmark, distressed firms convey their survival ability to the market participants (Bartov et al., 2002). Also, firms with high debt-to-equity ratio and higher magnitude of special items are more likely to disclose pro-forma earnings in their press releases than other firms. For such firms, GAAP earnings become less informative due to the increased probability of failure and transitory nature of special items (Hodgson and Clarke, 2000; Lougee and Marquardt, 2004).

Firms with special items are less profitable, more leveraged and have lower sales growth (Johnson et al., 2011; Elliot and Shaw, 1988; McVay, 2006). Firms with unusually poor earnings are more likely to report discretionary asset write-offs, particularly those related to goodwill and restructuring charges (Francis et al., 1996). Elliot and Shaw (1988) conclude that firms facing economic difficulties report large write-offs and thus, such firms are more likely to cut dividends to save cash. Hence, firms in the decline stage are

more likely to report special items and we conjecture that this tendency increases the opportunities for firms to engage in classification shifting.

Firms in decline stage are also likely to have bloated balance sheets because of either prior upward accrual manipulation (see Barton and Simko, 2002) or inability to collect money from debtors, unintended accumulation of inventories, etc. (Janes, 2003). Such constraint dissuades firms from engaging in accruals-based earnings management (Fan et al., 2010). Hence, it is possible that firms in the decline stage prefer earnings manipulation through classification shifting.

Taken together, the discussion suggests that firms in the decline stage of their life cycle may not be able to engage in accruals-based earnings management, are likely to report more special items, are more likely to value pro-forma earnings and have an incentive to meet or beat earnings benchmarks. Our last two hypotheses, therefore, are based on these observations.

H3: Managers of firms in the decline stage of life cycle are more likely to shift core expenses to income-decreasing special items.

H4: Managers of firms in the decline stage of life cycle shift core expenses to income-decreasing special items in order to meet or beat zero or prior-period core earnings.

III. SAMPLE SELECTION AND DESCRIPTIVE STATISTICS

Our sample comprises of Indian firms listed in A and B groups on the Bombay Stock Exchange, with data available for all dependent and independent variables. Data has been obtained from Centre for Monitoring Indian Economy's (CMIE) Prowess database and spans from financial years ending in March 1996 to March 2011. Variable definitions are given in Table 1. Initial sample consists of 60,038 firm-years (Table 2). We remove firms which had a change in fiscal-year end to keep the data comparable. We also remove firm-years for which negative sales or assets values are reported. 23,901 firm-years are lost due to the unavailability of data for calculating unexpected core earnings. Since, data on cash flows is not well populated in Prowess prior to financial year 1995, for few firm-years we could not calculate Dickinson's (2011) life cycle stages. We require at least 10 firms in each industry-year for running industry-year regressions in order to estimate unexpected core earnings. We classify industries using 2-digit National Industrial Classification codes. Our tests are run on sample with 14,588 firm-years. We also winsorize all the variables by fiscal year at 1st percentile and 99th percentile.

Table 1: Variable Definitions

at	Total assets.
ato	Asset turnover ratio. $(\text{Net sales}/((\text{noa}_t + \text{noa}_{t-1})/2))$.
ce	Core earnings. (Operating income before depreciation/Net sales).
dec	Indicator variable equal to 1 if a firm-year is in decline stage of life cycle, 0 otherwise.
lc_stage	Dickinson's (2011) life cycle stages: Introduction (1), Growth (2), Maturity (3), Shake-out (4) and Decline (5).
neg_sale	Growth in sales when $\text{per_ch_sale} < 0$, 0 otherwise.
noa	Net operating assets. $(\text{Total Assets}-\text{Cash and Cash Equivalents})-(\text{Total Assets}-\text{Long-term Debt}-\text{Debt in Current Liabilities}-\text{Common Equity}-\text{Preferred Stock})$.
ch_sale	Growth in sales. $((\text{Net Sales}_t - \text{Net Sales}_{t-1})/\text{Net sales}_{t-1})$.
tacc	Total accruals scaled by sales. $((\text{Profit after tax}-\text{Net cash flow from operating activities})/\text{Net sales})$.
pmbe	Indicator variable equal to 1 if a firm-year's change in operating income after depreciation per share is greater than or equal to 0, and less than or equal to 0.015, 0 otherwise.
sale	Net sales.
ue_ce	Unexpected core earnings estimated using McVay's (2006) model (Equation 1).
xe	Income-decreasing special items. (Extraordinary expense/Net sales). Extraordinary expense in Prowess includes both extraordinary as well as exceptional expenses or losses.
zmbe	Indicator variable equal to 1 if a firm-year's operating income after depreciation per share is greater than or equal to 0, and less than or equal to 0.03, 0 otherwise.

Table 2: Sample Selection

	No. of firms	No. of firm-years
Initial Prowess sample with non-missing co_code or nic code (March 1990-March 2011)	2,729	60,038
<u>Less:</u> Firm-years of firms with a change in fiscal-year end	760	16,720
	1,969	43,318
<u>Less:</u> Firm-years with negative sales or assets	0	695
	1,969	42,623
<u>Less:</u> Firm-years with missing values of variables used in the McVay's (2006) model for measuring unexpected core earnings	226	23,901
	1,743	18,722
<u>Less:</u> Firm-years with missing values of Dickinson's (2011) life cycle stages	34	737
	1,709	17,985
<u>Less:</u> Firm-years with missing values of variables related to meeting/beating earnings benchmarks	92	1,759
	1,617	16,226
<u>Less:</u> Firm-years in industry-years with observations less than 10 (minimum requirement for running industry-year regressions for estimating unexpected core earnings)	112	1,638
Final sample (March 1996-March 2011)	1,505	14,588

Table 3 contains the descriptive statistics. Mean (median) sale is 5501.77 million (795.15 million), while mean (median) assets are 8028.36 million (911.10 million).⁷ Compared to Prowess population, our sample comprises of large firms. Median sales and assets for the population are 518.90 million and 641.40 million, respectively. Mean (median) operating profitability of sample firms is -7.1% (4.0%). Mean income-decreasing special items are 0.3% of sales.

Table 3
Descriptive Statistics

	N	Mean	p25	Median	p75	Std Dev
sale	14588	5501.765	211.750	795.150	2862.000	21577.591
at	14588	8028.359	271.200	911.100	3458.050	34402.454
xe	14588	0.003	0.000	0.000	0.000	0.023
ce	14588	-0.071	-0.038	0.040	0.122	0.981
ue_ce	14588	-0.011	-0.056	-0.001	0.056	1.001
ato	14588	1.817	0.793	1.340	2.166	1.865
tacc	14588	-0.033	-0.109	-0.031	0.030	1.842
ch_sale	14588	0.225	-0.010	0.130	0.296	0.740
neg_sale	14588	-0.055	-0.010	0.000	0.000	0.140
lc_stage	14588	2.730	2.000	3.000	3.000	1.041

All variables are winsorized at 1% and 99% by fiscal year. Variable definitions are given in Table 1.

Table 4 presents the descriptive statistics by two groups, firms with and without income-decreasing special items. Firms with income-decreasing special items are bigger than those without income-decreasing special items as reflected by both sales (*sale*) and assets (*at*). However, there is an insignificant difference in the operating profitability (*ce*) of both the groups. Firms with income-decreasing special items are more efficient in the utilization of assets (*ato*), and have lower mean sales growth (*per_ch_sale*). Mean unexpected core earnings of firms with income-decreasing special items are significantly higher than that of those without income-decreasing special items. Correlations are reported in Table 5. As expected, both pearson and spearman coefficients of correlation are significantly positive between income-decreasing special items (*xe*) and unexpected core earnings (*ue_ce*).

Table 4
Descriptive Statistics (Income-decreasing Special Items Subgroups)

Variable	Income-decreasing Specials Items			No Income-decreasing Special Items			Equality of Means			Equality of Medians		
	N	Mean	Median	N	Mean	Median	Diff	pvalue	Sig	Diff	pvalue	Sig
sale	5549	8290.341	1390.500	7681	3522.998	512.500	4767.343	<.0001	***	878.000	<.0001	***
at	5549	11460.438	1601.800	7681	5592.963	618.300	5867.475	<.0001	***	983.500	<.0001	***
xe	5549	0.008	0.001	7681	0.000	0.000	0.008	<.0001	***	0.001	<.0001	***
ce	5549	-0.077	0.042	7681	-0.066	0.038	-0.011	0.506		0.004	0.184	
ue_ce	5549	0.014	0.000	7681	-0.029	-0.002	0.043	0.009	***	0.002	0.163	
ato	5549	1.910	1.438	7681	1.752	1.272	0.158	<.0001	***	0.166	<.0001	***
tacc	5549	-0.042	-0.031	7681	-0.026	-0.031	-0.016	0.607		0.000	0.987	
ch_sale	5549	0.191	0.133	7681	0.249	0.126	-0.058	<.0001	***	0.007	0.144	
neg_sale	5549	-0.048	0.000	7681	-0.060	0.000	0.012	<.0001	***	0.000	<.0001	***
lc_stage	5549	2.732	3.000	7681	2.728	3.000	0.004	0.835		0.000	0.770	

All variables are winsorized at 1% and 99% by fiscal year. Variable definitions are given in Table 1.

Table 5
Pearson (Spearman) Correlations above (below) the diagonal

variable	sale	at	xe	ce	ue_ce	ato	tacc	ch_sale	neg_sale	lc_stage
sale	1	0.818***	-0.028***	0.038***	0.001	0.183***	0.002	-0.001	0.072***	-0.008
at	0.887***	1	-0.003	-0.111***	0.007	0.025***	0.120***	0.003	0.042***	-0.020**
xe	0.147***	0.167***	1	-0.287***	0.034***	-0.094***	-0.077***	-0.034***	-0.166***	0.105***
ce	0.115***	0.126***	0.001	1	0.134***	0.101***	-0.228***	0.034***	0.242***	-0.083***
ue_ce	0.015*	0.020**	0.020**	0.380***	1	0.016*	0.066***	0.022***	0.017**	0.021**
ato	0.391***	0.050***	0.014*	-0.085***	-0.021**	1	0.007	0.060***	0.187***	-0.008
tacc	0.140***	0.095***	-0.026***	0.038***	-0.042***	0.257***	1	0.063***	0.098***	-0.011
ch_sale	0.160***	0.084***	-0.027***	0.156***	-0.014*	0.220***	0.239***	1	0.337***	-0.107***
neg_sale	0.253***	0.147***	-0.001	0.160***	-0.029***	0.275***	0.199***	0.777***	1	-0.169***
lc_stage	-0.125***	-0.098***	0.030***	-0.045***	0.045***	-0.051***	-0.204***	-0.193***	-0.158***	1

All variables are winsorized at 1% and 99% by fiscal year. Variable definitions are given in Table 1.

IV. RESEARCH DESIGN

Core earnings are recurring and are related to firm's normal operations. These earnings are firm's operating profits calculated as revenues less cost of goods sold and other operating expenses. Whereas items like gain or loss on sale of assets, or losses arising due to a natural calamity are non-recurring and therefore not part of the operating earnings. These earnings also exclude dividend income, interest income and interest expenses.

As per the Accounting Standard 5 (AS 5)^{viii} issued by The Institute of Chartered Accountants of India, non-recurring items can be classified as either extraordinary^{ix} or prior period.^x Extraordinary events are both unusual in nature and infrequent in their occurrence. Exceptional items are different from extraordinary items, but are non-recurring and also warrant a separate disclosure as per AS 5. Examples of extraordinary items include loss to business due to an earthquake or attachment of property of the business, while exceptional items include expenses on restructuring, gain or loss on sale of assets, write-down of inventories, etc. As per the Revised Schedule VI^{xi}, both exceptional and extraordinary items are reported before Profit/Loss before Tax. Such items are termed as 'Special Items' in this paper.^{xii}

McVay (2006) presents a model to estimate expected core earnings of a firm. If managers shift operating expenses to income-decreasing special items, a firm's reported core earnings will be higher than what is predicted. A positive association between the unexpected core earnings and income-decreasing special items signals the existence of use of classification shifting.

We use below-mentioned McVay's model to test our hypotheses. Specifically, equation one is run for every industry-year (excluding firm i) with minimum 10 observations. Unexpected core earnings are calculated as a difference between the reported core earnings and predicted core earnings.

$$\begin{aligned} CE_t = & \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 TACC_{t-1} + \beta_4 TACC_t + \beta_5 CH_SALE_t \\ & + \beta_6 NEG_SALE_t + \varepsilon_t \end{aligned} \quad (1)$$

In this equation, first explanatory variable is lagged core earnings (CE_{t-1}) as core earnings tend to be persistent (McVay, 2006). This persistence stems from the recurring nature of the operating revenues and expenses. Unlike non-recurring special or extraordinary items, these reflect the normal operations of the business. The asset turnover ratio (ATO_t) is included as firms strive to strike a balance between their profitability and efficiency to maximize the return on assets, consistent with DuPont approach (see Nissim and Penman, 2001). McVay mentions that firms with large income-decreasing special items, e.g. restructuring costs, may be changing their strategy to focus more on either profitability or efficiency.

The model also includes contemporaneous ($TACC_t$) and lagged ($TACC_{t-1}$) accruals as explanatory variables, in order to control for the impact of accruals on core earnings. Contemporaneous accruals are associated with firms' economic performance (DeAngelo et al., 1994). Sloan (1996) finds that current earnings are less likely to persist in future if it is composed of more accruals than cash. Thus current earnings are likely to be negatively associated with the lagged level of accruals.

The increase in a firm's core earnings with rising sales depends upon the structure of a firm's fixed costs. Any additional sales after a firm has recovered its fixed costs, contributes directly to the bottom line, net of the variable costs. Thus, higher sales growth (CH_SALE_t) results in higher earnings growth. Anderson et al. (2003) find that selling, general and administrative costs are sticky i.e. for a given increase in sales, costs increase more than they decrease for a corresponding decrease in sales. This is because managers maintain the unutilized resources in event of a fall in activity instead of downsizing. They do so to avoid incurring adjustment costs like severance pay on employee dismissals and/or hiring and training costs for new employees when sales rebound. Hence, NEG_SALE_t is included to allow the slope to differ between sales decreases and increases.

Estimated coefficients from equation one are used to estimate the expected core earnings for each firm-year. Unexpected core earnings are calculated as a difference between the actual core earnings and predicted core earnings. To test our hypothesis one, this unexpected performance variable (UE_CE_t) is regressed against income-decreasing special items (XE_t), as in equation two. If managers engage in classification shifting then unexpected performance should increase with the income-decreasing special items. In other words, a positive association is expected as an evidence for classification shifting.

$$UE_CE_t = \alpha_0 + \alpha_1 XE_t + \varepsilon_t \quad (2)$$

We use equation three to test our hypothesis two. MBE_t is an indicator variable equal to 1 if a firm meets or beats an earnings benchmark, 0 otherwise. Positive coefficient on interaction term MBE_XE_t will suggest that managers use classification shifting to meet or beat earnings benchmarks.

$$UE_CE_t = \alpha_0 + \alpha_1 XE_t + \alpha_2 MBE_t + \alpha_3 MBE_XE_t + \varepsilon_t \quad (3)$$

Equations four and five have been used to test our hypotheses (three and four) related to the impact of life cycle. DEC_t is an indicator variable equal to 1 if a firm-year is in the decline stage of life cycle, 0 otherwise.^{xiii}

$$UE_CE_t = \alpha_0 + \alpha_1 XE_t + \alpha_2 DEC_t + \alpha_3 DEC_XE_t + \varepsilon_t \quad (4)$$

$$UE_CE_t = \alpha_0 + \alpha_1 XE_t + \alpha_2 DEC_t + \alpha_3 DEC_XE_t + \alpha_4 MBE_t + \alpha_5 DEC_MBE_XE_t + \varepsilon_t \quad (5)$$

Variable of interest in equation four is DEC_XE_t , positive coefficient on which will indicate that firms in the decline stage are more likely to use classification shifting. Similarly, in equation five, positive coefficient on $DEC_MBE_XE_t$ will indicate that firms in the decline stage are more likely to use classification shifting to meet or beat earnings benchmarks.

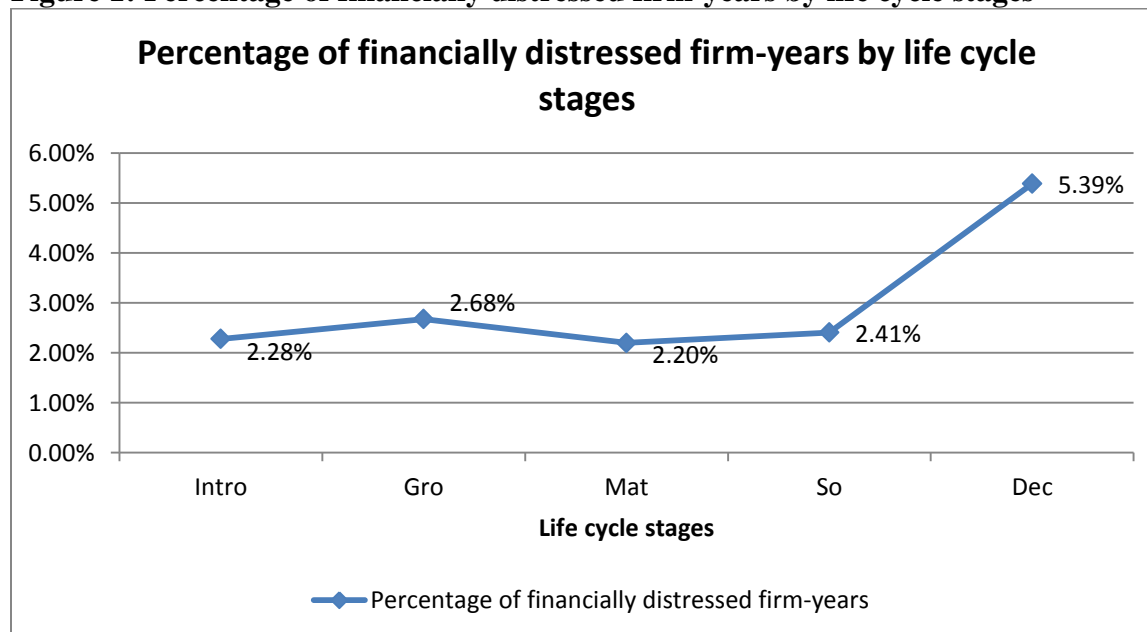
V. RESULTS

Are firms in the decline stage of life cycle really distressed?

In section two, we mention that firms in the decline stage of life cycle are more likely to be in financial distress as compared to the firms in other life cycle stages, because of their poor financial performance. We test this prediction using Altman's (2002) model for estimating Z-Score for firms in the emerging markets. Specifically, $Z\text{-Score} = (6.56 * \text{Working Capital} / \text{Total Assets}) + (3.26 * \text{Retained Earnings} / \text{Total Assets}) + (6.72 * \text{Profit before Interest and Tax} / \text{Total Assets}) + (1.05 * \text{Book Value of Equity} / \text{Total Liabilities})$.

A firm-year is classified as distressed if Z-Score is less than 1.10. Using this criterion we find that for our sample, maximum percentage of distressed firm-years are in the decline stage of life cycle consistent with our prediction. Out of 1002 firm-years that are in the decline stage, 54 firm-years have Z-Score less than 1.10 and thus, 5.39% of firm-years are financially distressed (Figure 1).

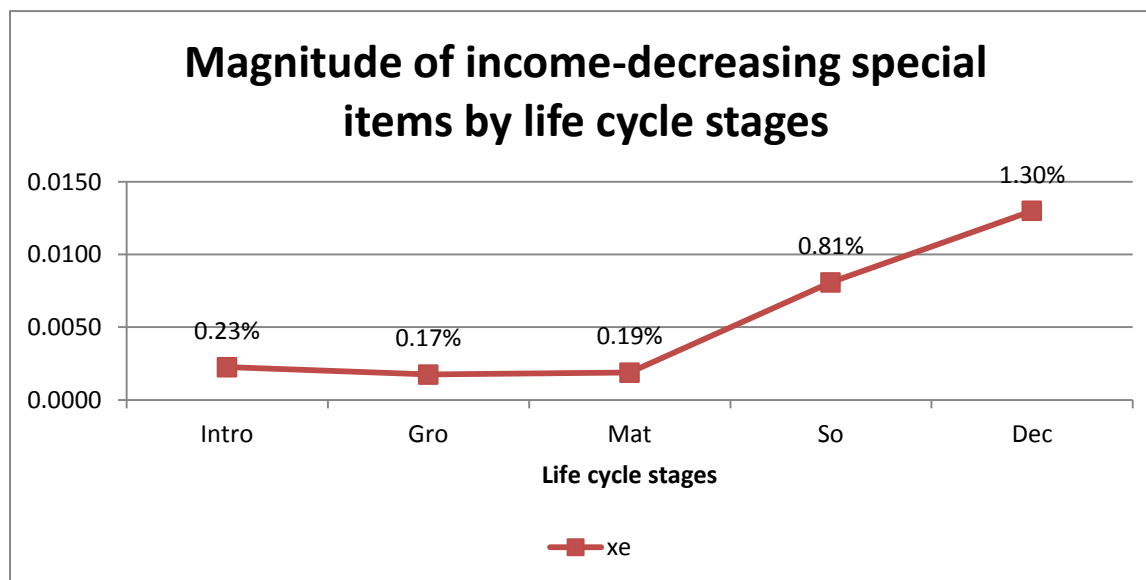
Figure 1: Percentage of financially distressed firm-years by life cycle stages



Magnitude of special items by life cycle stages

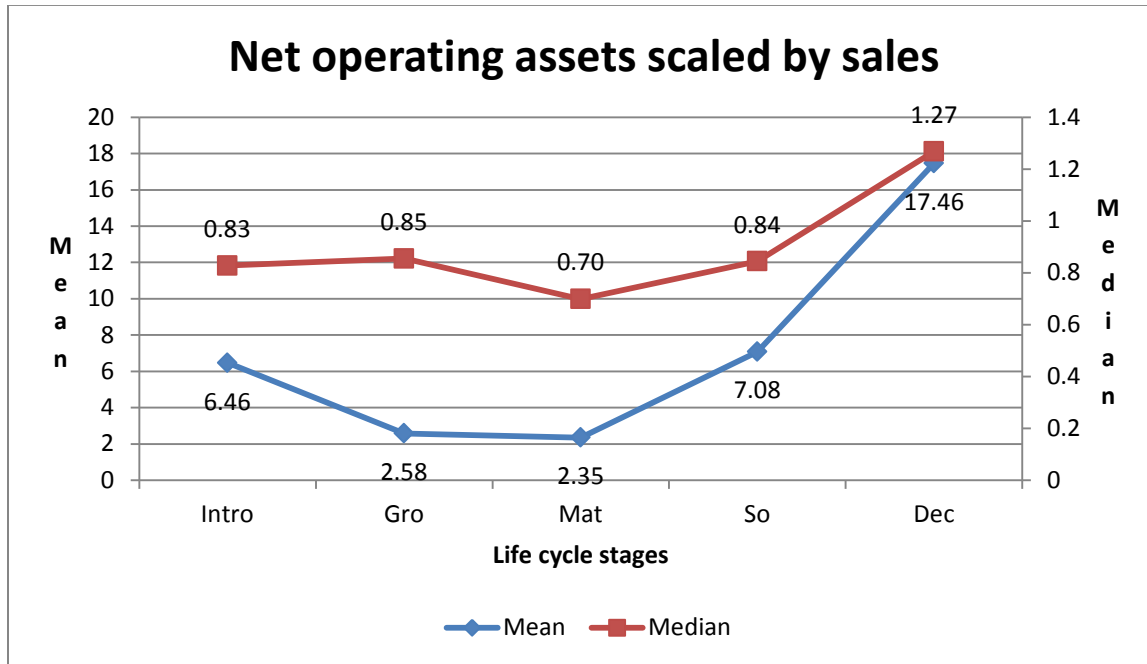
We also discuss earlier that firms in the decline stage are more likely to report income-decreasing special items, and predict that this tendency increases the probability of classification shifting. Figure 2 depicts the magnitude of income-decreasing special items (as a percentage of net sales) by life cycle stages, respectively. As expected, we observe that these special items are maximum (1.30%) for firm-years in the decline stage.

Figure 2: Magnitude of income-decreasing special items by life cycle stages



Balance sheet bloat

Figure 3 exhibits that firms in the decline stage of life cycle have highest net operating assets (scaled by sales). Mean (median) net operating assets are 17.46 (1.27) times sales. Such comparatively higher level of asset values may constrain these firms from using accruals-based earnings management. Thus, these firms are likely to engage in expense shifting in order to manage earnings.

Figure 3: Net operating assets (scaled by sales) by life cycle stages

Tests of hypotheses

Results in previous three sub-sections lend support to our hypotheses. In this sub-section, we formally test our hypotheses using multivariate analysis. Results are given in Tables 6, 7 and 8. Table 6 contains the results with respect to our hypotheses one and three. Table 7 (Table 8) considers incentives to meet or beat zero/prior-period core earnings before all the firms (firms in the decline stage of life cycle).

Table 6**Regressions of unexpected core earnings on income-decreasing special items and decline stage of life cycle**

	Dependent Variable: <i>ue_ce</i>	
	Panel A	Panel B
<i>xe</i>	1.498*** (4.118)	0.443 (0.988)
<i>dec</i>		0.013 (0.391)
<i>dec_xe</i>		3.021*** (3.885)
Constant	-0.016* (-1.914)	-0.016* (-1.863)
No. of observations	14588	14588
Adjusted R ²	0.1%	0.2%
p-value	0.000	0.000

Amounts reported are coefficients from pooled regressions. t-statistics are given in parentheses. Variable definitions are given in Table 1. * p<0.10, ** p<0.05, *** p<0.01

In hypothesis one, we predict that managers shift core expenses to income-decreasing special items. We do find evidence of this expense shifting in Panel A of Table 6. Specifically, coefficient on *xe* is positive and significant (t-statistic: 4.118).

Table 7
Regressions of unexpected core earnings on earnings benchmarks

	Dependent Variable: <i>ue_ce</i>	
	Panel A	Panel B
<i>xe</i>	1.116*** (3.084)	1.522*** (4.128)
<i>zmbe</i>	-0.133 (-1.126)	
<i>zmbe_xe</i>	76.372*** (14.893)	
<i>pmbe</i>		0.132 (0.773)
<i>pmbe_xe</i>		-1.171 (-0.511)
Constant	-0.016* (-1.878)	-0.016* (-1.954)
No. of observations	14588	14588
Adjusted R ²	1.6%	0.1%
p-value	0.000	0.001

Amounts reported are coefficients from pooled regressions. t-statistics are given in parentheses. Variable definitions are given in Table 1. * p<0.10, ** p<0.05, *** p<0.01

We find evidence in support of our hypothesis two in Table 7. Managers shift core expenses to income-decreasing special items in order to avoid core losses. In Panel A of Table 7, coefficient on *zmbe_xe* is positive and highly significant (t-statistic: 14.893). However, we get a negative coefficient on *pmbe_xe* in Panel B. Managers of Indian firms do not seem to shift core expenses to income-decreasing special items in order to meet or beat prior-period core earnings. Thus, our findings partially reconcile with the previous research (Fan et al., 2010) which documents use of expense shifting to meet or beat zero or prior-period earnings benchmarks.^{xiv}

Our hypothesis three predicts that the managers of firms in the decline stage of life cycle are more likely to shift core expenses to income-decreasing special items. As expected, we find a positive and significant (t-statistic: 3.885) coefficient on *dec_xe* in Panel B of Table 6.

Table 8
Regressions of unexpected core earnings on decline stage of life cycle and earnings benchmarks

	Dependent Variable: <i>ue_ce</i>	
	Panel A	Panel B
<i>xe</i>	0.443 (0.993)	0.442 (0.988)
<i>dec</i>	0.011 (0.333)	0.011 (0.320)
<i>dec_xe</i>	2.317*** (2.980)	3.263*** (4.084)
<i>zmbe</i>	0.022 (0.186)	
<i>dec_zmbe_xe</i>	61.893*** (10.702)	
<i>pmbe</i>		0.128 (0.757)
<i>dec_pmbe_xe</i>		-3.289 (-1.400)
Constant	-0.016* (-1.878)	-0.016* (-1.892)
No. of observations	14588	14588
Adjusted R ²	1.0%	0.2%
p-value	0.000	0.000

Amounts reported are coefficients from pooled regressions. t-statistics are given in parentheses. Variable definitions are given in Table 1.

* p<0.10, ** p<0.05, *** p<0.01

Results with respect to hypothesis four are contained in Table 8. In Panel A of Table 8, coefficient on *dec_zmbe_xe* is positive and highly significant (t-statistic: 10.702). Thus, managers of Indian firms, which are in the decline stage of life cycle, seem to shift core expenses

to income-decreasing special items in order to meet or beat zero core earnings. However, we get a negative coefficient on *dec_pmbe_xe* in Panel B.

To summarize, our results suggest that expense shifting does happen in India. Evidence suggests that Indian firms use classification shifting to meet or beat zero core earnings benchmark. Use of classification shifting is also linked to the stage of life cycle in which firm is in. As expected, firms in the decline stage of life cycle are more likely to use expense shifting. Such firms also use this earnings management tool to avoid reporting of core losses.

VI. CONCLUSION

Managers of firms in the United States shift core expenses to income-decreasing special items in order to inflate core earnings (McVay, 2006; Fan et al., 2010). This expense shifting also exists in the East Asian countries (Haw et al., 2011). Use of classification shifting is driven by managers' desire to meet or beat earnings benchmarks like zero core earnings, prior-period core earnings (Fan et al., 2010), and analysts' forecasts (McVay, 2006; Fan et al., 2010; Athanasakou et al., 2011; Lin et al., 2006; Haw et al., 2011).

In the United States, Securities Exchange Commission (SEC) has accused several firms of engaging in classification shifting. However, there has not been any such instance in India that has come to public knowledge. It is possible that Indian firms may be using this earnings management tool but regulators are not aware of it. Using a sample of more than 1,500 exchange listed Indian firms, we find evidence of expense shifting by the Indian firms. These firms also seem to use expense shifting to avoid reporting of operating losses.

We also link the use of this earnings management tool with firm life cycle. Using Dickinson's (2011) cash flow patterns based life cycle proxy, we conclude that firms in the decline stage of life cycle are more likely to use classification shifting and, also to meet or beat zero core earnings.

By providing evidence that the use of classification shifting is dependent upon the stage of life cycle in which firm is in, we contribute to the evolving literature on classification shifting. Thereby, we also alert the Indian accounting and stock market regulators about the use of this earnings management tool which is tough to detect. If regulators' efforts are directed towards constraining only accruals-based earnings management, Indian firms may be using classification shifting to escape scrutiny.

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Endnotes

¹ Borden Inc., SmarTalk, Anicom and AmeriServe Food Distribution (McVay 2006, page 502).

² http://articles.economicstimes.indiatimes.com/2012-06-15/news/32254667_1_hdfc-bank-hdfc-management-ceo-keki-mistry

³ <http://www.financialexpress.com/news/satyam-fraud-full-text-of-rajus-letter-to-board/407799/0>

⁴ We do not examine incentives to meet or beat analysts' forecasts as only few firms are regularly tracked by analysts in India (Krishnan, 2012).

⁵ Dickinson's (2011) life cycle proxy is based on the sign (positive/negative) of operating, investing and financing cash flows, which capture firm's fundamental performance.

⁶ A description of economic characteristics of firms by life cycle stages is contained in Dickinson (2011) (pages 1975-1979).

⁷ All amounts are in Indian National Rupees.

^{viii} AS 5: Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies

(http://www.icaai.org/post.html?post_id=8660).

^{ix} "Extraordinary items are income or expenses that arise from events or transactions that are clearly distinct from the ordinary activities of the enterprise and, therefore, are not expected to recur frequently or regularly."

(Page 91, AS 5, <http://220.227.161.86/27272asb-as-5.pdf>)

^x "Prior period items are income or expenses which arise in the current period as a result of errors or omissions in the preparation of the financial statements of one or more prior periods."

(Page 91, AS 5, <http://220.227.161.86/27272asb-as-5.pdf>)

^{xi} Issued by the Ministry of Corporate Affairs, Government of India

(<http://www.icsi.edu/docs/webmodules/Student/Supplement%20on%20revised%20schedule%20VI-110512.pdf>).

^{xii} As per Generally Accepted Accounting Principles (GAAP) in the United States (U.S.), extraordinary items are reported net of income taxes, while exceptional items are reported at a pre-tax amount. McVay's (2006) analysis is concentrated on these exceptional items. In India, prior to issuance of Revised Schedule VI, norms were similar to that in U.S. However, our data source - Prowess doesn't distinguish between extraordinary items and exceptional items and reports a combined field. Hence, in our analysis, special items refer to both extraordinary items and exceptional items.

^{xiii} Dickinson (2011) uses signs of cash flows to determine life cycle stages as follows :

	1	2	3	4	5	6	7	8
	Introduction	Growth	Mature	Shake-Out	Shake-Out	Shake-Out	Decline	Decline
Predicted Sign								
Cash flows from operating activities	-	+	+	-	+	+	-	-
Cash flows from investing activities	-	-	-	-	+	+	+	+
Cash flows from financing activities	+	+	-	-	+	-	+	-

Source: Dickinson (2011), Footnote 7, Page 1974

^{xiv} We do not examine incentive to meet or beat analysts' forecasts.