# The Value of Attention Grabbing: The Case of Advertising and Corporate Bonds

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# Prior Research

- Mathur, “The Effect of Advertising Slogan Changes on the Market Values of Firms," *Journal of Advertising Research*.
- What happens when firms change their advertising slogans?
- Excess returns: 0.92%

# Prior Research (Continued)

- Mathur, "Is There Value Associated With Initiating New Advertising Agency-Client Relations?" *Journal of Advertising*.
- What happens when firms change advertising agencies? This is similar to firms changing their investment banking relations.
- Excess returns for new accounts:: -0.68%
- Excess returns for new accounts with agency already linked to firm: -0.90%
- Excess returns for new activity by firm: 1.16%
- Excess returns smaller advertising agencies: -0.82%
- Excess returns younger advertising agencies: -1.02%

# Prior Research (Continued)

- Mathur, Rangan, "The Wealth Effects Associated With a Celebrity Endorser: The Michael Jordan PhenCBBnon," *Journal of Advertising Research*.
- Jordan endorsing products by General Mills (Wheaties), McDonalds (Big Mac, Value Meal), Nike (Shoes), Quaker Oats Gatorade), and Sara Lee (Underwear).
- Excess returns for Jordan firms: 1.63%
- Contagion effects for non-Jordan firms: -1.01%
- For McDonalds: $192 million in incremental sales. 64 million value meals.

# Prior Research (Continued)

- Balasubramanian, Mathur, Thakur, "The Impact of High-Quality Firm Achievements on Shareholder Value: Focus on Malcolm Baldrige and J.D. Power & Associates Awards," *Journal of Academy of Marketing Science*.
- Excess returns: 1.27%
- Firms with intangible assets have higher excess returns.

# Advertising and Finance

- Merton's 1987 model implies that imperfect information carries a premium.
  - *Making a firm more visible should reduce or even eliminate this premium.*
- When a firm advertises, potential investors becCBB more aware of the company, i.e., the firm becCBBs more visible. This in turn can improve the firms' stock liquidity and value.

# Extant Evidence

- **Visibility and Stocks**
  - Huberman (2001) coins the phrase "**familiarity breeds investments**" and shows that Regional Bell Operating Companies' shareholders tend to live in the areas that these companies serve.
  - Odean (1999) proposes that in choosing among thousands of possible stocks, investors narrow their search to stocks that recently caught their attention. Barber and Odean (2008) indeed find support for this.
- **Advertising and Stocks**
  - Grullon, Kanatas, and Weston (2004) show that firms with larger advertising expenditures attract a greater pool of institutional investors and have better stock liquidity.
  - Chemmanur and Yan (2008) find that advertising increases the levels of trading volume and analyst coverage, and hence improves contemporary stock returns.

# What's Unanswered?

- Does grabbing attention unequivocally benefit firms? i.e., is the capital channel effect of advertising unhindered by other effects?
  - "Attention is a scarce resource" (Barber and Odean 2008, p. 785) and thus among "many alternatives, options that attract attention are more likely to be considered, hence more likely to be chosen."
  - Attention can only lead to optimal choices when salient attributes of the chosen alternative are critical to the investor's utility.

# What's Unanswered? (Cont'd)

- Would attempts to subvert the attention to suboptimal choices that offer no relevancy to investor's utility be effective?
  - For most firms, advertising is targeted toward consumers, not investors. So grabbing investor's attention is a side-effect. Would investors then neglect main effects in favor of the side effects?

# Our Mission

- Using an experiment whereby both costs and benefits of advertising are sharply contrasted against each other, which aspect of the advertising will prevail?
- We choose to study the impact of advertising on corporate bond yields and liquidity because:
  - Bondholders bear the cost of advertising as it is expensed before the debt service is made.
  - Bondholders gain little or no benefit from real positive consequences of effective advertising, e.g., increased sales, better margins, etc.

# Anecdotes

- Bondholders don't seem as easily impressed by advertising campaigns designed merely to grab bond investor's attention.

"E*Trade Group Inc. may have sponsored the Super Bowl's half-time show, but apparently not too many convertible bond investors were watching. Despite a week-long road show, investors balked at the terms originally proposed by E*Trade and its underwriter, FleetBoston Financial Corp.'s Robertson Stephens, for the $500 million offering. By the time the firm sat down to discuss final pricing yesterday evening, it appeared as though E*Trade would be paying a higher interest rate. The company also had to offer more generous conversion terms to convince investors to subscribe for the full deal…."

*The Wall Street Journal*, Tuesday, February 2, 2000

# Empirical Methodology

- We perform a panel regression analysis of corporate bond yields (credit spreads) and liquidity for the period 1994 – 2006 and examine the impacts of advertising's (1) visibility and (2) effectiveness.
  - Visibility—shear size of advertising expenditures—has been used as proxy for visibility.
  - Effectiveness—the link between current sales and past advertising—proxies for the net real costs of advertising.

# Dependent Variables

- $CSPRD_{i,t}$ = the *i*th firm's credit spread in the month *t*; credit spread is the difference between yield-to-maturity of the bond and yield-to-maturity of a Treasury instrument with the same years-to-maturity
- $LIQUIDITY_{i,t}$ = the *i*th firm's bond liquidity in the month *t*; three proxies:
    1. LIQ is the fraction of the past 12 months with a trade.
    2. LogDVolm is the natural log of the cumulative dollar value of trading over the past 12 months.
    3. LogTVolm is the natural log of the cumulative number of bonds traded over the past 12 months.

# Advertising Visibility

- $nLOGADV0_{i,t}$ = the *i*th firm's log of current year's advertising expenditures normalized for the industry:

$$n\text{LOGADV0}_{i,t} = \frac{\text{LOGADV0}_{i,t} - \min_{i \in \text{2digit SIC}} \{\text{LOGADV0}_{i,t}\}}{\max_{i \in \text{2digit SIC}} \{\text{LOGADV0}_{i,t}\} - \min_{i \in \text{2digit SIC}} \{\text{LOGADV0}_{i,t}\}}$$

- $nLOGADV1_{i,t}$ = the *i*th firm's log of current and past year's advertising expenditures in the month *t* normalized for the industry:

$$n\text{LOGADV1}_{i,t} = \frac{\text{LOGADV1}_{i,t} - \min_{i \in \text{2digit SIC}} \{\text{LOGADV1}_{i,t}\}}{\max_{i \in \text{2digit SIC}} \{\text{LOGADV1}_{i,t}\} - \min_{i \in \text{2digit SIC}} \{\text{LOGADV1}_{i,t}\}}$$

# Advertising Ineffectiveness

- $nAvgA2SL_{i,t}$ = the industry normalized for 10-year average of the *i*th firm's ratio of the last year's advertising expenditures to the current sales:

$$\text{nAvgA2SL}_{i,t} = \frac{\text{AvgA2SL}_{i,t} - \min_{i \in \text{2digit SIC}} \{\text{AvgA2SL}_{i,t}\}}{\max_{i \in \text{2digit SIC}} \{\text{AvgA2SL}_{i,t}\} - \min_{i \in \text{2digit SIC}} \{\text{AvgA2SL}_{i,t}\}}$$

*where:*

$$\text{AvgA2SL}_{i,t} = \frac{1}{10} \sum_{j=0}^{9} \frac{\text{Adv}_{i,t-j-1}}{\text{Sales}_{i,t-j}}$$

# Advertising Ineffectiveness (Cont'd)

- $neA2S5_{i,t}$ = the industry normalized 5-year correlation between the *i*th firm's ratio of the last year's advertising expenditures and its the current sales:

$$neA2S5_{i,t} = \frac{eA2S5_{i,t} - \min_{i \in 2\text{digit SIC}} \{eA2S5_{i,t}\}}{\max_{i \in 2\text{digit SIC}} \{eA2S5_{i,t}\} - \min_{i \in 2\text{digit SIC}} \{eA2S5_{i,t}\}}$$

*where:*

$$eA2S5_t = \frac{\frac{1}{5}\sum_{k=0}^{4}\left[\log(Adv_{t-1-k}) - \frac{1}{5}\sum_{j=0}^{4}\log(Adv_{t-1-j})\right]\left[\log(Sales_{t-k}) - \frac{1}{5}\sum_{j=0}^{4}\log(Sales_{t-j})\right]}{\left(\sum_{k=0}^{4}\left[\log(Adv_{t-1-k}) - \frac{1}{5}\sum_{j=0}^{4}\log(Adv_{t-1-j})\right]^2 \sum_{k=0}^{4}\left[\log(Sales_{t-k}) - \frac{1}{5}\sum_{j=0}^{4}\log(Sales_{t-j})\right]^2\right)^{\frac{1}{2}}}$$

# Credit Spread's Model

- We estimate the following panel regression:

$$\text{CSPRD}_{b,i,t} = \alpha + \beta_1 \text{VISIBILITY}_{i,t} + \beta_2 \text{INEFFECTIVENESS}_{i,t} + \Phi_{b,i,t} X_{b,i,t} + \varepsilon_{b,i,t}$$

where $\boldsymbol{X}_{b,i,t}$ includes credit rating (CRD), Treasury bill yield (LEVEL), Treasury term spread (SLOPE), Euro dollar-Treasury bill yield spread (EUROD), the natural log of bond's age (LogAGE), the natural log of years-to-maturity (LogMAT), stock return's volatility (RETVOL), bond's liquidity (LIQ), ratio of total debt to capital (TD2Cap), long-term debt-to-assets ratio (LTDB), earnings volatility (EARNVOL), quick ratio (QUIK), EBITDA to assets ratio (ROA), and four interest coverage dummies per Blume et al. (1998) (INTD1, INTD2, INTD3, and INTD4) (plus Fixed Effects, clustering, etc.).

# Bond Liquidity's Model

- We estimate the following panel regression:

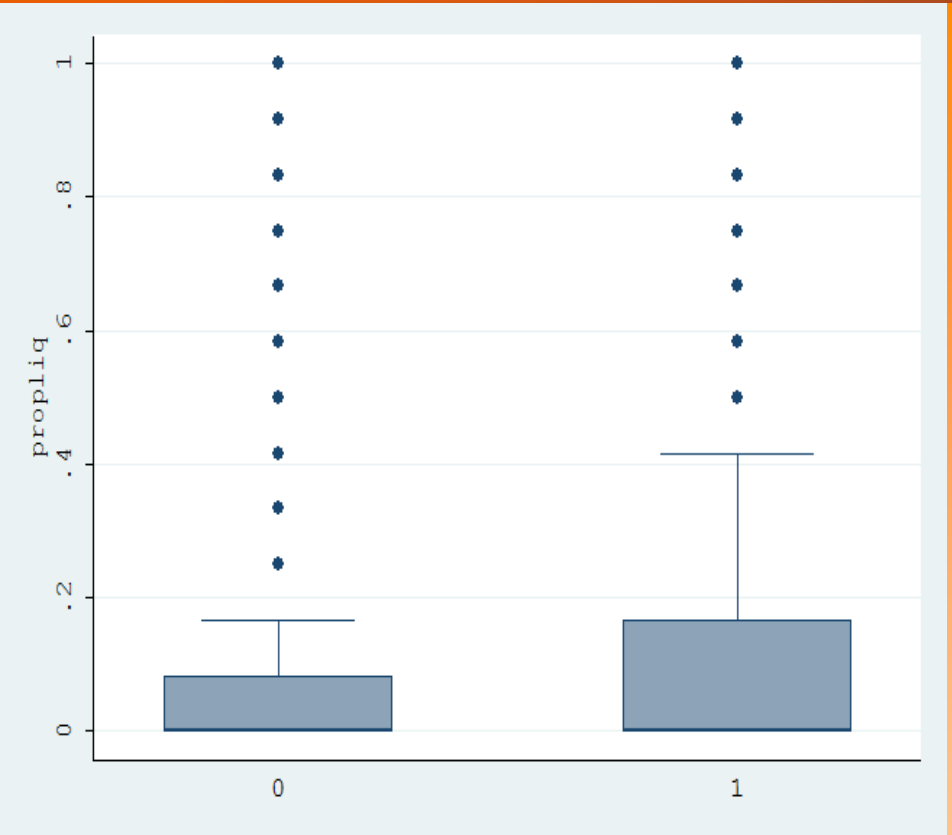
$$\text{Liquidity}_{b,i,t} = \delta + \lambda_1 \text{VISIBILITY}_{i,t} + \lambda_2 \text{INEFFECTIVENESS}_{i,t} + \Theta_{b,i,t} Z_{b,i,t} + \varsigma_{b,i,t}$$

where $\boldsymbol{Z}_{b,i,t}$ includes credit rating (CRD), the natural log of a bond's age (years after issuance) (LogAGE), the natural log of years-to-maturity (LogMAT), firm size (SIZE), trading volume (LogEVolm) of a firm's stock, and bond yield volatility (YldVOL) (plus Fixed Effects, clustering, etc.).

# Data

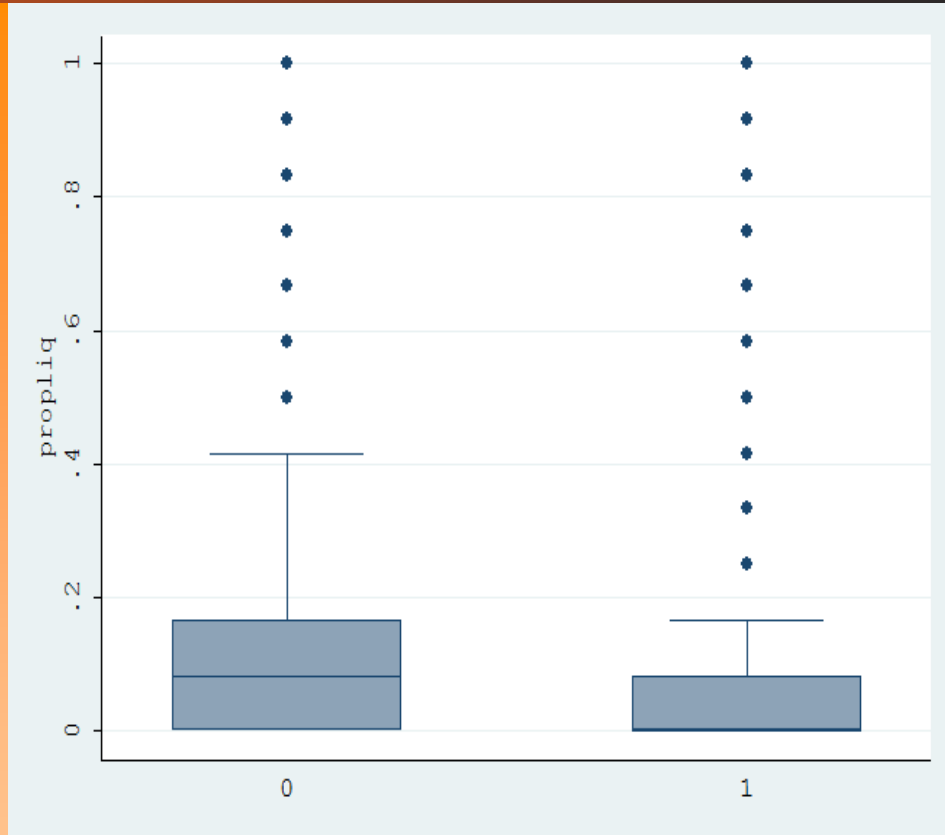
- Corporate bond data is from Mergent's FISD
  - Jan 1994 to Dec 2006
  - Plain vanilla corporate bonds, excluding callable, putable, convertible, and other optionalities
- Accounting information is from COMPUSTAT
  - Annual data matched with one-year lagged basis with FISD
- Federal Reserve Board
  - Interest rates (Treasury constant-maturity yields)
- SP500 options prices from Optionmetrics
  - Probability of jumps per Collin-DuFrense et al. (2001)
- CBOE's VIX index

# Heuristics: Liquidity




**Visibility**

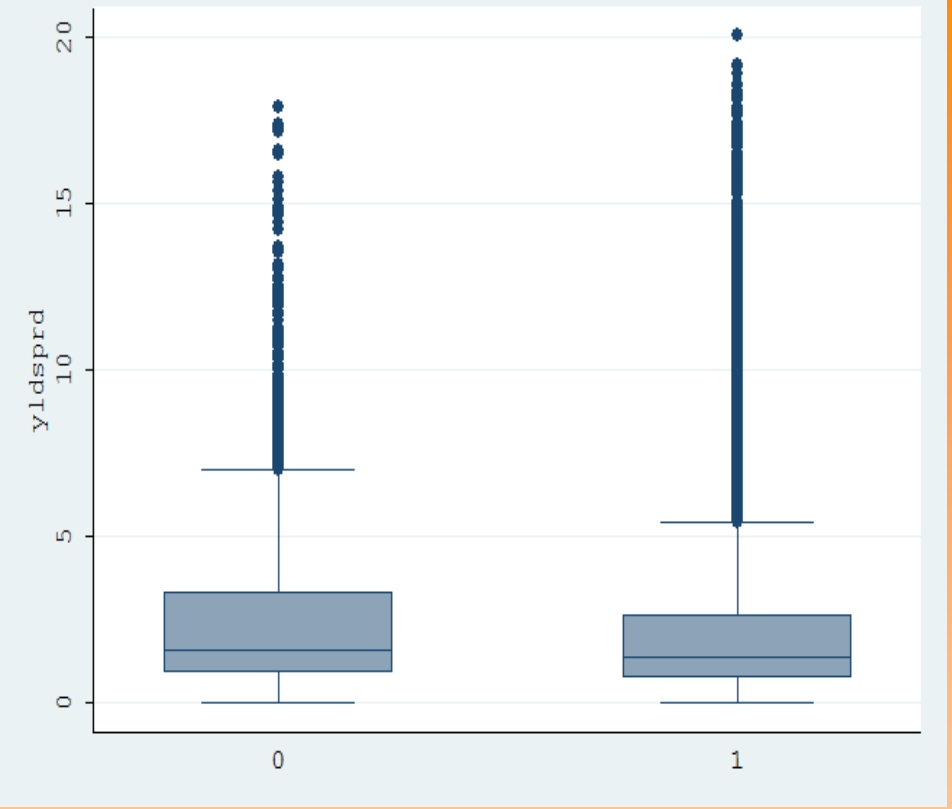
low high




**Effectiveness**

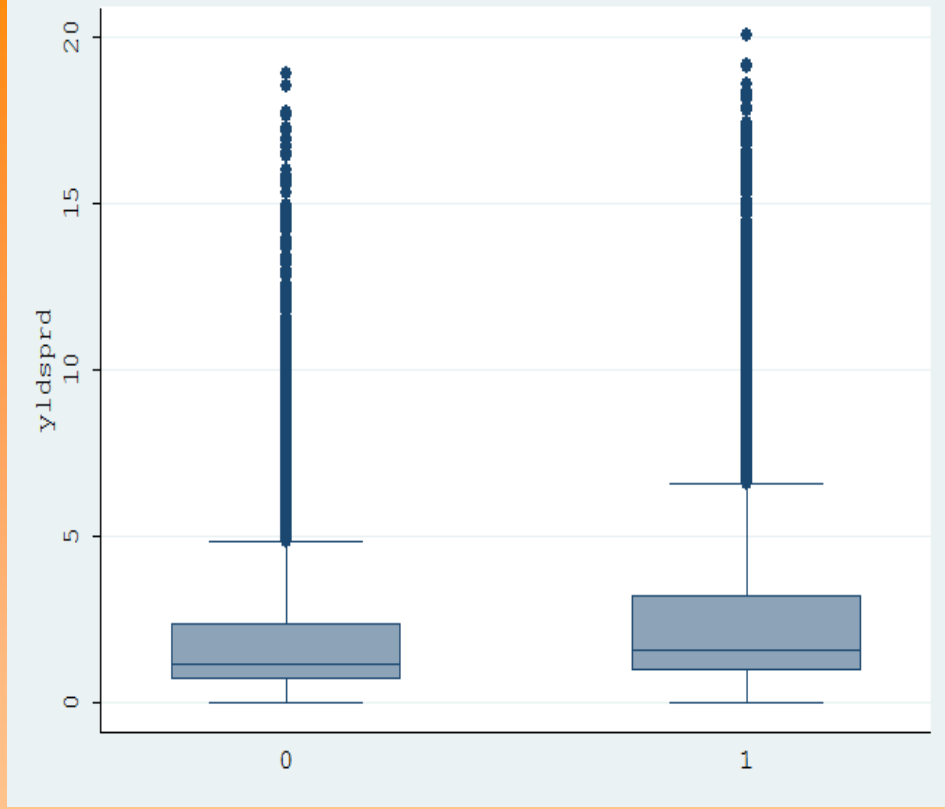
high low

# Heuristics: Spreads




**Visibility**

low high




**Effectiveness**

high low

# Univariate: Credit Spreads

| | Small Advertisers | | Large Advertisers | | |
|---|---|---|---|---|---|
| | NOBS | CSPRD | NOBS | CSPRD | Diff. |
| All Firms | 13,937 | 2.848 | 13,914 | 1.533 | -1.314[a] |
| *Panel A. Credit Rating*: | | | | | |
| AAA, AA+, AA, AA- | | | | | |
| A+, A, A- | 464 | 0.627 | 2,510 | 0.765 | 0.138[a] |
| BBB+, BBB, BBB- | 3,419 | 1.067 | 5,764 | 1.058 | -0.008 |
| BB+, BB, BB- | 4,303 | 2.004 | 4,370 | 1.860 | -0.145[a] |
| B+, B, B- | 2,861 | 3.474 | 987 | 3.630 | 0.155[b] |
| CCC+ and less | 2,370 | 5.400 | 250 | 5.374 | -0.026 |
| *Panel B. Maturity*: | 520 | 8.438 | 33 | 8.003 | -0.435 |
| Short-term (7 ≤ yrs.) | | | | | |
| Medium-term (7 < yrs. ≤ 12) | 7,304 | 3.048 | 5,958 | 1.311 | -1.737[a] |
| Long-term (yrs. > 12) | 4,133 | 2.911 | 2,946 | 1.386 | -1.525[a] |
| *Panel C. Firm Size*: | 2,500 | 2.157 | 5,010 | 1.884 | -0.272[a] |
| Small Firms (Bottom 33%) | | | | | |
| Medium Firms (Mid 33%) | 6,353 | 3.675 | 463 | 3.274 | -0.401[a] |
| Large Firms (Top 33%) | 5,163 | 2.518 | 3,973 | 1.806 | -0.712[a] |
| *Panel D. Leverage*: | 2,421 | 1.379 | 9,478 | 1.334 | -0.045 |
| Low (Bottom 33%) | | | | | |
| Medium (Mid 33%) | 4,613 | 1.802 | 4,180 | 1.238 | -0.564[a] |
| High (Top 33%) | 4,488 | 2.486 | 5,259 | 1.557 | -0.930[a] |

# Univariate: Credit Spreads

| | Effective Advertisers | | Ineffective Advertisers | | |
|---|---|---|---|---|---|
| | NOBS | CSPRD | NOBS | CSPRD | Diff. |
| All Firms | 13,955 | 2.142 | 13,896 | 2.241 | 0.099[a] |
| *Panel A. Credit Rating*: | | | | | |
| AAA, AA+, AA, AA- | 1,540 | 0.668 | 1,434 | 0.824 | 0.156[a] |
| A+, A, A- | 4,147 | 0.957 | 5,036 | 1.147 | 0.190[a] |
| BBB+, BBB, BBB- | 4,256 | 1.763 | 4,417 | 2.093 | 0.330[a] |
| BB+, BB, BB- | 2,026 | 3.206 | 1,822 | 3.857 | 0.651 |
| B+, B, B- | 1,708 | 5.022 | 912 | 6.099 | 1.077[a] |
| CCC+ and less | 278 | 8.319 | 275 | 8.506 | 0.187 |
| *Panel B. Maturity*: | | | | | |
| Short-term ($7 \leq$ yrs.) | 6,981 | 2.237 | 6,281 | 2.302 | 0.065 |
| Medium-term ($7 <$ yrs. $\leq 12$) | 4,015 | 2.288 | 3,064 | 2.262 | -0.026 |
| Long-term (yrs. $> 12$) | 2,959 | 1.719 | 4,551 | 2.142 | 0.423[a] |
| *Panel C. Firm Size*: | | | | | |
| Small Firms (Bottom 33%) | 4,171 | 3.588 | 2,645 | 3.743 | 0.155 |
| Medium Firms (Mid 33%) | 4,325 | 2.009 | 4,811 | 2.388 | 0.380 [a] |
| Large Firms (Top 33%) | 5,459 | 1.142 | 6,440 | 1.513 | 0.371[a] |
| *Panel D. Leverage*: | | | | | |
| Low (Bottom 33%) | 4,973 | 1.483 | 3,820 | 1.600 | 0.117[a] |
| Medium (Mid 33%) | 4,666 | 1.860 | 5,081 | 2.099 | 0.239[a] |
| High (Top 33%) | 4,316 | 3.205 | 4,995 | 2.875 | -0.331[a] |

# Multivariate: Credit Spread

$$\text{CSPRD}_{b,i,t} = \alpha + \beta_1 \text{VISIBILITY}_{i,t} + \beta_2 \text{INEFFECTIVENESS}_{i,t} + \Phi_{b,i,t}\mathbf{X}_{b,i,t} + \varepsilon_{b,i,t}$$

| | Model (1) | Model (2) | Model (3) | Model (4) | Model (5) | Model (6) | Model (7) | Model (8) |
|---|---|---|---|---|---|---|---|---|
| **nLOGADV0** | **0.079** | | **0.036** | | **-0.074** | | **-0.125** | |
| | **(0.49)** | | **(0.23)** | | **(-0.49)** | | **(-0.83)** | |
| **nLOGADV1** | | **0.074** | | **-0.025** | | **-0.087** | | **-0.211** |
| | | **(0.40)** | | **(-0.13)** | | **(-0.52)** | | **(-1.18)** |
| **nAvgA2SL** | **3.334*** | **3.332*** | | | **3.727*** | **3.751**** | | |
| | **(1.81)** | **(1.83)** | | | **(1.96)** | **(1.97)** | | |
| **neA2S5** | | | **0.463***** | **0.470***** | | | **0.561***** | **0.579***** |
| | | | **(2.78)** | **(2.77)** | | | **(3.32)** | **(3.33)** |
| Bond Attrib. | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Macro Var. | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Character. | | | | | Yes | Yes | Yes | Yes |
| N. Obs. | 27,792 | 27,792 | 27,792 | 27,792 | 27,792 | 27,792 | 27,792 | 27,792 |
| Adj. RSQ | 0.5849 | 0.5849 | 0.5871 | 0.5870 | 0.6145 | 0.6145 | 0.6178 | 0.6179 |

# Multivariate: Credit Spread

$$\text{CSPRD}_{b,i,t} = \alpha + \beta_1 \text{VISIBILITY}_{i,t} + \beta_2 \text{INEFFECTIVENESS}_{i,t} + \Phi_{b,i,t}\mathbf{X}_{b,i,t} + \varepsilon_{b,i,t}$$

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| Bond Attrib. | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Macro Var. | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Character. | | | | | Yes | Yes | Yes | Yes |
| N. Obs. | 27,792 | 27,792 | 27,792 | 27,792 | 27,792 | 27,792 | 27,792 | 27,792 |
| Adj. RSQ | 0.5849 | 0.5849 | 0.5871 | 0.5870 | 0.6145 | 0.6145 | 0.6178 | 0.6179 |

# Advertising & Spreads by Categories

| | AAA – AA Rated | A – BBB Rated | BB – C Rated | Short-term Debt ( < 7 yrs.) | Mid-term Debt | Long-term Debt (> 12 yrs.) |
|---|---|---|---|---|---|---|
| N. Obs. | 2,969 | 17,825 | 6,998 | 13,241 | 7,053 | 7,498 |
| nLOGADV0 | 0.041 | -0.128 | **0.525*** | -0.177 | 0.086 | 0.115 |
| | (0.70) | (-1.01) | **(1.68)** | (-0.86) | (0.51) | (0.69) |
| nAvgA2SL | -0.132 | 4.710 | **8.774*** | **4.242**** | 2.483 | 3.842 |
| | (-0.43) | (1.45) | **(1.83)** | **(2.46)** | (1.07) | (1.14) |
| *Adj. RSQ* | *0.3152* | *0.4000* | *0.5250* | *0.6305* | *0.6495* | *0.5811* |
| nLOGADV1 | 0.069 | -0.155 | **0.618*** | -0.178 | 0.075 | 0.129 |
| | (1.07) | (-1.10) | **(1.68)** | (-0.74) | (0.38) | (0.71) |
| nAvgA2SL | -0.138 | 4.793 | **8.598*** | **4.262**** | 2.483 | 3.821 |
| | (-0.46) | (1.46) | **(1.82)** | **(2.46)** | (1.06) | (1.14) |
| *Adj. RSQ* | *0.3154* | *0.4001* | *0.5249* | *0.6305* | *0.6495* | *0.5811* |
| nLOGADV0 | 0.065 | -0.105 | 0.239 | -0.212 | 0.032 | 0.066 |
| | (1.15) | (-0.72) | (0.73) | (-1.02) | (0.20) | (0.36) |
| neA2S5 | -0.088 | **0.281**** | **1.262***** | **0.549**** | **0.717***** | **0.380**** |
| | (-1.25) | **(2.04)** | **(3.39)** | **(2.54)** | **(3.27)** | **(2.10)** |
| *Adj. RSQ* | *0.3168* | *0.3999* | *0.5339* | *0.6324* | *0.6561* | *0.5837* |
| nLOGADV1 | **0.110*** | -0.151 | 0.129 | -0.281 | -0.081 | 0.036 |
| | **(1.79)** | (-0.84) | (0.33) | (-1.11) | (-0.42) | (0.17) |
| neA2S5 | -0.097 | **0.292**** | **1.276***** | **0.567**** | **0.731***** | **0.382**** |
| | (-1.36) | **(2.03)** | **(3.38)** | **(2.56)** | **(3.26)** | **(2.06)** |
| *Adj. RSQ* | *0.3173* | *0.4001* | *0.5336* | *0.6324* | *0.6561* | *0.5837* |

# Advertising & Spreads by Categories

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|---|---|---|---|---|---|---|
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| nLOGADV0 | 0.041 | -0.128 | **0.525*** | -0.177 | 0.086 | 0.115 |
| | (0.70) | (-1.01) | **(1.68)** | (-0.86) | (0.51) | (0.69) |
| nAvgA2SL | -0.132 | 4.710 | **8.774*** | **4.242**** | 2.483 | 3.842 |
| | (-0.43) | (1.45) | **(1.83)** | **(2.46)** | (1.07) | (1.14) |
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| | (1.07) | (-1.10) | **(1.68)** | (-0.74) | (0.38) | (0.71) |
| nAvgA2SL | -0.138 | 4.793 | **8.598*** | **4.262**** | 2.483 | 3.821 |
| | (-0.46) | (1.46) | **(1.82)** | **(2.46)** | (1.06) | (1.14) |
| *Adj. RSQ* | *0.3154* | *0.4001* | *0.5249* | *0.6305* | *0.6495* | *0.5811* |
| nLOGADV0 | 0.065 | -0.105 | 0.239 | -0.212 | 0.032 | 0.066 |
| | (1.15) | (-0.72) | (0.73) | (-1.02) | (0.20) | (0.36) |
| neA2S5 | -0.088 | **0.281**** | **1.262***** | **0.549**** | **0.717***** | **0.380**** |
| | (-1.25) | **(2.04)** | **(3.39)** | **(2.54)** | **(3.27)** | **(2.10)** |
| *Adj. RSQ* | *0.3168* | *0.3999* | *0.5339* | *0.6324* | *0.6561* | *0.5837* |
| nLOGADV1 | **0.110*** | -0.151 | 0.129 | -0.281 | -0.081 | 0.036 |
| | **(1.79)** | (-0.84) | (0.33) | (-1.11) | (-0.42) | (0.17) |
| neA2S5 | -0.097 | **0.292**** | **1.276***** | **0.567**** | **0.731***** | **0.382**** |
| | (-1.36) | **(2.03)** | **(3.38)** | **(2.56)** | **(3.26)** | **(2.06)** |
| *Adj. RSQ* | *0.3173* | *0.4001* | *0.5336* | *0.6324* | *0.6561* | *0.5837* |

# Advertising & Spreads by Categories

| | AAA – AA Rated | A – BBB Rated | BB – C Rated | Short-term Debt ( < 7 yrs.) | Mid-term Debt | Long-term Debt (> 12 yrs.) |
|---|---|---|---|---|---|---|
| N. Obs. | 2,969 | 17,825 | 6,998 | 13,241 | 7,053 | 7,498 |
| nLOGADV0 | 0.041 | -0.128 | **0.525*** | -0.177 | 0.086 | 0.115 |
| | (0.70) | (-1.01) | **(1.68)** | (-0.86) | (0.51) | (0.69) |
| nAvgA2SL | -0.132 | 4.710 | **8.774*** | **4.242**** | 2.483 | 3.842 |
| | (-0.43) | (1.45) | **(1.83)** | **(2.46)** | (1.07) | (1.14) |
| *Adj. RSQ* | *0.3152* | *0.4000* | *0.5250* | *0.6305* | *0.6495* | *0.5811* |
| nLOGADV1 | 0.069 | -0.155 | **0.618*** | -0.178 | 0.075 | 0.129 |
| | (1.07) | (-1.10) | **(1.68)** | (-0.74) | (0.38) | (0.71) |
| nAvgA2SL | -0.138 | 4.793 | **8.598*** | **4.262**** | 2.483 | 3.821 |
| | (-0.46) | (1.46) | **(1.82)** | **(2.46)** | (1.06) | (1.14) |
| *Adj. RSQ* | *0.3154* | *0.4001* | *0.5249* | *0.6305* | *0.6495* | *0.5811* |
| nLOGADV0 | 0.065 | -0.105 | 0.239 | -0.212 | 0.032 | 0.066 |
| | (1.15) | (-0.72) | (0.73) | (-1.02) | (0.20) | (0.36) |
| neA2S5 | -0.088 | **0.281**** | **1.262***** | **0.549**** | **0.717***** | **0.380**** |
| | (-1.25) | **(2.04)** | **(3.39)** | **(2.54)** | **(3.27)** | **(2.10)** |
| *Adj. RSQ* | *0.3168* | *0.3999* | *0.5339* | *0.6324* | *0.6561* | *0.5837* |
| nLOGADV1 | **0.110*** | -0.151 | 0.129 | -0.281 | -0.081 | 0.036 |
| | **(1.79)** | (-0.84) | (0.33) | (-1.11) | (-0.42) | (0.17) |
| neA2S5 | -0.097 | **0.292**** | **1.276***** | **0.567**** | **0.731***** | **0.382**** |
| | (-1.36) | **(2.03)** | **(3.38)** | **(2.56)** | **(3.26)** | **(2.06)** |
| *Adj. RSQ* | *0.3173* | *0.4001* | *0.5336* | *0.6324* | *0.6561* | *0.5837* |

# Advertising & Spreads by Categories

| | Small-Cap Firms | Mid-Cap Firms | Large-Cap Firms | Low Leverage | Medium Leverage | High Leverage |
|---|---|---|---|---|---|---|
| N. Obs. | 6,794 | 9,119 | 11,879 | 8,777 | 9,729 | 9,286 |
| nLOGADV0 | **0.480**** | -0.113 | 0.083 | -0.097 | 0.027 | -0.175 |
| | **(1.99)** | (-0.34) | (0.53) | (-0.47) | (0.12) | (-0.70) |
| nAvgA2SL | **5.145*** | **10.634*** | -0.127 | 1.418 | **6.144**** | -0.308 |
| | **(1.75)** | **(1.96)** | (-0.10) | (0.86) | **(2.10)** | (-0.13) |
| *Adj. RSQ* | *0.5976* | *0.6577* | *0.5279* | *0.4922* | *0.5455* | *0.6607* |
| nLOGADV1 | 0.337 | 0.086 | 0.176 | -0.114 | 0.074 | -0.175 |
| | (1.26) | (0.27) | (0.87) | (-0.51) | (0.28) | (-0.61) |
| nAvgA2SL | **5.023*** | **10.202*** | -0.216 | 1.436 | **6.086**** | -0.306 |
| | **(1.70)** | **(1.91)** | (-0.17) | (0.86) | **(2.08)** | (-0.13) |
| *Adj. RSQ* | *0.5966* | *0.6576* | *0.5282* | *0.4922* | *0.5455* | *0.6606* |
| nLOGADV0 | 0.385 | 0.042 | 0.022 | -0.116 | -0.002 | -0.273 |
| | (1.53) | (0.11) | (0.14) | (-0.59) | (-0.01) | (-1.12) |
| neA2S5 | **0.600**** | **0.460**** | 0.476 | 0.088 | **0.735***** | **1.185***** |
| | **(2.05)** | **(2.21)** | (1.62) | (0.50) | **(2.96)** | **(2.65)** |
| *Adj. RSQ* | *0.5995* | *0.6546* | *0.5349* | *0.4922* | *0.5507* | *0.6689* |
| nLOGADV1 | 0.185 | 0.174 | 0.024 | -0.151 | 0.004 | **-0.475*** |
| | (0.65) | (0.43) | (0.10) | (-0.75) | (0.01) | **(-1.74)** |
| neA2S5 | **0.622**** | **0.442**** | 0.474 | 0.097 | **0.735***** | **1.247***** |
| | **(2.08)** | **(2.03)** | (1.55) | (0.56) | **(2.92)** | **(2.75)** |
| *Adj. RSQ* | *0.5987* | *0.6547* | *0.5349* | *0.4923* | *0.5507* | *0.6695* |

# Advertising & Spreads by Categories

| | Small-Cap Firms | Mid-Cap Firms | Large-Cap Firms | Low Leverage | Medium Leverage | High Leverage |
|---|---|---|---|---|---|---|
| N. Obs. | 6,794 | 9,119 | 11,879 | 8,777 | 9,729 | 9,286 |
| nLOGADV0 | **0.480**** | -0.113 | 0.083 | -0.097 | 0.027 | -0.175 |
| | **(1.99)** | (-0.34) | (0.53) | (-0.47) | (0.12) | (-0.70) |
| nAvgA2SL | **5.145*** | **10.634*** | -0.127 | 1.418 | **6.144**** | -0.308 |
| | **(1.75)** | **(1.96)** | (-0.10) | (0.86) | **(2.10)** | (-0.13) |
| *Adj. RSQ* | *0.5976* | *0.6577* | *0.5279* | *0.4922* | *0.5455* | *0.6607* |
| nLOGADV1 | 0.337 | 0.086 | 0.176 | -0.114 | 0.074 | -0.175 |
| | (1.26) | (0.27) | (0.87) | (-0.51) | (0.28) | (-0.61) |
| nAvgA2SL | **5.023*** | **10.202*** | -0.216 | 1.436 | **6.086**** | -0.306 |
| | **(1.70)** | **(1.91)** | (-0.17) | (0.86) | **(2.08)** | (-0.13) |
| *Adj. RSQ* | *0.5966* | *0.6576* | *0.5282* | *0.4922* | *0.5455* | *0.6606* |
| nLOGADV0 | 0.385 | 0.042 | 0.022 | -0.116 | -0.002 | -0.273 |
| | (1.53) | (0.11) | (0.14) | (-0.59) | (-0.01) | (-1.12) |
| neA2S5 | **0.600**** | **0.460**** | 0.476 | 0.088 | **0.735***** | **1.185***** |
| | **(2.05)** | **(2.21)** | (1.62) | (0.50) | **(2.96)** | **(2.65)** |
| *Adj. RSQ* | *0.5995* | *0.6546* | *0.5349* | *0.4922* | *0.5507* | *0.6689* |
| nLOGADV1 | 0.185 | 0.174 | 0.024 | -0.151 | 0.004 | **-0.475*** |
| | (0.65) | (0.43) | (0.10) | (-0.75) | (0.01) | **(-1.74)** |
| neA2S5 | **0.622**** | **0.442**** | 0.474 | 0.097 | **0.735***** | **1.247***** |
| | **(2.08)** | **(2.03)** | (1.55) | (0.56) | **(2.92)** | **(2.75)** |
| *Adj. RSQ* | *0.5987* | *0.6547* | *0.5349* | *0.4923* | *0.5507* | *0.6695* |

# Advertising & Spreads by Categories

| | Small-Cap Firms | Mid-Cap Firms | Large-Cap Firms | Low Leverage | Medium Leverage | High Leverage |
|---|---|---|---|---|---|---|
| N. Obs. | 6,794 | 9,119 | 11,879 | 8,777 | 9,729 | 9,286 |
| nLOGADV0 | **0.480**** | -0.113 | 0.083 | -0.097 | 0.027 | -0.175 |
| | **(1.99)** | (-0.34) | (0.53) | (-0.47) | (0.12) | (-0.70) |
| nAvgA2SL | **5.145*** | **10.634*** | -0.127 | 1.418 | **6.144**** | -0.308 |
| | **(1.75)** | **(1.96)** | (-0.10) | (0.86) | **(2.10)** | (-0.13) |
| *Adj. RSQ* | *0.5976* | *0.6577* | *0.5279* | *0.4922* | *0.5455* | *0.6607* |
| nLOGADV1 | 0.337 | 0.086 | 0.176 | -0.114 | 0.074 | -0.175 |
| | (1.26) | (0.27) | (0.87) | (-0.51) | (0.28) | (-0.61) |
| nAvgA2SL | **5.023*** | **10.202*** | -0.216 | 1.436 | **6.086**** | -0.306 |
| | **(1.70)** | **(1.91)** | (-0.17) | (0.86) | **(2.08)** | (-0.13) |
| *Adj. RSQ* | *0.5966* | *0.6576* | *0.5282* | *0.4922* | *0.5455* | *0.6606* |
| nLOGADV0 | 0.385 | 0.042 | 0.022 | -0.116 | -0.002 | -0.273 |
| | (1.53) | (0.11) | (0.14) | (-0.59) | (-0.01) | (-1.12) |
| neA2S5 | **0.600**** | **0.460**** | 0.476 | 0.088 | **0.735***** | **1.185***** |
| | **(2.05)** | **(2.21)** | (1.62) | (0.50) | **(2.96)** | **(2.65)** |
| *Adj. RSQ* | *0.5995* | *0.6546* | *0.5349* | *0.4922* | *0.5507* | *0.6689* |
| nLOGADV1 | 0.185 | 0.174 | 0.024 | -0.151 | 0.004 | **-0.475*** |
| | (0.65) | (0.43) | (0.10) | (-0.75) | (0.01) | **(-1.74)** |
| neA2S5 | **0.622**** | **0.442**** | 0.474 | 0.097 | **0.735***** | **1.247***** |
| | **(2.08)** | **(2.03)** | (1.55) | (0.56) | **(2.92)** | **(2.75)** |
| *Adj. RSQ* | *0.5987* | *0.6547* | *0.5349* | *0.4923* | *0.5507* | *0.6695* |

# Univariate: Liquidity

| | Effective Advertisers | | Ineffective Advertisers | | |
|---|---|---|---|---|---|
| | LIQ | LogTVolm | LIQ | LogTVolm | |
| All Firms | 0.125 | 0.914 | 0.100 | 0.745 | a, a |
| *Panel A. Credit Rating*: | | | | | |
| AAA, AA+, AA, AA- | 0.163 | 1.127 | 0.105 | 0.811 | a, a |
| A+, A, A- | 0.122 | 0.890 | 0.094 | 0.658 | a, a |
| BBB+, BBB, BBB- | 0.140 | 1.026 | 0.115 | 0.885 | a, a |
| BB+, BB, BB- | 0.104 | 0.782 | 0.099 | 0.709 | –, a |
| B+, B, B- | 0.098 | 0.746 | 0.075 | 0.576 | a, a |
| CCC+ and less | 0.045 | 0.367 | 0.059 | 0.517 | –, a |
| *Panel B. Maturity*: | | | | | |
| Short-term (7 ≤yrs.) | 0.130 | 0.925 | 0.102 | 0.749 | a, a |
| Medium-term (7 < yrs. ≤ 12) | 0.140 | 1.077 | 0.121 | 0.943 | a, a |
| Long-term (yrs. > 12) | 0.094 | 0.666 | 0.084 | 0.605 | a, a |
| *Panel C. Firm Size*: | | | | | |
| Small Firms (Bottom 33%) | 0.085 | 0.615 | 0.067 | 0.522 | b, a |
| Medium Firms (Mid 33%) | 0.110 | 0.810 | 0.090 | 0.638 | a, a |
| Large Firms (Top 33%) | 0.167 | 1.225 | 0.122 | 0.916 | a, a |
| *Panel D. Leverage*: | | | | | |
| Low (Bottom 33%) | 0.140 | 1.012 | 0.082 | 0.596 | c, b |
| Medium (Mid 33%) | 0.133 | 0.984 | 0.110 | 0.827 | a, a |
| High (Top 33%) | 0.099 | 0.726 | 0.105 | 0.775 | a, a |

# Univariate: Liquidity

| | Effective Advertisers | | Ineffective Advertisers | | |
|---|---|---|---|---|---|
| | LIQ | LogTVolm | LIQ | LogTVolm | |
| All Firms | 0.091 | 0.674 | 0.135 | 0.986 | a, a |
| *Panel A. Credit Rating*: | | | | | |
| AAA, AA+, AA, AA- | 0.101 | 0.708 | 0.141 | 1.024 | b, a |
| A+, A, A- | 0.082 | 0.615 | 0.121 | 0.850 | a, a |
| BBB+, BBB, BBB- | 0.095 | 0.696 | 0.159 | 1.209 | a, a |
| BB+, BB, BB- | 0.102 | 0.747 | 0.103 | 0.748 | –, – |
| B+, B, B- | 0.089 | 0.681 | 0.099 | 0.743 | –, – |
| CCC+ and less | 0.049 | 0.403 | 0.091 | 1.054 | a, a |
| *Panel B. Maturity*: | | | | | |
| Short-term (7 ≤yrs.) | 0.091 | 0.665 | 0.148 | 1.058 | a, a |
| Medium-term (7 < yrs. ≤ 12) | 0.111 | 0.848 | 0.161 | 1.259 | a, a |
| Long-term (yrs. > 12) | 0.056 | 0.409 | 0.104 | 0.739 | a, a |
| *Panel C. Firm Size*: | | | | | |
| Small Firms (Bottom 33%) | 0.079 | 0.577 | 0.072 | 0.601 | –, – |
| Medium Firms (Mid 33%) | 0.090 | 0.660 | 0.111 | 0.796 | a, a |
| Large Firms (Top 33%) | 0.124 | 0.955 | 0.148 | 1.084 | a, a |
| *Panel D. Leverage*: | | | | | |
| Low (Bottom 33%) | 0.076 | 0.543 | 0.158 | 1.150 | a, a |
| Medium (Mid 33%) | 0.111 | 0.834 | 0.130 | 0.960 | a, a |
| High (Top 33%) | 0.087 | 0.649 | 0.119 | 0.863 | a, a |

# Multivariate: Bond Liquidity

$$\text{Liquidity}_{b,i,t} = \delta + \lambda_1 \text{VISIBILITY}_{i,t} + \lambda_2 \text{INEFFECTIVENESS}_{i,t} + \Theta_{b,i,t}\mathbf{Z}_{b,i,t} + \varsigma_{b,i,t}$$

| | LIQ | FLIQ | LogDVolm | F LogDVolm | LogTVolm | FLogTVolm |
|---|---|---|---|---|---|---|
| **nLOGADV0** | **0.033**** | **0.028*** | **2.128***** | **1.796***** | **0.244**** | **0.240**** |
| | **(2.49)** | **(1.94)** | **(4.13)** | **(3.29)** | **(2.47)** | **(2.00)** |
| **neA2S5** | **-0.045***** | **-0.039***** | **-2.253***** | **-1.968***** | **-0.382***** | **-0.388***** |
| | **(-3.01)** | **(-2.76)** | **(-4.15)** | **(-3.53)** | **(-3.65)** | **(-3.27)** |
| CRD | 0.003* | 0.002 | 0.108* | 0.077 | 0.025** | 0.024* |
| | (1.77) | (1.25) | (1.91) | (1.33) | (2.13) | (1.84) |
| SIZE | 0.017*** | 0.017*** | 0.665*** | 0.674*** | 0.126*** | 0.155*** |
| | (3.21) | (3.53) | (3.62) | (3.62) | (3.12) | (3.46) |
| LogEVolm | 0.015*** | 0.013*** | 0.495*** | 0.563*** | 0.116*** | 0.125*** |
| | (3.84) | (3.42) | (3.19) | (3.70) | (3.43) | (3.33) |
| YldVOL | 0.186*** | 0.030** | 6.067*** | 1.860*** | 1.007*** | 0.322*** |
| | (3.37) | (2.40) | (3.70) | (3.43) | (3.76) | (3.14) |
| LogAGE | -0.013*** | -0.034*** | -0.829*** | -1.428*** | -0.136*** | -0.303*** |
| | (-6.39) | (-13.59) | (-9.18) | (-16.63) | (-8.55) | (-15.28) |
| LogMAT | -0.016*** | -0.011*** | -0.542*** | -0.523*** | -0.109*** | -0.107*** |
| | (-4.30) | (-3.21) | (-4.15) | (-3.79) | (-4.25) | (-3.65) |
| *Adj. RSQ* | *0.0646* | *0.1049* | *0.0669* | *0.0923* | *0.0915* | *0.1333* |

# Multivariate: Bond Liquidity

$$\text{Liquidity}_{b,i,t} = \delta + \lambda_1 \text{VISIBILITY}_{i,t} + \lambda_2 \text{INEFFECTIVENESS}_{i,t} + \Theta_{b,i,t}\mathbf{Z}_{b,i,t} + \varsigma_{b,i,t}$$

| | LIQ | FLIQ | LogDVolm | F LogDVolm | LogTVolm | FLogTVolm |
|---|---|---|---|---|---|---|
| **nLOGADV0** | **0.033**** | **0.028*** | **2.128***** | **1.796***** | **0.244**** | **0.240**** |
| | **(2.49)** | **(1.94)** | **(4.13)** | **(3.29)** | **(2.47)** | **(2.00)** |
| **neA2S5** | **-0.045***** | **-0.039***** | **-2.253***** | **-1.968***** | **-0.382***** | **-0.388***** |
| | **(-3.01)** | **(-2.76)** | **(-4.15)** | **(-3.53)** | **(-3.65)** | **(-3.27)** |
| CRD | 0.003* | 0.002 | 0.108* | 0.077 | 0.025** | 0.024* |
| | (1.77) | (1.25) | (1.91) | (1.33) | (2.13) | (1.84) |
| SIZE | 0.017*** | 0.017*** | 0.665*** | 0.674*** | 0.126*** | 0.155*** |
| | (3.21) | (3.53) | (3.62) | (3.62) | (3.12) | (3.46) |
| LogEVolm | 0.015*** | 0.013*** | 0.495*** | 0.563*** | 0.116*** | 0.125*** |
| | (3.84) | (3.42) | (3.19) | (3.70) | (3.43) | (3.33) |
| YldVOL | 0.186*** | 0.030** | 6.067*** | 1.860*** | 1.007*** | 0.322*** |
| | (3.37) | (2.40) | (3.70) | (3.43) | (3.76) | (3.14) |
| LogAGE | -0.013*** | -0.034*** | -0.829*** | -1.428*** | -0.136*** | -0.303*** |
| | (-6.39) | (-13.59) | (-9.18) | (-16.63) | (-8.55) | (-15.28) |
| LogMAT | -0.016*** | -0.011*** | -0.542*** | -0.523*** | -0.109*** | -0.107*** |
| | (-4.30) | (-3.21) | (-4.15) | (-3.79) | (-4.25) | (-3.65) |
| *Adj. RSQ* | *0.0646* | *0.1049* | *0.0669* | *0.0923* | *0.0915* | *0.1333* |

# Multivariate: Bond Liquidity

$$\text{Liquidity}_{b,i,t} = \delta + \lambda_1 \text{VISIBILITY}_{i,t} + \lambda_2 \text{INEFFECTIVENESS}_{i,t} + \Theta_{b,i,t}\mathbf{Z}_{b,i,t} + \varsigma_{b,i,t}$$

| | LIQ | FLIQ | LogDVolm | F LogDVolm | LogTVolm | FLogTVolm |
|---|---|---|---|---|---|---|
| **nLOGADV0** | **0.033**** | **0.028*** | **2.128***** | **1.796***** | **0.244**** | **0.240**** |
| | **(2.49)** | **(1.94)** | **(4.13)** | **(3.29)** | **(2.47)** | **(2.00)** |
| **neA2S5** | **-0.045***** | **-0.039***** | **-2.253***** | **-1.968***** | **-0.382***** | **-0.388***** |
| | **(-3.01)** | **(-2.76)** | **(-4.15)** | **(-3.53)** | **(-3.65)** | **(-3.27)** |
| CRD | 0.003* | 0.002 | 0.108* | 0.077 | 0.025** | 0.024* |
| | (1.77) | (1.25) | (1.91) | (1.33) | (2.13) | (1.84) |
| SIZE | 0.017*** | 0.017*** | 0.665*** | 0.674*** | 0.126*** | 0.155*** |
| | (3.21) | (3.53) | (3.62) | (3.62) | (3.12) | (3.46) |
| LogEVolm | 0.015*** | 0.013*** | 0.495*** | 0.563*** | 0.116*** | 0.125*** |
| | (3.84) | (3.42) | (3.19) | (3.70) | (3.43) | (3.33) |
| YldVOL | 0.186*** | 0.030** | 6.067*** | 1.860*** | 1.007*** | 0.322*** |
| | (3.37) | (2.40) | (3.70) | (3.43) | (3.76) | (3.14) |
| LogAGE | -0.013*** | -0.034*** | -0.829*** | -1.428*** | -0.136*** | -0.303*** |
| | (-6.39) | (-13.59) | (-9.18) | (-16.63) | (-8.55) | (-15.28) |
| LogMAT | -0.016*** | -0.011*** | -0.542*** | -0.523*** | -0.109*** | -0.107*** |
| | (-4.30) | (-3.21) | (-4.15) | (-3.79) | (-4.25) | (-3.65) |
| *Adj. RSQ* | *0.0646* | *0.1049* | *0.0669* | *0.0923* | *0.0915* | *0.1333* |

# Advertising & Liquidity by Category

| | AAA – AA Rated | A – BBB Rated | BB – C Rated | Short-term Debt (< 7 yrs.) | Mid-term Debt | Long-term Debt (> 12 yrs. |
|---|---|---|---|---|---|---|
| N. Obs. | 2,969 | 17,831 | 6,997 | 13,243 | 7,051 | 7,503 |
| *Panel A. Dependent Variable is LIQ* | | | | | | |
| nLOGADV0 | -0.002 | 0.019 | **0.040**** | **0.036**** | **0.035**** | **0.036**** |
| | (-0.09) | (1.01) | **(2.51)** | **(2.07)** | **(2.02)** | **(2.44)** |
| neA2S5 | **-0.051**** | **-0.037*** | **-0.029**** | **-0.033*** | **-0.039*** | **-0.061***** |
| | **(-2.54)** | **(-1.76)** | **(-1.97)** | **(-1.79)** | **(-1.75)** | **(-4.36)** |
| Adj. RSQ | 0.1016 | 0.0702 | 0.0681 | 0.0655 | 0.0715 | 0.0787 |
| *Panel B. Dependent Variable is LogDVolm* | | | | | | |
| nLOGADV0 | 0.439 | **1.328*** | **3.029***** | **2.622***** | **1.919***** | **2.027***** |
| | (0.41) | **(1.96)** | **(4.56)** | **(3.93)** | **(2.71)** | **(2.84)** |
| neA2S5 | **-1.922**** | **-2.165***** | **-1.544**** | **-1.796***** | **-2.157***** | **-2.814***** |
| | **(-2.03)** | **(-2.99)** | **(-2.33)** | **(-2.99)** | **(-2.68)** | **(-4.07)** |
| Adj. RSQ | 0.1066 | 0.0776 | 0.0499 | 0.0668 | 0.0660 | 0.0765 |
| *Panel C. Dependent Variable is LogTVolm* | | | | | | |
| nLOGADV0 | 0.048 | 0.094 | **0.389***** | **0.266**** | **0.317**** | **0.197*** |
| | (0.32) | (0.70) | **(3.24)** | **(2.20)** | **(2.55)** | **(1.71)** |
| neA2S5 | **-0.380**** | **-0.347**** | **-0.238*** | **-0.291**** | **-0.356**** | **-0.482***** |
| | **(-2.47)** | **(-2.53)** | **(-1.93)** | **(-2.31)** | **(-2.31)** | **(-4.65)** |
| Adj. RSQ | 0.1477 | 0.1070 | 0.0684 | 0.0918 | 0.1030 | 0.1070 |

# Advertising & Liquidity by Category

| | AAA – AA Rated | A – BBB Rated | BB – C Rated | Short-term Debt (< 7 yrs.) | Mid-term Debt | Long-term Debt (> 12 yrs. |
|---|---|---|---|---|---|---|
| N. Obs. | 2,969 | 17,831 | 6,997 | 13,243 | 7,051 | 7,503 |
| *Panel A. Dependent Variable is LIQ* | | | | | | |
| nLOGADV0 | -0.002 | 0.019 | **0.040**** | **0.036**** | **0.035**** | **0.036**** |
| | (-0.09) | (1.01) | **(2.51)** | **(2.07)** | **(2.02)** | **(2.44)** |
| neA2S5 | **-0.051**** | **-0.037*** | **-0.029**** | **-0.033*** | **-0.039*** | **-0.061***** |
| | **(-2.54)** | **(-1.76)** | **(-1.97)** | **(-1.79)** | **(-1.75)** | **(-4.36)** |
| Adj. RSQ | 0.1016 | 0.0702 | 0.0681 | 0.0655 | 0.0715 | 0.0787 |
| *Panel B. Dependent Variable is LogDVolm* | | | | | | |
| nLOGADV0 | 0.439 | **1.328*** | **3.029***** | **2.622***** | **1.919***** | **2.027***** |
| | (0.41) | **(1.96)** | **(4.56)** | **(3.93)** | **(2.71)** | **(2.84)** |
| neA2S5 | **-1.922**** | **-2.165***** | **-1.544**** | **-1.796***** | **-2.157***** | **-2.814***** |
| | **(-2.03)** | **(-2.99)** | **(-2.33)** | **(-2.99)** | **(-2.68)** | **(-4.07)** |
| Adj. RSQ | 0.1066 | 0.0776 | 0.0499 | 0.0668 | 0.0660 | 0.0765 |
| *Panel C. Dependent Variable is LogTVolm* | | | | | | |
| nLOGADV0 | 0.048 | 0.094 | **0.389***** | **0.266**** | **0.317**** | **0.197*** |
| | (0.32) | (0.70) | **(3.24)** | **(2.20)** | **(2.55)** | **(1.71)** |
| neA2S5 | **-0.380**** | **-0.347**** | **-0.238*** | **-0.291**** | **-0.356**** | **-0.482***** |
| | **(-2.47)** | **(-2.53)** | **(-1.93)** | **(-2.31)** | **(-2.31)** | **(-4.65)** |
| Adj. RSQ | 0.1477 | 0.1070 | 0.0684 | 0.0918 | 0.1030 | 0.1070 |

# Advertising & Liquidity by Category

| | AAA – AA Rated | A – BBB Rated | BB – C Rated | Short-term Debt (< 7 yrs.) | Mid-term Debt | Long-term Debt (> 12 yrs. |
|---|---|---|---|---|---|---|
| N. Obs. | 2,969 | 17,831 | 6,997 | 13,243 | 7,051 | 7,503 |
| *Panel A. Dependent Variable is LIQ* | | | | | | |
| nLOGADV0 | -0.002 | 0.019 | **0.040**** | **0.036**** | **0.035**** | **0.036**** |
| | (-0.09) | (1.01) | **(2.51)** | **(2.07)** | **(2.02)** | **(2.44)** |
| neA2S5 | **-0.051**** | **-0.037*** | **-0.029**** | **-0.033*** | **-0.039*** | **-0.061***** |
| | **(-2.54)** | **(-1.76)** | **(-1.97)** | **(-1.79)** | **(-1.75)** | **(-4.36)** |
| Adj. RSQ | 0.1016 | 0.0702 | 0.0681 | 0.0655 | 0.0715 | 0.0787 |
| *Panel B. Dependent Variable is LogDVolm* | | | | | | |
| nLOGADV0 | 0.439 | **1.328*** | **3.029***** | **2.622***** | **1.919***** | **2.027***** |
| | (0.41) | **(1.96)** | **(4.56)** | **(3.93)** | **(2.71)** | **(2.84)** |
| neA2S5 | **-1.922**** | **-2.165***** | **-1.544**** | **-1.796***** | **-2.157***** | **-2.814***** |
| | **(-2.03)** | **(-2.99)** | **(-2.33)** | **(-2.99)** | **(-2.68)** | **(-4.07)** |
| Adj. RSQ | 0.1066 | 0.0776 | 0.0499 | 0.0668 | 0.0660 | 0.0765 |
| *Panel C. Dependent Variable is LogTVolm* | | | | | | |
| nLOGADV0 | 0.048 | 0.094 | **0.389***** | **0.266**** | **0.317**** | **0.197*** |
| | (0.32) | (0.70) | **(3.24)** | **(2.20)** | **(2.55)** | **(1.71)** |
| neA2S5 | **-0.380**** | **-0.347**** | **-0.238*** | **-0.291**** | **-0.356**** | **-0.482***** |
| | **(-2.47)** | **(-2.53)** | **(-1.93)** | **(-2.31)** | **(-2.31)** | **(-4.65)** |
| Adj. RSQ | 0.1477 | 0.1070 | 0.0684 | 0.0918 | 0.1030 | 0.1070 |

# Advertising & Spread: Robustness

| | Year Fixed Effects | Year & Industry Fixed Effects | Firm, Year & Industry Fixed Effects | Newey-West Standard Errors | Fama-McBeth Regression | Cross-Sectional Regression |
|---|---|---|---|---|---|---|
| **nLOGADV0** | **-0.164** | **-0.097** | **-0.002** | **-0.125*** ** | **3.799** | **0.050** |
| | **(-0.99)** | **(-0.58)** | **(-0.01)** | **(-2.88)** | **(0.93)** | **(0.32)** |
| **neA2S5** | **0.453*** ** | **0.411** ** | **0.353** | **0.561*** ** | **0.434** ** | **0.814*** ** |
| | **(2.60)** | **(2.49)** | **(1.62)** | **(13.44)** | **(2.24)** | **(5.06)** |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Dummies | Yes | Yes | Yes | - | - | - |
| Industry Dummies | - | Yes | Yes | - | - | - |
| Firm Dummies | - | - | Yes | - | - | - |
| N. Obs. | 27,792 | 27,792 | 27,792 | 27,792 | 27,792 | 1,829 |
| Adj. RSQ | 0.6367 | 0.6405 | 0.7653 | 0.6178 | 0.7232 | 0.7113 |

# Advertising & Liquidity: Robustness

| | Industry Fixed Effects | Industry & Firm Fixed Effects | Firm, Year & Industry Fixed Effects | Newey-West Standard Errors | Fama-McBeth Regression | Cross-Sectional Regression |
|---|---|---|---|---|---|---|
| **nLOGADV0** | **0.034*** ** | **0.023** ** | **0.016** | **0.033*** ** | **0.018** ** | **0.051*** ** |
| | **(2.96)** | **(2.20)** | **(1.60)** | **(6.78)** | **(2.06)** | **(5.16)** |
| **neA2S5** | **-0.038*** ** | **-0.024** ** | **-0.026** ** | **-0.045*** ** | **-0.032*** ** | **-0.053*** ** |
| | **(-2.70)** | **(-2.36)** | **(-2.44)** | **(-9.78)** | **(-6.81)** | **(-5.24)** |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Dummies | Yes | Yes | Yes | - | - | - |
| Firm Dummies | - | Yes | Yes | - | - | - |
| Year Dummies | - | - | Yes | - | - | - |
| N. Obs. | 27,797 | 27,797 | 27,797 | 27,797 | 27,797 | 1,827 |
| Adj. RSQ | 0.0715 | 0.1505 | 0.1609 | 0.0646 | 0.1438 | 0.1475 |

# Advertising, Spreads & Liquidity

| | Model (1) | | Model (2) | | Model (3) | |
|---|---|---|---|---|---|---|
| | CSPRD | LIQ | CSPRD | LogDVolm | CSPRD | LogTVolm |
| Constant | -1.062*** | -0.143*** | -0.928*** | -2.888*** | -1.000*** | -1.056*** |
| | (-7.27) | (-10.16) | (-5.48) | (-4.93) | (-6.71) | (-11.67) |
| CSPRD | | 0.003** | | 0.106* | | 0.031*** |
| | | (2.14) | | (1.80) | | (3.41) |
| LIQ | -2.194*** | | | | | |
| | (-7.74) | | | | | |
| LogDVolm | | | -0.061*** | | | |
| | | | (-7.40) | | | |
| LogTVolm | | | | | -0.311*** | |
| | | | | | (-7.81) | |
| **nLOGADV0** | **0.030** | **0.034*** ** | **0.096*** | **2.190*** ** | **0.035** | **0.247*** ** |
| | **(0.65)** | **(5.74)** | **(1.88)** | **(8.93)** | **(0.75)** | **(6.53)** |
| **neA2S5** | **0.477*** ** | **-0.046*** ** | **0.434*** ** | **-2.273*** ** | **0.459*** ** | **-0.395*** ** |
| | **(13.75)** | **(-10.57)** | **(11.55)** | **(-12.57)** | **(12.99)** | **(-14.19)** |
| NOBS | 27,788 | 27,788 | 27,788 | 27,788 | 27,788 | 27,788 |
| Adj. RSQ | 0.5986 | 0.0619 | 0.5872 | 0.0647 | 0.6038 | 0.0873 |

# Conclusion

- Increasing advertising for the sake of attracting potential bond investors may not be as beneficial as attempts to attract stock investors!
- This is because bondholders are forced to tolerate greater default risk in lieu of large advertising expenses without much to gain from potential positive real impacts of the advertising.
- Firms benefit minimally from large advertising expenditures in the form of better bond liquidity; but if not substantiated by a past history of effectiveness, firms will suffer greatly in the form of wider spread.