THE IMPLICATIONS OF ACCOUNTING VARIABLES ON FUTURE PROFITABILITY AND THE VALUATION OF STARTUP COMPANIES

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SUMMARY: This paper examines the accounting and financial aspects of startup companies. Because startup companies have shorter histories of past performance, both managers and investors face more uncertainty regarding future profitability and growth potential. For this study, we collect data from U.S. firms for 1991-2015 to determine whether firms in their early stages report different financial characteristics than those reported by mature firms. Test results show that current cash flows from operating activities are less persistent in the prediction of one-year-ahead earnings for early-stage firms than for mature firms. The firm's financing capacity is more positively associated with future earnings for early-stage firms. From the stock price-to-book value of the equity ratio, we find that research and development expenses are valued less for early-stage firms. The findings of this paper suggest that the managers of startup companies need to consider such differences in their planning for future operations.

Introduction

Startup companies operate in unique situations that involve more uncertainty about future growth, cash flows, and market valuations than firms operating in mature stages. Such unique situations affect how accounting variables are interpreted to predict future earnings for startup companies. The motivation of this paper is to identify a set of accounting variables that show different characteristics in different stages and to examine how such variables affect future earnings and firm valuation for startup companies. A sample of U.S. firms for the period of 1991 to 2015 was selected from the COMPUSTAT annual data. As a proxy to represent startup companies, we identify early-stage firms and compare such firms with nonearly-stage firms based on the IPO age. Test models are constructed to compare the relative coefficients of accounting variables in the prediction of one-year-ahead earnings. The implications of accounting variables for firm valuation are tested using the price-to-book (PB) ratios of the firms. The price-to-book ratio captures the implications of accounting variables not yet reflected in the current book value

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of equity. A high PB ratio may indicate that investors assign more value to the future expected cash flows of the firm.

We find that accounting variables show different financial characteristics for early-stage and nonearly-stage companies. The test results also show that stock market investors place varying emphases on the accounting variables of early-stage companies than those of nonearly-stage companies. The remainder of this paper is organized as follows. Section 2 reviews prior research and develops research questions for this work. Test models and sample selection are presented in sections 3 and 4. Section 5 reports descriptive statistics for the sample. The regression results are provided in section 6. Section 7 presents conclusions and suggestions to the managers and investors of startup companies.

Literature Review and Research Questions

Prior research on startup companies addresses various factors that affect the success of startup businesses. Gelderen et al. (2006) examine the factors that shape the success of a business in the pre-startup phase. Sommer et al. (2009) present evidence on how startup companies manage uncertainty. Another area of research on startup companies focuses on the impacts of venture capital on the success of startup companies (Hellmann and Puri, 2002; Davila et al., 2003; Ivanov and Xie, 2010). Cassar (2009) reports that the importance of the cash flow statement varies in different stages of development. Archibald et al. (2002) find that startup and established companies apply different criteria to their operating decisions.

Prior research in accounting reports that the roles of accounting variables in the prediction of future profitability vary at different stages of the life cycle of a firm (Oskouel and Zadeh, 2017). Jenkins and Kane (2004) examine the value relevance of accounting variables and find a higher level of valuation emphasis placed on the growth of a firm in earlier life cycle stages. In the management accounting research literature, it is reported that the characteristics of a firm affect the adoption of management accounting systems (Granlund and Taipaleenmaki, 2005; Davila and Foster, 2005, 2007).

Differential roles of the cash flow and accrual components in the prediction of future earnings have been previously reported (Sloan, 1996; Richardson et al., 2005; Hewitt, 2009). Dichev and Tang (2008) report that earnings persistence declines as the volatility of earnings increases. Call et al. (2015) show that using firm-specific estimates of earnings persistence provides incremental information for forecasting and valuation. Using the book-to-market ratio, Lev and Sougiannis (1999) show that research and development (R&D) capital provides value-relevant information to stock investors. Beaver and Ryan (2000) show how book-to-market ratios are associated with future book returns on equity. Nezlobin et al. (2016) find that the price-to-book (PB) ratio and the price-to-earnings (PE) ratio are affected by various factors, such as anticipated future growth and economic profitability.

To examine whether accounting variables have different implications for future earnings and firm valuations for startup companies, we address the following research questions: (1) are accounting variables generally different for firms in an early business stage after IPO than for firms in a more mature stage? (2) do the accounting measures exhibit different abilities to predict future earnings for firms in an early business stage after IPO than for firms in a more mature stage? (3) finally, do accounting variables have different valuation implications for firms in an early business stage after IPO than for firms in a more mature stage?

Test Models

To examine our first research question, we compare descriptive statistics for several accounting measures across the early-stage and nonearly-stage subsamples. The results are presented in Table 1. To examine our second research question, we first apply Model 1 to the early-stage and nonearly-stage subsamples separately (the coefficients are reported in Table 3 Columns 1 and 2); then, we use Model 2 to examine differences in coefficients across these two subsamples:

Model 1: Prediction of one-year-ahead earnings

$$ROA_{t+1} = \beta_0 + \beta_1 ROA_t + \beta_2 CFOA_t + \beta_3 CFFOA_t + \beta_4 REVOA_t + \beta_5 TLTA_t + \beta_6 RNDOA_t + \varepsilon_{t+1}$$

where,

Return-on-asset ratio (*ROA*) is net income divided by average total assets for the current period.
Asset turnover ratio (*REVOA*) is the total revenue divided by average total assets.
R&D expenditure level (*RNDOA*) is the Research and Development (R&D) expenses divided by average total assets for the current period.
Leverage level (*TLTA*) is total liabilities divided by total assets.
We also include two cash flow ratios: ***CFOA***, which equals cash flow from operating activities divided by average total assets; and ***CFFOA***, which equals cash flow from financing activities divided by average total assets.

Model 2: Regression model to test whether two age groups (early-stage and nonearly-stage) report different coefficients

$$ROA_{t+1} = \beta_0 + \beta_1 EarlyStage + \beta_2 ROA_t + \beta_3 ROA_t*EarlyStage + \beta_4 CFOA_t + \beta_5 CFOA_t*EarlyStage + \beta_6 CFFOA_t + \beta_7 CFFOA_t*EarlyStage + \beta_8 REVOA_t + \beta_9 REVOA_t*EarlyStage + \beta_{10} TLTA_t + \beta_{11} TLTA_t*EarlyStage + \beta_{12} RNDOA_t + \beta_{13} RNDOA_t*EarlyStage + \varepsilon_{t+1}$$

where,

Early-stage indicator (EarlyStage) is equal to 1 when a firm's IPO_AGE is less than or equal to two, and equal to 0 otherwise. IPO_AGE is calculated as the number of fiscal years that have passed since the IPO year. IPO_AGE is zero when the current fiscal year is the IPO year. IPO_AGE is one when the current fiscal year is the first year following the IPO year.

All other variables are as defined above. Model 2 is estimated for early-stage and nonearly-stage subsamples combined. Coefficients on the interaction terms are reported in Table 3 Column 3.

To examine our third research question, we first separately apply Model 3 to the early-stage and nonearly-stage subsamples (the coefficients are reported in Table 4 Columns 1 and 2); then, we use Model 4 to examine differences in the coefficients between these two subsamples:

Model 3: Price-to-book (PB) ratio as a dependent variable

$$PB_t = \beta_0 + \beta_1 ROA_t + \beta_2 CFOA_t + \beta_3 CFFOA_t + \beta_4 REVOA_t + \beta_5 TLTA_t + \beta_6 RNDOA_t + \varepsilon_t$$

where, **Price-to-book (PB) ratio** is the stock price per share divided by the book value per share. All other variables are as defined above.

Model 4: Regression model to test whether two age groups (early-stage and nonearly-stage) report different coefficients

$$PB_t = \beta_0 + \beta_1 EarlyStage + \beta_2 ROA_t + \beta_3 ROA_t*EarlyStage + \beta_4 CFOA_t + \beta_5 CFOA_t*EarlyStage + \beta_6 CFFOA_t + \beta_7 CFFOA_t*EarlyStage + \beta_8 REVOA_t + \beta_9 REVOA_t*EarlyStage + \beta_{10} TLTA_t + \beta_{11} TLTA_t*EarlyStage + \beta_{12} RNDOA_t + \beta_{13} RNDOA_t*EarlyStage + \varepsilon_t$$

All other variables are as defined above. Model 4 is estimated for the early-stage and nonearly-stage subsamples combined. The coefficients on the interaction terms are reported in Table 4 Column 3.

Sample Selection

The COMPUSTAT North America Fundamentals Annual data is provided by Wharton Research Data Services (WRDS, https://wrds-web.wharton.upenn.edu/wrds/). This data was used to select the sample companies for the fiscal years of 1991 to 2015. Companies with an ISO Country Code of Incorporation of USA and a Currency Code of USD were selected. The IPO age of a firm is calculated as 0 when the COMPUSTAT Company Initial Public Offering date falls within the fiscal year. IPO age is coded as 1 for the following fiscal year. IPO age n refers to the fiscal period, which is n years after the IPO year. For certain companies, COMPUSTAT reports data for fiscal years preceding the IPO year. Fiscal years preceding the IPO year are excluded from the sample.

For fiscal years 1991 to 2015, 71,741 firm-years are included in the sample. From this sample, extreme values for each variable are defined as less than the 1st percentile or as greater than the 99th percentile. For statistical analyses, we transformed extreme values as missing values. In the calculation of the price-to-book (PB) ratio, which is defined as the stock price per share divided by the book value per share, when the book value of equity is zero or negative, it is difficult to interpret implications of the PB ratio. Therefore, additional requirements were imposed on sample selection by excluding firm-years reporting a zero or negative PB ratio. In the final sample, 63,177 firm-years reported positive PB ratios.

We divided the sample into two sub-samples: an early-stage subsample and nonearly-stage subsample. The early-stage subsample includes firm-years with IPO age from 0 to 2 (i.e., 3 years including the IPO years). Nonearly-stage subsample includes firm-years with IPO ages of equal to or greater than 3. In the regression analyses, we require that no accounting variables are missing from the regression model.

Descriptive Statistics

To answer our first research question, we compare accounting variables of the early-stage and nonearly-stage subsamples. Table 1 presents descriptive statistics for all accounting variables of interest for the IPO sample companies in their early-stage (Table 1 Column 1) and their nonearly-stage (Table 1 Column 2). Table 1 Column 3 compares the means of all accounting variables of interest for the early-stage and nonearly-stage subsamples.

Table 1

Summary Statistics

Accounting Variables	(1) Early-stage			(2) Nonearly-stage			(3) Diff. in Mean	
	N	Mean	SD	N	Mean	SD	Diff.	P-value
PB	17,607	4.017	4.695	45,570	3.252	4.259	0.765	<.0001
ROA	14,565	−0.114	0.342	44,196	−0.051	0.2616	−0.063	<.0001
CFOA	14,101	−0.053	0.264	43,070	0.016	0.2073	−0.069	<.0001
CFFOA	14,110	0.302	0.471	43,017	0.074	0.2545	0.228	<.0001
REVOA	14,486	0.914	0.837	44,264	0.949	0.8211	−0.036	<.0001
TLTA	17,335	0.433	0.258	45,004	0.500	0.2507	−0.067	<.0001
RNDOA	8,521	0.138	0.166	25,527	0.101	0.1443	0.037	<.0001

Note. Table 1 separately presents the number of nonmissing values (N) and the means and standard deviations (SD) of all accounting variables of interest for the two subsamples (Column 1: Early-stage subsample, Column 2: Nonearly-stage subsample). Column 3 presents differences in means observed between the Early-stage and Nonearly-stage subsamples and the t-test p-value for the significance of differences.

Table 1 shows that early-stage companies generally report lower levels of profitability (i.e., smaller *ROA*) than do their nonearly-stage counterparts. Consistently, early-stage companies tend to generate more cash flow from financing activities (*CFFOA*) than from operating activities (*CFOA*). However, mature companies report higher leverage levels. As one possible explanation, as profitability levels are generally low in early business stages, companies mainly finance by issuing shares rather than by borrowing money from banks. We also find that early-stage companies tend to have more Research and Development expenditures (*RNDOA*) than their nonearly-stage counterparts, which is consistent with higher R&D intensity levels observed in earlier stages (Park, 2017; Lev and Sougiannis, 1999). Price-to-book (*PB*) ratio is generally higher in the companies' early years than in their later stages

We find that the mean *ROA* is negative for our sample. According to the prior literature, negative and positive earnings may have different implications for future earnings and market prices (e.g., Collins, Pincus and Xie, 1999; Brown, 2001; Barnhart and Giannetti, 2009; Dorminey, Sivakumar and Vijayakumar, 2018; Hayn, 1995; Hu, Ke and Yu, 2018; Joos and Plesko, 2005; Klein and Marquardt, 2006; Pinello, 2008; Sadka and Sadka, 2009). Thus, we first estimate regression Models 1-4 without restrictions on *ROA* and then with a restriction of $ROA_t > 0$ to focus on positive-earnings firms.

Table 2 presents correlation coefficients for the early-stage subsample in Panel 1 and for the nonearly-stage subsample in Panel 2. Overall, we find that almost all accounting variables are correlated with one-year-ahead *ROA* and *PB* ratios with only one exception: for the early-stage subsample, the leverage levels are not correlated with *PB* ratios. We mainly rely on the regression results of Models 1-4 to analyze the association between *ROA (PB)* and the accounting variables of interest.

Table 2

Correlation Table

Panel 1. Pearson Correlation for the Early-stage Subsample

	PB_t	ROA_{t+1}	ROA_t	$CFOA_t$	$CFFOA_t$	$REVOA_t$	$TLTA_t$
PB_t	1.00						
ROA_{t+1}	**-0.18**	1.00					
ROA_t	**-0.20**	**0.70**	1.00				
$CFOA_t$	**-0.15**	**0.67**	**0.78**	1.00			
$CFFOA_t$	**0.19**	**-0.32**	**-0.38**	**-0.47**	1.00		
$REVOA_t$	**0.04**	**0.28**	**0.31**	**0.29**	**-0.21**	1.00	
$TLTA_t$	0.00	**0.20**	**0.13**	**0.16**	**-0.27**	**0.05**	1.00
$RNDOA_t$	**0.20**	**-0.44**	**-0.54**	**-0.54**	**0.33**	**-0.33**	**-0.24**

Panel 2. Pearson Correlation for the Nonearly-stage Subsample

	PB_t	ROA_{t+1}	ROA_t	$CFOA_t$	$CFFOA_t$	$REVOA_t$	$TLTA_t$
PB_t	1.00						
ROA_{t+1}	**-0.23**	1.00					
ROA_t	**-0.27**	**0.71**	1.00				
$CFOA_t$	**-0.23**	**0.69**	**0.79**	1.00			
$CFFOA_t$	**0.28**	**-0.43**	**-0.51**	**-0.58**	1.00		
$REVOA_t$	**0.02**	**0.19**	**0.22**	**0.26**	**-0.19**	1.00	
$TLTA_t$	**0.02**	**0.12**	**0.07**	**0.06**	**-0.08**	**-0.06**	1.00
$RNDOA_t$	**0.31**	**-0.48**	**-0.56**	**-0.59**	**0.42**	**-0.26**	**-0.21**

Note. Table 2 presents Pearson correlations for the early-stage subsample in Panel 1 and for the Nonearly-stage subsample in Panel 2. Significant correlation coefficients are bolded at the 0.05 level. All dependent and independent variables used for the regression analyses are included in Panels 1 and 2.

Regression Results

Table 3 presents regression results on the predictability of accounting measures to future earnings (i.e., ROA_{t+1}). The regression was separately estimated for the early-stage and nonearly-stage subsamples. Column 1 presents estimations of coefficients and t-statistics for the early-stage subsample, in which we include data for 2 years after an IPO and for the year of an IPO. Column 2 presents our estimation of coefficients and t-statistics for the nonearly-stage subsample, in which we include all available years beyond the second fiscal year after a firm's IPO. Column 3 presents the difference in coefficient estimations observed between the two subsamples and the t-test p-

value of their significance level.[*,†] We first present regression results without any restrictions on ROA_t in Table 3 Panel 1; we then present regression results with the $ROA_t > 0$ restriction in Table 3 Panel 2. We can see that for our early-stage subsample, only about 46% of firm-years have positive earnings. For our nonearly-stage subsample, about 56% of firm-years have positive earnings.

The results presented in Table 3 Panel 1 demonstrate that, in general, ROA_t positively predicts future earnings, and the level of predictability is not significantly different across early-stage and nonearly-stage subsamples. The asset turnover ratio ($REVOA_t$) is more positively associated with future earnings for early-stage firms than for nonearly-stage firms. As one possible explanation, in early stages, the ability to generate revenue reflects the ability of a company to survive, which is crucial to an early-stage company. Cash flows from both operating ($CFOA_t$) and financing activities ($CFFOA_t$) predict future earnings. The predictability of $CFOA_t$ is stronger for nonearly-stage companies, while that of $CFFOA_t$ is stronger for early-stage companies. These results are consistent with the fact that early-stage companies do not usually have an ability to generate large sums of cash through operating activities, while cash flows from financing activities may help them succeed in business. We also find that the leverage ratio is positively associated with future earnings while predictability levels are higher for early-stage firms than for nonearly-stage firms, suggesting that the capacity of early-stage companies to borrow money is an important predictor of their future profitability. We find that R&D expenses ($RNDOA_t$) do not positively predict future earnings, suggesting that investors should not rely too heavily on this variable in predicting one-year-ahead earnings.

We re-estimate the regression with $ROA_t > 0$ as a restriction, and we present the results in Table 3 Panel 2. The results suggest that when focusing on profitable companies, cash flows from financing activities no longer positively predict one-year-ahead earnings. We also find that for profitable early-stage firms, the predictability of ROA_t is stronger than it is for nonearly-stage firms.

Table 3

The Predictability of Accounting Variables to Future Earnings

Panel 1. The Predictability of Accounting Variables to Future Earnings without ROA_t Restriction

	(1) Early-stage		(2) Nonearly-stage		(3) Diff. in Coeff.	
Variables	Coeff.	T-stat.	Coeff.	T-stat.	Diff.	P-value
ROA_t	0.42***	27.30	0.43***	48.79	−0.01	0.376
$CFOA_t$	0.51***	26.20	0.58***	49.91	−0.07***	0.000
$CFFOA_t$	0.04***	5.90	0.02***	3.45	0.02**	0.040
$REVOA_t$	0.03***	7.59	0.01***	2.75	0.03***	<.0001
$TLTA_t$	0.11***	7.35	0.06***	9.14	0.05***	0.001

[*] The t-test statistics are generated from interaction terms in a regression analysis of the whole sample (i.e., Model 2).

[†] The untabulated robustness test suggests that including year or industry-fixed effects does not significantly affect our results. Our regression results are also robust to different standard error adjustments.

$RNDOA_t$	−0.06***	-2.79	−0.07***	-5.42	−0.00	0.848
Intercept	−0.15***	-19.22	−0.09***	-22.52		
N	8,127		24,287			
Adj. R^2	0.54		0.58			

Panel 2. The Predictability of Accounting Variables to Future Earnings with $ROA_t > 0$ Restriction

	(1) Early-stage		(2) Nonearly-stage		(3) Diff. in Coeff.	
Variables	Coeff.	T-stat.	Coeff.	T-stat.	Diff.	P-value
ROA_t	0.57***	15.15	0.34***	18.24	0.23***	<.0001
$CFOA_t$	0.26***	13.39	0.39***	34.31	-0.14***	<.0001
$CFFOA_t$	-0.01*	-1.81	-0.03***	-4.02	0.01	0.134
$REVOA_t$	0.00	-0.11	0.00	-1.12	0.00	0.699
$TLTA_t$	0.03**	2.26	0.00	-0.93	0.03***	0.008
$RNDOA_t$	-0.28***	-9.96	-0.30***	-19.9	0.02	0.523
Intercept	-0.03***	-4.27	-0.01**	-2.17		
N	3,743		13,681			
Adj. R^2	0.16		0.18			

Note. Table 3 presents regression results on the predictability of accounting variables to future earnings without ROA_t restriction (Panel 1) and with $ROA_t > 0$ restriction (Panel 2). The dependent variable is the one-year-ahead return on assets (ROA_{t+1}). Column 1 presents the estimations of coefficients and *t*-statistics for the Early-stage subsample, in which we include data for 2 years after an IPO and for the year of an IPO. Column 2 presents the estimation of coefficients and *t*-statistics for the Nonearly-stage subsample, in which we include all available years following the second fiscal year after a firm's IPO. ***, **, * indicate variables significant at the 0.01, 0.05 and 0.1 levels, using two-sided t-test. Column 3 presents the difference in coefficient estimations observed across the two subsamples and the t-test p-value of their significance level from Model 2.

Table 4 presents regression results on the market valuation of accounting variables of interest. The dependent variable is the current year PB ratio. Without any restrictions on ROA_t we find that ROA_t is negatively associated with PB_t (Table 4 Panel 1). Thus, we re-estimate Models 3 and 4 with the restriction that $ROA_t > 0$, and we present the results in Table 4 Panel 2. When $ROA_t > 0$, ROA_t is positively associated to PB_t, which is consistent with the prior valuation literature (i.e., Beaver and Ryan, 2000; Feltham and Ohlson, 1995; Olson, 1995). We also find that $REVOA_t$ is only priced by the market when there is a loss and is not priced when net income is positive. Interestingly, even though Research and Development expenses do not predict one-year-ahead earnings, they are priced by the market, suggesting that the valuation market recognizes the potential long-term benefits of Research and Development expenditures.

From Table 4 Panel 2, we find that the market prices of all accounting variables are similar across profitable early-stage and nonearly-stage firms, while the results given in Table 3 suggest that the predictability of ROA_t, $CFOA_t$, and $TLTA_t$ for future earnings significantly varies between early-stage and nonearly-stage firms. These results suggest that investors may overlook differences in the implications of financial variables for early-stage and nonearly-stage firms.

Table 4

The Valuation of Accounting Variables

Panel 1. The Valuation of Accounting Variables without ROA_t Restriction

	(1) Early-stage		(2) Nonearly-stage		(3) Diff. in Coeff.	
Variables	Coeff.	T-stat.	Coeff.	T-stat.	Diff.	P-value
ROA_t	-0.99***	-3.74	-1.80***	-10.66	0.81***	0.007
$CFOA_t$	1.24***	3.66	1.88***	8.44	-0.64*	0.095
$CFFOA_t$	1.97***	17.16	3.27***	27.91	-1.29***	<.0001
$REVOA_t$	0.28***	3.59	0.20***	5.38	0.07	0.374
$TLTA_t$	4.52***	17.99	4.23***	33.96	0.30	0.258
$RNDOA_t$	5.85***	14.68	8.67***	36.11	-2.83***	<.0001
Intercept	1.03***	7.32	0.45***	6.09		
N	8,175		24,474			
Adj. R^2	0.10		0.18			

Panel 2. The Valuation of Accounting Variables with $ROA_t > 0$ Restriction

	(1) Early-stage		(2) Nonearly-stage		(3) Diff. in Coeff.	
Variables	Coeff.	T-stat.	Coeff.	T-stat.	Diff.	P-value
ROA_t	15.81***	15.08	16.63***	35.21	-0.82	0.421
$CFOA_t$	4.82***	9.02	5.55***	19.16	-0.72	0.185
$CFFOA_t$	1.80***	9.27	2.21***	13.09	-0.41*	0.091
$REVOA_t$	-0.05	-0.58	-0.01	-0.24	-0.04	0.613
$TLTA_t$	5.24***	16.54	5.13***	39.18	0.11	0.709
$RNDOA_t$	10.86***	13.92	11.88***	31.25	-1.02	0.186
Intercept	-0.83***	-3.96	-1.44***	-16.46		
N	3,763		13,763			
Adj. R^2	0.18		0.23			

Note. Table 4 presents regression results on the valuation of accounting variables without ROA_t restriction (Panel 1) and with $ROA_t > 0$ restriction (Panel 2). The dependent variable is the current year price-to-book ratio (PB_t). Column 1 presents estimations of coefficients and *t*-statistics for the Early-stage subsample, in which we include data for 2 years following an IPO and for the year of an IPO. Column 2 presents the estimation of coefficients and *t*-statistics for the Nonearly-stage subsample, in which we include all years following the second fiscal year after a firm's IPO. ***, **, * indicate variables significant at the 0.01, 0.05 and 0.1 levels, using two-sided t-test. Column 3 presents the difference in coefficient estimations between the two subsamples and the t-test p-value of their significance level in Model 4.

In this paper we use IPO age as a proxy to identify early-stage companies. Firm-years with IPO ages of 0, 1 and 2 were selected to measure early-stage companies. Due to data availability limitations, test results provided in this paper are based on the number of years since the IPO and

not on the number of years of operation. Compared to mature-stage firms, we believe that early-stage firms share some financial characteristics with startup companies. To determine whether the test results are sensitive to the increase in IPOs occurring among tech industry companies in the late 1990s and early 2000s, we identified high-tech industries based on the SIC code classifications used by Chen, DeFond and Park (2002). Test results for the high-tech industry and for other industries still show that the implications of accounting variables are different for early-stage and nonearly-stage firms.

Conclusions and Suggestions

Based on our analyses of U.S. firms for 1991 to 2015, we find that early-stage firms after an IPO present different financial characteristics from those of mature firms. The implications of accounting variables for the prediction of one-year-ahead earnings and for firm valuation are also different for early-stage and nonearly-stage firms. Based on these findings, it is suggested that the managers and investors of startup companies not overlook the fact that financial characteristics of startup companies are different from those of mature companies. More specifically, we make following suggestions to the investors and managers of startup firms based on the results of this paper.

Suggestions to Investors

(1) Accounting variables are significantly different between new startup companies and more mature companies.
(2) The predictability of accounting variables for future earnings also differs between startup and mature companies. Investors should consider these differences in their investment decisions.

Suggestions to Managers

(1) Investors treat gain and loss companies differently.
(2) Asset turnover ratio and cash flow from financing activities are more important for startup companies to succeed than they are for mature companies.
(3) Even though Research and Development expenses do not provide a short-term benefit, they are priced by the market, suggesting that the valuation market recognizes the potential long-term benefits of Research and Development activities.

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