LONG-RUN OPERATING PERFORMANCE OF PREFERRED STOCK ISSUERS

Devrim Yaman, Western Michigan University

ABSTRACT

In this paper, we study the long-run operating performance of preferred stock issuers. We use three different measures of operating performance; pre-tax cash flows, profit margin and return on assets. We study the performance of industrial firms, financial firms, and utilities separately, as well as the performance of the whole sample. Our results indicate that the operating performance of preferred stock issuers as a whole declines in the three-years before the issue. We find that profitability continues to decline after the issue. This finding is consistent with earlier findings on bond and common stock issuers. We also find that the decline in profitability is more pronounced for financial firms, although the cash flows of financial firms increase after the offering. The results show that the operating performance after the issue is worse for firms that raise large amounts of capital through the issue. There is also some evidence that preferred stock issuers with information asymmetry have lower operating performance following the issue.

JEL: G30, G32

KEYWORDS: Preferred stock; long-run performance; operating performance

INTRODUCTION

Preferred stock is an essential and popular method of raising capital by firms. During the period 1985-1999, firms raised $324.63 billion in U.S. markets by engaging in 2,636 preferred stock offerings. Over the same period, firms made 7,017 seasoned equity offerings raising $606.03 billion (Bajaj, Mazumdar, and Sarin, 2002). Since 1990 the size of the public market for preferred stock quadrupled, reaching $193 billion in 2005 (Dash, 2009). Despite the importance of preferred stock, there are only a handful of studies on this security. Prior studies such as Wansley et al. (1990), Houston and Houston (1990), Stickel (1991), Rao and Moyer (1992), Lee and Figlewicz (1999), and Callahan, et al. (2001) focus on the announcement returns, characteristics and the motivations of issuing firms. Recently, Howe and Lee (2006) and Abhyankar and Ho (2006) study the long-run stock performance of preferred stock issuers.

In this paper, we study the long-run operating performance of preferred stock issuers. The only other study that examines this issue is Lee and Johnson (2009). We extend previous research by studying the change in operating performance of our sample firms from the period right before the offering, besides raw operating performance. We also contribute to the literature by analyzing the factors that may affect the operating performance of preferred stock issuers. We use recent data and our sample period is long, covering a period of 13 years.

Our sample consists of 1,334 publicly issued non-convertible preferred stock issues offered in US markets between 1992 and 2004. We measure operating performance using three proxies; the cash flows of the firm, the profit margin and the return on assets. We study the performance of industrial firms, financial firms and utilities separately, as well as the performance of the whole sample. We find that the operating performance of firms in all industry types deteriorate gradually until the issuance. Profitability is also lower after the issue compared to the year before the issue. This decrease in performance is more pronounced for financial firms, although there is an increase in the cash flows of these firms. We find

that the performance of firms that issue large amounts of preferred stock is better than the performance of firms that issue small amounts. There is also some evidence that firms with low book-to-market ratios and large firms have better post-issue performance.

The rest of this paper is organized as follows: In section 2, we summarize the findings of previous studies on the long-run stock and operating performance of bonds and stocks. In section 3, we develop our hypotheses and in section 4, we present the results of the tests of these hypotheses. In section 5, we conclude the paper.

PRIOR RESEARCH

Long-run Performance of Straight Bonds and Common Stock

Studies have mixed results for the long-run performance of straight bond issuers. Hansen and Crutchley (1990) and McLaughlin et al. (1998a) show that the long-run operating performance of straight bond issuers are negative while Bae et al. (2002) show that the performance is insignificant. Dichev and Piotroski (1999) find that the long-run stock returns of straight bond issuers are insignificant while Spiess and Affleck-Graves (1999) and Eckbo et al. (2000) show that these issuers underperform. Dichev and Piotroski also find that public debt issuers underperform the market while private debt issuers outperform the market.

Studies show that both the operating performance and stock performance are negative for equity issuers in the long-run (Hansen and Crutchley (1990), McLaughlin et al. (1998a), Cheng (1998), and Kang et al. (1999)). Jung et al. (1996) find that the long-run stock performance of equity issuers is lower than that for straight bond issuers, although there is no statistically significant difference. Cheng (1998) shows that the underperformance is less severe for equity issuers that use the proceeds for capital investments. Eckbo et al. (2000) find that when equity issuers lower their leverage as a result of the issue, they also decrease their exposure to unexpected inflation and default risk. This, in turn, decreases their expected returns relative to matched firm.

Studies also analyze different sub-samples of equity issues. For example for the case of private equity issues, Hertzel et al. (2002) show that these issues have positive announcement effects and negative long-run stock returns since investors are overoptimistic about the future prospects of equity issuers. Kang et al. shows the performance of firms placing the privately is similar to the performance of firms that place the issue publicly. Alderson and Betker (2000) study withdrawn equity issues and show that the long-run operating and stock performance of firms that withdraw the offering is lower than control firms. The overvaluation before the announcement of the issue is concentrated among smaller firms and the underperformance is higher among firms that announced the offering during periods of high equity issue volume. For equity issues in which the seller is an insider, Clarke et al. (2004) find that the long-run stock returns are negative and operating performance declines after the issue. Their findings are consistent with the hypothesis that managers issue overvalued shares at secondary equity offerings.

Long-run Performance of Preferred Stock

Howe and Lee (2006) and Abhyankar and Ho (2006) study the long-run stock performance of preferred stock issuers. Howe and Lee find that preferred stock issuers underperform only in the year after the issuance. Two and three years after the issue, the issuers do not consistently underperform. Howe and Lee argue that the one-year underperformance is driven by the small firms in their sample. They find that financial firms do not underperform while industrial firms and utilities underperform for a short period of time. Abhyankar and Ho study convertible preferred stock. They show that preferred stock issuers obtain positive stock returns before the issue. As in Howe and Lee, they find that preferred stock issuers

underperform after the issue. They argue that the stock price reaction is related to the "debt-like" and "equity-like" characteristics of the convertible security. They also find that the long-run underperformance is more severe when they allow for time-varying risk in their model.

Lee and Johnson (2009) study the operating performance of preferred stock issuers. They find that the profitability of preferred stock issuers declines until the year of the issue and gradually recovers after that. Lee and Johnson also show that preferred stock issuers have higher capital expenditure plus R&D expenses to assets ratios compared to other firms before the issue and until two years after the issue. The market-to-book ratio of preferred stock issuers is also higher before the offering and until one year after the offering. They show that financial firms do not show any abnormal operating performance patterns before or after the issue whereas the industrial firms show patterns similar to the whole sample.

HYPOTHESES ON THE LONG-RUN OPERATING PERFORMANCE OF PREFERRED STOCKS

Preferred stock is a hybrid security that has both debt-like and equity-like characteristics. Just like debt, preferred stockholders get a stated amount of dividend. In case of liquidation, they also receive a stated value. However, just like common stock dividends, when determining the taxable income of a corporation, preferred dividends cannot be deducted as interest expense. Also, as with common stockholders, preferred stockholders cannot force the firm into bankruptcy if the firm cannot pay the dividends (Ross et al. 2008). The hybrid nature of this security implies that the long-run operating performance will be similar to the performance of bonds and stocks.

Spiess and Affleck-Graves (1995, 1999) show that the long-term stock performance of both bonds and common stock are negative. This finding is consistent with the argument that firms take advantage of "windows of opportunity" and issue securities when they are overvalued. Similarly, Hansen and Crutchley (1990), McLaughlin et al. (1998a), and Cheng (1998) show that the long-run operating performance of bond and common stock issuers is also negative. Since preferred stock has both debt and equity characteristics, we expect preferred stock issuers to have negative long-run operating performance.

McLaughlin et al. (1998a) indicate that two years before the issue there is a decrease in the operating performance of common stock issuers compared to the previous year, although the performance increases a year before the issue. In the case of bond issuers, the operating performance declines gradually beginning three years before the issue. The hybrid characteristic of preferred stocks suggests that the operating performance of preferred stock should also decrease in the years leading to the issue year. However, the window of opportunity hypothesis suggests the opposite effect of an increase in operating performance in the years before the issue. In this hypothesis, firms issue securities when the firm is in good financial position and therefore there should be an improvement in operating performance prior to the issue.

In Myers and Majluf (1984), overvaluation of securities is higher for firms with high information asymmetry. Therefore, Myers and Majluf predict a more negative operating performance following preferred stock issues when firms have high information asymmetry. Miller and Rock (1985) argue that unanticipated financing implies that managers expect a shortfall in future cash flows. Hence, Miller and Rock predict a negative relation between the size of the issue and the operating performance after the offering. Consistent with these arguments, McLaughlin et al. (1998a) show that bond and common stock issuing firms with the largest information asymmetry (measured with the size and market value of the firm) have the largest declines in operating performance following the issue while McLaughlin et al. (1998b) show companies that make relatively larger offers have larger declines in operating performance following the issue. Similarly, Loughran and Ritter (1995) and Spiess and Affleck-Graves (1995) show that the poor long-run stock performance following common stock issues is more severe for smaller firms

while Spiess and Affleck-Graves (1999) show that for bond issuers the long-run stock performance is worse for smaller firms, and firms with large issues. In this study, we test whether similar relations exist for preferred stock issuers and measure whether smaller firms, firms with high market-to-book ratios, and firms that issue large offerings obtain lower long-run operating performance following preferred stock issuance.

METHODOLOGY AND RESULTS

Data and Sample Characteristics

Our sample consists of non-convertible preferred stock issues offered in US public markets between 1992 and 2004. All issues are completed and traditionally registered. We obtain issue-related data from Thomson Financial's Securities Data Corporation (SDC) Database and firm-related data from Compustat. As in D'Mello et al. (2003), we classify firms with two-digit SIC codes of 49 as utilities, firms with one-digit SIC codes of 6 as financial institutions and all other firms with valid SIC codes as industrial firms. Our final sample consists of 1,334 preferred stock issues offered by 876 firms. 96 of these issues were made by industrial firms, 989 issues were made by financial firms, and 249 issues were made by utilities.

Table 1: Frequency Distribution of Offerings and Firms

Year	All Firms		Industrial Firms		Financial Firms		Utilities	
	# of issues	# of firms	# of issues	# of firms	# of issues	# of firms	# of issues	# of firms
1992	229	143	15	11	141	85	73	47
1993	288	198	18	15	182	131	88	53
1994	69	57	8	7	42	35	19	16
1995	38	32	1	1	35	29	2	2
1996	85	80	17	17	54	49	14	14
1997	109	106	11	11	79	77	19	18
1998	66	64	7	7	54	52	5	5
1999	64	59	11	10	46	42	7	7
2000	15	12	0	0	13	10	2	2
2001	37	35	0	0	32	30	5	5
2002	17	17	0	0	15	15	2	2
2003	195	130	3	3	187	122	5	5
2004	122	87	5	5	109	76	8	8
Total	1,334	876	96	80	989	655	249	147

This table presents the frequency distribution of publicly placed preferred stock offerings in US markets during the period 1992-2004 and the firms that made these offerings. Preferred stock offering data is obtained from Thomson Financial's Securities Data Corporation Database.

Table 1 presents the frequency distribution of preferred stock offerings and firms that make the offerings over the sample period. The number of issues varies throughout the sample period and most of the offerings were made during the first half of the sample period for the whole sample and the three sub-samples. In the first six years, there were a total of 818 issues made compared to 516 issues made in the last seven years. The number of offerings for the first six years is 70 for industrial firms, 533 for financial

firms and 215 for utilities. For the whole sample, the lowest number of offerings was in the year 2000 while the highest number of offerings was in 1993. There were 15 preferred stock issues made by 12 firms in 2000 and 288 offerings made by 198 firms in 1993. The highest number of issues was also in 1993 for industrial firms and utilities with 18 and 88 offerings in each group respectively. There were no preferred stock offerings in years 2000, 2001, and 2002 for industrial firms while utilities had only two offerings in years 1995, 2000, and 2002. For financial firms, the lowest number of offerings was in 2000 (13 offerings) and the highest number of offerings was in 2003 (187 offerings).

Table 2: Firm and Issue Characteristic

Variable		All Firms	Industrial Firms	Financial Firms	Utilities
Total Assets		40,690.22 (2,923.79)	25,550.08 (3,549.36)	44,499.07 (2,952.98)	3,813.64 (1,672.76)
Market Value of Equity		4,065.08 (1,109.00)	6,824.88 (3,290.00)	3,969.15 (1,056.00)	1,762.00 (649.00)
Issue Size		135.26 (72.05)	222.19 (150.00)	140.41 (70.00)	81.29 (50.00)
Standardized Issue Size		0.051 (0.03)	0.12 (0.04)	0.04 (0.03)	0.03 (0.03)
Market-to-book Ratio		0.28 (0.16)	0.37 (0.28)	0.28 (0.12)	0.31 (0.16)
Exchange (%)	NYSE/AMEX	89.62	63.64	91.94	89.31
	NASDAQ	5.25	10.91	5.53	1.53
	Other	5.13	25.45	2.53	9.16

This table presents the firm and issue characteristics of the sample. Total Assets is the book value of total assets. Market Value of Equity is the price multiplied by *the number of common shares outstanding. Issue Size is the total proceeds from the issue. Standardized Issue Size is the total proceeds divided by the book value of total assets. Market-to-Book Ratio is the price* multiplied by *the number of common shares outstanding,* divided by *common equity. Exchange (%) shows the percentage of firms in the sample listed in NYSE/AMEX, NASDAQ and other exchanges. In each row (except for the exchange), the first figure is the mean value while the figure in parentheses is the median value.*

In Table 2, we present the characteristics of the firms and issues in our sample. The average book value of assets in our sample is $ 40,690 million while the median is $ 2,924 million. Financial firms have the highest average asset size with $ 44,499 million. The average asset size is $ 25,550 million for industrial firms and $ 3,814 million for utilities. We define market value of equity as the price of common stock multiplied by the number of common shares outstanding. The average market value of equity in the sample is $ 4,065 million while the median is $ 1,109 million. Industrial firms have the largest market value of equity with a mean of $ 6,825 million and a median of $ 3,290 million. The average market value of equity is $ 3,969 million for financial firms and $ 1,762 million for utilities.

We use two measures for the size of the issue; raw issue size and standardized issue size. Raw issue size is the total proceeds raised from the issue and standardized issue size is the total proceeds adjusted by the book value of the assets of the firm. The average raw issue size is $ 135 million for the whole sample while the median is $ 72 million. On average, the issues were about 5.06% of the total assets of the sample firms. Industrial firms issued the largest offerings with an average size of $ 222 million, representing 12.14% of their assets. The average issue size was $ 140 million and $ 81 million for financial firms and utilities, representing 4.41% and 3.18% of their assets, respectively.

In this paper, we measure the growth opportunities of the firm with the market-to-book ratio. Market-to-book ratio is the stock price of the firm multiplied by the number of outstanding common shares of the company, divided by common equity. The average market-to-book ratio is 0.28 for the sample firms while the median of this ratio is 0.16. Industrial firms have the highest market-to-book ratio with a mean of 0.37 and a median of 0.28. The average market-to-book ratio is 0.28 for financial firms and 0.31 for utilities. 89.62% of the sample firms were listed on the New York Stock Exchange (NYSE) or the American Stock Exchange (AMEX) while 5.25% of were listed on NASDAQ. 63.64 % of industrial firms were listed on NYSE or AMEX while 10.91 % were listed on NASDAQ. 91.94% of financial firms and 89.31% of utilities were listed on NYSE or AMEX.

Measures of Operating Performance

Following Lee and Loughran (1998), Lewis et al. (2001), and Hertzel et al. (2002), we use the profit margin and the return on total assets as our measures of operating performance. We measure profit margin as income before extraordinary items divided by net sales and return on total assets as income before extraordinary items divided by total assets. As in McLaughlin et al. (1996, 1998a, 1998b), Alderson and Berker (2000), and Lewis et al. (2001) we also use the pre-tax cash flows as an additional measure. A benefit of the pre-tax cash flow measure is that it is not impacted by the changes in interest expense, the level of assets in place, and the level of taxes that may affect the other measures. Hence, pre-tax cash flows will not be affected by the capital structure policies, investment levels, and the tax status of the sample firms. We measure pre-tax cash flows with the operating income before depreciation and amortization (Compustat item 13). We standardize pre-tax cash flows with the book value of assets (Compustat item 6) because the cash flows depend on the value of the firm's assets and with standardized cash flows we can compare the performance of firms with each other and across time.

As in McLaughlin et al. (1998b), we analyze the long-run operating performance of preferred stock issuers over a seven-year period, beginning three years before the issue and ending three years after the issue. We also study the change in operating performance of the sample firms after the offering compared to their performance before the offering. Change in operating performance is the difference in the operating performance measures in one, two, and three years after the offering from the performance in the year before the offering.

Long-run Operating Performance

In Table 3, we present the mean and median operating performance results for the years -3 to +3 relative to the issue year. Panel A shows the results for the whole sample. The average pre-tax cash flows decrease from 7.35% of total assets in year -3 to 6.07% in year -1. There is some increase in the pre-tax cash flows in years +1 and +3, and a decrease in year +2. The average profit margin decreases from 18.24% in year -2 to 17.65% in year -1. The profit margin increases to 18.66% in year +1 but decreases to 13.52% in year 3. The average return on assets is 2.37% in year -3 and decreases to 1.61% in year 0. The return on assets increases to 2.2 % in year +1 but decreases again in year +3. The median values follow the same pattern for most periods.

Panel B of Table 3 presents the annual operating results for industrial firms. There is a dramatic decrease in operating performance before the offering until the issue year using all three measures. The average pre-tax cash flows drop from 14.74% in year -3 to 7.29% in year 0. The profit margin drops from 5.32% to -4.58% and the return on assets drops from 2.27% to -4.09% during the same period. After the issue, pre-tax cash flows increase to 15.02% in year +1 but decreases to 12.10% the next year. The profit margin and return on assets follow the same pattern. The profit margin increases to 6.17% in year +1 and decreases back to 4.02% in year 2 while the return on assets increases to 3.37% and decreases to 1.75% during the same period.

Table 3: Annual Operating Performance

Variable	Year -3	Year -2	Year -1	Year 0	Year +1	Year +2	Year +3
Panel A: All Firms							
Cash Flows	7.35 (6.55)	6.58 (5.66)	6.07 (4.76)	5.17 (4.35)	6.58 (4.73)	5.99 (5.05)	6.95 (5.17)
Profit Margin	18.13 (12.72)	18.24 (14.74)	17.65 (14.07)	18.30 (13.72)	18.66 (14.01)	16.36 (13.19)	13.53 (12.30)
Return on Assets	2.37 (2.42)	2.14 (1.95)	2.00 (1.93)	1.61 (1.68)	2.21 (1.64)	1.73 (1.33)	1.65 (1.41)
Panel B: Industrial Firms							
Cash Flows	14.74 (12.78)	13.75 (13.31)	12.31 (11.05)	7.29 (11.47)	15.02 (12.51)	12.10 (11.03)	13.72 (12.57)
Profit Margin	5.32 (3.38)	3.02 (4.53)	-2.14 (3.07)	-4.58 (6.10)	6.17 (4.84)	4.02 (4.21)	5.17 (6.88)
Return on Assets	2.27 (2.42)	1.13 (1.53)	0.78 (1.58)	-4.09 (1.74)	3.37 (2.87)	1.75 (2.69)	2.80 (3.71)
Panel C: Financial Firms							
Cash Flows	4.96 (4.25)	4.11 (3.37)	3.79 (2.72)	3.92 (2.84)	4.03 (3.34)	3.86 (2.91)	4.11 (3.13)
Profit Margin	19.94 (15.72)	20.18 (17.25)	20.13 (15.86)	21.33 (16.08)	20.46 (16.07)	17.95 (14.36)	14.61 (14.06)
Return on Assets	2.28 (2.03)	2.16 (1.86)	2.06 (1.79)	2.16 (1.36)	2.03 (1.35)	1.64 (1.23)	1.41 (1.17)
Panel D: Utilities							
Cash Flows	11.62 (12.55)	11.46 (12.65)	10.38 (10.32)	10.12 (9.64)	10.58 (11.04)	11.21 (11.91)	11.50 (12.04)
Profit Margin	11.21 (11.77)	11.31 (11.25)	10.21 (9.46)	8.86 (6.34)	10.82 (10.50)	10.53 (9.90)	11.16 (10.68)
Return on Assets	3.79 (4.19)	3.56 (3.66)	3.02 (2.98)	2.61 (2.33)	3.18 (3.21)	3.39 (3.62)	3.55 (3.41)

This table presents the mean and median annual operating performance of the sample firms. Cash flows is the operating income before depreciation and amortization standardized with the book value of assets. Profit Margin is the income before extraordinary items divided by net sales and Return on Assets is the income before extraordinary items divided by total assets. In each row, the first figure is the mean value while the figure in parentheses is the median value.

The operating performance results for financial firms are presented in Panel C of Table 3. We observe a pattern of a decrease in operating performance before the issue in financial firms as well. The average pre-tax cash flows decrease from 4.96% to 3.79% and return on assets decreases from 2.28% to 2.06% from year -3 to year -1. The average profit margin increases from 19.94% in year -3 to 20.18% in year -2 but decreases back to 20.13% in year -1. After the offering, the average pre-tax cash flow decreases from 4.03% in year +1 to 3.86% in year +2, although it increases to 4.11% in year 3. The average profit margin and return on assets decrease gradually to 14.61% and 1.41% respectively in year +3.

In Panel D of Table 3, we present the operating performance results for utilities. There is a gradual decrease in the operating performance of utilities before the offering. The average pre-tax cash flow decreases from 11.62% to 10.12% from year -3 to year 0, while the profit margin and return assets decrease from 11.21% to 8.86% and 3.79% to 2.61% respectively. The average profit margin decreases from year +1 to year +2 while the pre-tax cash flow and the return on assets increase gradually after the offering.

Overall, the results in Table 3 show that there is a decrease in the operating performance of preferred stock issuers before the offering. This result is consistent with the findings of McLaughlin et al. (1998a) for the case of stock and bond issues. We find that the decrease in performance exists in all industry types. Our results also indicate that the decrease in performance continues after the offering, except for utilities.

Table 4: Changes in Operating Performance

Variable	Year +1	Year +2	Year +3
Panel A: All Firms			
Cash Flows	0.74	0.38	0.77
	(0.12)	(0.27)	(0.19)
Profit Margin	0.93	-1.16	-4.64 ***
	(0.52)	(-0.18)	(-1.6) *
Return on Assets	0.19	-0.28	-0.40
	(-0.16) **	(-0.21) ***	(-0.34) ***
Panel B: Industrial Firms			
Cash Flows	3.10	0.37	1.83
	(1.04)	(-0.01)	(0.94)
Profit Margin	7.81 *	5.85	7.90 *
	(1.77)	(0.98)	(1.73)
Return on Assets	2.69	0.91	2.21
	(0.88)	(0.10)	(1.59)
Panel C: Financial Firms			
Cash Flows	0.21 *	0.36 **	0.42 **
	(0.12)	(0.27)	(0.13)
Profit Margin	0.26	-1.94 *	-6.32 ***
	(0.33)	(-0.29)	(-2.72) ***
Return on Assets	-0.063	-0.42***	-0.72***
	(-0.16) **	(-0.32) ***	(-0.48) ***
Panel D: Utilities			
Cash Flows	0.19	0.49	0.77
	(-0.46)	(0.01)	(0.62)
Profit Margin	0.61	0.42	1.04
	(-0.02)	(1.24)	(2.19)
Return on Assets	0.16	0.30	0.46
	(-0.29)	(-0.01)	(0.06)

*This table presents mean and median changes in operating performance of sample firms after the offering. Change in operating performance is defined as the operating performance in years +1, +2, and +3 minus the operating performance in year -1, where year 0 is the issue year. In each row, the first figure is the mean value while the figure in parentheses is the median value. We use t-tests to test the significance of the means the sign test to test the significance of the medians. ***, **, and * denote significance at 1, 5 and 10 percent levels respectively.*

Table 4 shows the change in operating performance of preferred stock issuers following the issue compared to their performance before the issue. The change in operating performance is defined as the difference in operating performance of the firm in years +1, +2, and +3 minus their performance in year -1. Panel A presents the change in performance of all firms in our sample. There was no significant change in the pre-tax cash flows in the three years after the issue. The profit margin, however, decreased significantly three years after the issue. The average decrease in profit margin is 4.64% while the median decrease is 1.6%. The median decrease in return on assets was also significant in all three years following the offering. For example three years after the offering the operating performance decreased by 0.34%.

In Panel B of Table 4, we present the change in performance for industrial firms while in panels C and D we present the change in performance for financial firms and utilities, respectively. For industrial firms although there is no significant change in the pre-tax cash flows and return on assets in the three years after the offering, there is a marginal increase (significant only at 10% level) in the average profit margin of industrial firms in years +1 and +3. The average pre-tax cash flow increases for financial firms after the offering while the profit margin and return on assets decrease. For example, in year +3 the average

pre-tax cash flows increase by 0.42% while the median cash flow does not change significantly. During the same period, the average decrease in profit margin is 6.32% while the median decrease is 2.72%. The return on assets decreases significantly in all three years. The average decrease in return on assets is 0.42% in year 2 and 0.72% in year 3. There is no significant change in the operating performance of utilities in our sample.

Overall, the results in Table 4 show that profitability, measured with the profit margin and return on assets, decreases after the offering. This result is consistent with Howe and Lee (2006) and Abhyankar and Ho (2006) who find negative stock performance for preferred stock issuers following the issue. The results is also consistent with Hansen and Crutchley (1990), McLaughlin et al. (1998a), and Cheng (1998) who find negative operating performance after the issuers of common stocks and bonds and with Spiess and Affleck-Graves (1995, 1999) who find negative long-run stock returns for common stock and bond issuers. Our results indicate that the decrease in profitability is most pronounced for financial firms. There is some increase in the pre-tax cash flows of financial firms although there is no significant change for the whole sample.

Factors that Affect Long-run Operating Performance

Table 5: Determinants of Operating Performance

Variable	All Firms	Industrial Firms	Financial Firms	Utilities
Panel A: Market-to-Book Subsamples				
Cash Flows	1.34	7.44	-1.29	1.60
	(-0.20)	(5.10)	(-0.79) **	(1.98)
Profit Margin	2.91	7.87	3.65	-0.21
	(-4.46) **	(1.55)	(-5.37) **	(1.22)
Return on Assets	0.05	3.00	-0.16	0.18
	(-0.25)	(2.72)	(-0.43)	(0.53)
Panel B: Asset Size Subsamples				
Cash Flows	-1.21	3.65	0.15	-1.98
	(-0.03)	(3.054)	(0.39)	(-2.94)
Profit Margin	-1.80	1.47	3.22	4.73
	(0.99)	(4.19)	(-0.08)	(2.04) *
Return on Assets	0.58	1.15	0.42	-0.06
	(0.41) **	(4.36)	(0.44)	(-0.02)
Panel C: Standardized Issue Size Subsamples				
Cash Flows	3.19 *	8.08	1.19	1.65
	(1.63) **	(6.07)	(1.41) **	(2.94)
Profit Margin	5.97 *	4.60	5.37	1.58
	(3.63) **	(-1.61)	(4.76) *	(-0.24)
Return on Assets	0.22	1.14	-0.14	1.10 *
	(-0.15)	(1.58)	(-0.20)	(1.44)

This table presents the differences in mean and median changes in operating performance of sample firms after the offering. In each row, the first figure is the mean value while the figure in parentheses is the median value. We use t-tests to test the significance of the means the sign test to test the significance of the medians ***, **, *and* * *denote significance at 1, 5 and 10 percent levels respectively.*

We study the factors that affect the operating performance of preferred stock issuers in Table 5. We specifically test whether information asymmetry and amount of financing affect the long-run operating performance of preferred stock issuers. We measure information asymmetry with the growth opportunities and the size of the firm. Smith and Watts (1992) argue that managers of firms with better growth opportunities will have better knowledge of the firm's future prospects compared to outsiders. Hence, there is higher information asymmetry between managers and outside investors for firms with better growth opportunities. Similarly, information asymmetry will be higher for smaller firms since fewer analysts follow them (McLaughlin et al., 1998a). The amount of financing is measured with the total proceeds from the issue standardized with the book value of assets. In this table, we test the differences in the changes in operating performance after the offering for different subsamples. We

define the change in operating performance as the operating performance in year +3 minus the operating performance in year -1, where year 0 is the issue year.

In Panel A, we test the influence of the growth opportunities. We measure growth opportunities with the market-to-book ratio of the firm. In this panel, we define the difference in the change in operating performance with the change in operating performance for firms with market-to-book ratios above sample median minus the change in operating performance for firms with market-to-book ratios below sample median. We find that the median difference in the change in profit margin is significantly negative for the whole sample. This result indicates that the profit margin is lower for firms that have high market-to-book ratios. We also find that the median cash flows and profit margin are lower for financial firms with high market-to-book ratios, although growth opportunities do not affect the long-run performance of industrial firms and utilities. In Panel B, we measure information asymmetry with the size of the firm proxied by the total assets. Total assets is the total book value of assets. In Panel B, the difference in the change in operating performance is defined as the change in operating performance for firms with total assets above sample median minus the change in operating performance for firms with total assets below sample median. We find that for the whole sample the median return on assets is higher for large firms while for utilities the profit margin is higher. The size of the firm does not have an influence on the performance of industrial and financial firms.

We measure the influence of the size of the issue in Panel C. In this panel, the difference in the change in operating performance is defined as the change in operating performance for firms with standardized issue size above sample median minus the change in operating performance for firms with standardized issue size below sample median. For the whole sample, we find that both the mean and median differences in the change in cash flows and profit margin are significantly positive. This results shows that cash flows and profit margin are higher for firms that make larger offerings. We also find that the median cash flow and profit margin are higher for financial firms that issue larger offerings while the average return on assets is higher for utilities that issue large offerings.

The findings in Table 5 indicate that overall the long-run operating performance is better for firms that make larger offerings. There is also some evidence that preferred stock issuers with low information asymmetry have better operating performance. The latter result is consistent with McLaughlin et al. (1998a, 1998b) who find similar results for the cases of bond and common stock offerings.

CONCLUSIONS

In this paper, we study the long-run operating performance of the issuers of preferred stock. We hypothesize that the operating performance of preferred stock issuers will decrease before the issue and this decrease will continue after the issue. We also expect the decrease in operating performance to be more pronounced for firms with high information asymmetry and larger offerings.

Our sample consists of non-convertible completed preferred stock issues offered in US public markets. There are 1,334 issues in our sample offered by 876 firms during the 1992-2004 period. Consistent with our hypothesis, we find that there is a decrease in operating performance of preferred stock issuers before the offering. The decrease is evident in industrial firms, financial firms and utilities. After the offering, overall there is a decrease in the profitability of preferred stock issuers. The decrease in profitability is more pronounced for financial firms, although these firms have higher cash flows after the offering. We also find that issuers of large offerings have better long-run operating performance after the offering. There is also some evidence that preferred stock issuers with low information asymmetry have better operating performance.

Our study shows that preferred stock issuers in different types of industries can have different long-run operating performances. Future studies should analyze whether these differences in operating performance persists for stock and bond offerings. Future research should also study the industry effect in long-run stock performance.

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BIOGRAPHY

Devrim Yaman is an Associate Professor of Finance at Western Michigan University. She can be contacted at Department of Finance & Commercial Law, Haworth College of Business, Western Michigan University, Kalamazoo, MI 49008, USA. Email: devrim.yaman@wmich.edu.