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Md Ruhul Amin

The University of Texas Rio Grande Valley, mdruhul.amin01@utrgv.edu

Abdullah Al Masum

The University of Texas Rio Grande Valley

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Business Strategy and Cost of Bank Loans

Md Ruhul Amin
The University of Texas Rio Grande Valley
Edinburg, TX 78539
Email: mdruhul.amin01@utrgv.edu

Abdullah Al Masum
The University of Texas Rio Grande Valley
Edinburg, TX 78539
Email: abdullahal.masum01@utrgv.edu

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Amin (**Corresponding author**) is a PhD candidate in Finance at The University of Texas Rio Grande Valley. Masum is a PhD candidate in Finance at The University of Texas Rio Grande Valley.

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Business Strategy and Cost of Bank Loans

Abstract

Following Miles and Snow's Business Strategy (BS) topology, we find that banks impose relatively higher loan spreads for the firms that follow an Innovation-Oriented Business Strategy (IOBS). We further document that IOBS is positively associated with corporate risk measures such as variances in equity returns and returns on assets. Overall, our findings suggest that banks charge a higher cost of debt in anticipation of borrowers' payback riskiness from an IOBS.

JEL Classification: *G21, G32, O31*

Key Words: *Business Strategy, cost of bank loan, loan spreads, prospectors, corporate risk*

1. Introduction

Business Strategy (BS) refers to a set of actions and choices that a firm makes to place itself into the competitive market and perform in its best possible ways (Porter, 2008). Organizational literature offers several BS topologies. The Miles and Snow's (1978, 2003) topology framework, among others, is one of the most popular and highly cited that classifies the firms into *Prospectors*, *Defenders*, and *Analyzers* sub-groups based on their rate of change in the same lines of products and markets. While other BS topology frameworks require surveys or interviews that are tough to replicate, Miles and Snow's (1978, 2003) is based on archival data and easy to replicate. Also, the validity of Miles and Snow's (1978, 2003) framework has already been established by quite many studies. According to the classification, *Prospectors* are those firms who tend to be more innovative via higher expenditure on Research and Development (R&D). Likewise, *Defenders* focus less on innovation but more on enhancing existing production efficiency and their better distribution. *Analyzers* make a balance between the properties of both *Prospectors* and *Defenders* sub-groups.

It is a well-established issue in financial economics that higher investment in R&D is beneficial for a firm in the long run, but it generates earlier investment uncertainty and puts a firm into the riskier position (e.g., see Kothari et al., 2002; Eberhart et al., 2004; Bernile et al., 2018). This study investigates whether the investors treat a firm differently for its innovation-oriented BS (i.e., *Prospectors* or IOBS) nature. We employ a large cross-section of syndicated bank loan data from Thomson Reuters Loan Pricing Corporation's (LPC) DealScan. Studying bank loans provides us with a very useful setup from several considerations. For instance, bank loans are historically known as one of the most important external funding sources for firms (Houston and James, 1996). Furthermore, banks can play roles as delegated monitors with a high amount of

information about the borrowers that is nearly impossible for any other investors or creditors (Myers, 1977; Berlin and Loeys, 1988).

However, we hypothesize and find that banks charge significantly higher loan spreads from the borrowers who are Prospectors. We establish BS as a relevant corporate risk factor by confirming that it is positively associated with variances in return on assets, idiosyncratic risks, and variances in sales growth (Hilary and Hui, 2009; Jiang et al., 2020). Dennis et al. (2000) and Goss and Roberts (2011) argue that banks may also practice other options against a borrower's risk profile, such as decreasing the loan amounts, imposing covenants, etc. Consistently, we find that banks reduce loan amounts and put more covenants in the loan contracts when a borrower is a Prospector.

Our study contributes to the determinants of the cost of bank loans literature (e.g., Chava et al., 2009; Goss and Roberts, 2011; Hasan et al., 2014; Houston et al., 2014), as well as to the organizational literature of BS (e.g., Bentley et al., 2013; Higgins et al., 2015; Yuan et al., 2020).

2. Data and methodology

We collect bank loan data from Thomson Reuters LPC DealScan. Following extant literature (e.g., Chava et al., 2009; Valta, 2012; Nadauld et al., 2012; and Chava, 2014), we identify “*all-in-drawn*” (i.e., annual spread paid in basis point over London Inter-Bank Offered Rate – LIBOR) as the primary cost feature of bank loans. We also collect facility amount, loan maturity, and a set of loan-specific indicator variables that include term structure, revolver, takeover, LBO, merger, working capital, debt repayment, and corporate purpose for US public firms. Consistent with prior studies on BS (e.g., Higgins et al., 2015; Bentley et al., 2013; and Ittner et al., 1997), we first compute all the strategy component variables using a rolling average of the respective yearly ratios over the prior five years. We then rank each of the six variables by

quintiles within every two digits sic coded industry and year to construct our final composite BS variable. We assign a score of 5 for observations in the highest quintile, 4 for the second-highest quintile, and, as we advance, 1 for the bottom quintile observations within each industry-year group. The process works in reverse order for the sixth component (net property, plant, and equipment divided by total assets) of the strategy composite measure since prospectors tend to focus less on capital intensity. We set a 5(1) score to the observations in the lowest (highest) quintile. Finally, for each firm-year, we sum the scores of the six variables to construct a composite index. This summation process yields the highest value of 30 and the lowest value of 6 for the composite index, which is the main proxy for a firm's BS. We consider firms as *Defenders* if their composite index falls within 6-12, *Analyzers* if their composite index falls within 13-23, and *Prospectors* if their composite index falls within 24-30. These three types of BS variables are indicator variables. Following Yuan et al. (2020), we also compute a categorical variable, *Strategy_types*, which indicates a value of 1 if the firm follows *Defender* BS, a value of 2 if the firm follows *Analyzer* BS, and a value of 3 if the firm follows *Prospector* BS. Other related information, for example, stock return volatility, is collected from the daily CRSP database. We do not consider utility and financial firms (two-digit SIC codes: 49, 60-69) as they are highly regulated. We keep only US public firms. We report the distribution of our sample across industry and descriptive statistics of BS components, composite strategy, loan spread, and related control variables in Table 1.

[Table 1 about here]

Panel A provides the distribution of BS samples in each two-digit SIC coded industry. This sampling distribution across the industry is consistent with those reported in Bentley et al., 2013; Higgins et al., 2015; and Yuan et al., 2020. Panel B reports the descriptive statistics for all six

variables used to compute our composite BS by each strategy type. The median score of the BS variable is 18, which is consistent with the literature. The raw components of BS variables of prospectors are significantly ($p=0.001$) different from those of defenders. Panel C provides descriptive statistics of regression variables (final sample for this study). On average, firms in our final sample pay approximately 212 basis points over the LIBOR for each dollar drawn down, with a variation of about 142 basis points. We find that the strategy variable has a mean value of approximately 17.8 with a median value of 18 and a standard deviation of strategy is 3.4. (consistent with Bentley et al. (2013), Higgins et al. (2015), and Yuan et al. (2020)). The average firm size is approximately \$5.5 billion, return on assets of about 2%, market-to-book of about 1.3, and 34% debt in their capital structure. Panel D presents the univariate analysis (mean difference t-test) of important loan features. We find that the mean loan spread for the *Prospectors* sub-group is 229.199 basis points, which is 18.481 basis points higher (statistically significant) than the rest of our sample with a mean loan spread of 210.718 basis points. We also observe a significant difference in other loan features between prospectors and other firms.

We employ the following Ordinary Least Square (OLS) regression model to examine the impact of BS on the pricing of bank loans:

$$\mathbf{Log(Spread)}_{i,j,t} = \alpha + \beta \mathbf{Strategy}_{j,t} + \gamma \mathbf{Firm Controls}_{j,t} + \delta \mathbf{Loan Controls}_{i,j,t} + \rho \mathbf{Executive Controls}_{j,t} + \mathbf{Fixed Effects} + \varepsilon_{i,j,t} \quad (\text{Eq. 1})$$

In Eq. 1, the dependent variable is the natural logarithm of loan spreads of the facility i of firm j , in industry k , at the year t . The higher value on the Strategy variable represents more IOBS. Following standard literature (e.g., Cai and Zhu, 2020; Ni and Yin, 2018; Parrino et al., 2005; Graham et al., 2008; Valta, 2012; Nadauld et al., 2012; and Chava, 2014), we consider three group of control variables step by step to rule out any concern about their potential impact in our study

(firm-level: size, return on assets, leverage, and market-to-book ratio; loan-level: deal amount, maturity, and other loan type and purpose dummies; executive-level: CEO age, gender, and tenure). We also control for the probable variations due to differences in industries and years. We cluster the standard errors at the firm level. However, β is our coefficient of interest which we expect to be positive and statistically significant to infer a negative impact of IOBS on the cost of bank loans.

3. Result and discussion

3.1 Main findings

Table 2 reports the estimation results of our baseline model that links loan spreads to firms' BS and other known factors. Column (1) reports the results controlling firm-level variables, column (2) includes firm and loan-specific variables, and column (3) includes, in addition to firm-specific and loan-specific controls, related CEO characteristics to avoid the concern that the effect of strategy variable is already absorbed by these control variables. The coefficient estimates in all the model specifications are positive and statistically significant at the 1 percent level (t -statistics=6.14 in column 1). These results support our main hypothesis that the cost of bank loans for a firm increases when it follows an IOBS. The results are economically meaningful. For example, based on the coefficient reported in column (1), when the Strategy score increases from the 25th percentile to the 75th percentile, the loan spread increases by 6.7% ($e^{0.013*5} - 1$), which is about 1.3% ($0.067/5.085$) relative to the mean loan spread. Our interpretation from this result is that when a firm changes its BS from the defender (cost-leadership) to prospector (innovation-oriented), on average, the cost of bank loans increases by about 1.3% compared to the mean loan spreads. This result suggests that banks price their borrower strategic business orientation in setting loan spreads.

[Table 2 about here]

We also create four dummy variables from the composite BS score: *Defender*, *Analyzer*, *Prospector*, and *Prospector_pd*. The results are reported in columns (4) to (7) of Table 2. The coefficient on *Prospector* is positive and statistically significant, suggesting that prospectors significantly pay higher loan spreads than defenders and analyzers.

3.2 Business Strategy as corporate risk

Here, we attempt to explain our main findings by investigating the riskiness of these firms. Innovative firms invest more in R&D, resulting in greater uncertainty and risk (Bentley et al., 2013). Pandit et al. (2011) and Eberhart et al. (2008) also show a positive relation between R&D expenditure and firm-specific risk. Empirical evidence (e.g., Bradley et al., 2016; and Ni and Yin, 2018) suggests that banks price firms' risk-taking by charging higher loan spreads. Based on this riskiness channel, we expect and find that banks charge higher loan spreads to innovative firms due to their higher risk-taking behaviors (we regress idiosyncratic risk, sales growth volatility, and operating performance volatility on strategy). Results are reported in Table 3.

[Table 3 about here]

3.3 Robustness check

We conduct three sets of robustness analyses to check our main results. First, we re-estimate our baseline model using two different loan features other than the loan spreads (i.e., facility amount and number of covenants). Second, we use different model specification. Specifically, we run our baseline results using firm fixed effects instead of industry fixed effects. Third, we use an alternative definition of our key explanatory variable and use firm fixed effects in those models. Table 4 reports the results.

[Table 4 about here]

Consistent with the idea that banks consider their borrowers' strategic business orientation in case of debt contacts by charging higher spreads, we also find that firms that follow IOBS face higher loan covenants and avail lower loan amounts than the *Defenders*.

4. Conclusion

Our main finding is that a firm that follows an IOBS (i.e., *Prospector*) pays significantly higher bank financing costs than *Defenders* or *Analyzers*. This study has important implications for firms that heavily depend on external debt financing. Specifically, the financially constrained firms need to be more cautious in formulating BS since banks might charge them higher loan spreads. If so, it would drive them to underinvestment and more unsatisfactory financial performance. However, the IOBS may also align with the interest of shareholders. Whether *Prospectors* enjoy a lower cost of equity is beyond the scope of this study. We leave this for future research.

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Appendix A: Variable definition

Variables	Definitions	Sources
<i>Spread</i>	The interest amount paid by borrowers annually over LIBOR in basis points (Allindrawn).	Dealscan
<i>Upfront fee</i>	The upfront fee paid by borrowers for a loan	Dealscan
<i>Maturity</i>	Maturity of a loan in a month	Dealscan
<i>Loan amount</i>	Loan facility amount in millions of U.S. dollars	Dealscan
<i>Secure loan</i>	A dummy variable, equal to 1 if the loan is a secure loan and 0, otherwise	Dealscan
<i>Covenant</i>	A dummy variable, equal to 1 if the loan has either financial or general covenant, and 0, otherwise	Dealscan
<i>Strategy</i>	Composite score with values ranging from 6 to 30, where high (low) values in the continuum indicate prospector (defender) firms respectively, measured based on six components following Bentley et al. (2013)	Compustat
<i>Strategy-Type</i>	Alternative definition of key IDV, equal to 1 if STRATEGY score is between 6 and 12, equal to 2 if STRATEGY score is between 13 and 23, and equal to 3 if STRATEGY score is between 24 and 30	Compustat
<i>Defender</i>	A dummy variable, equal to 1 if Strategy composite score is between 6 and 12, and 0, otherwise	Compustat
<i>Analyzer</i>	A dummy variable, equal to 1 if Strategy composite score is between 13 and 23, and 0, otherwise	Compustat
<i>Prospect</i>	A dummy variable, equal to 1 if Strategy composite score is between 24 and 30, and 0, otherwise	Compustat
<i>Prospect_pd</i>	A dummy variable, equal to 1 if Strategy composite score is between 24 and 30, and 0 if Strategy composite score is between 6 and 12	Compustat
<i>Firm age</i>	The number of fiscal years since the firm first appears in the Compustat database	Compustat
<i>ROA</i>	Earnings before interest, tax, depreciation, and amortization (EBITDA) scaled by total assets	Compustat
<i>Leverage</i>	The ratio of total liabilities (dlc+dltt) to total assets (at)	Compustat
<i>MTB</i>	The market value of assets divided by the book value of assets	Compustat
<i>Cashflow Volatility</i>	The standard deviation of the ratio of income before extraordinary items plus Depreciation and Amortization to lagged total assets over the previous three years and current year	Compustat
<i>Earning volatility</i>	The standard deviation of the ratio of income before extraordinary items to total assets over the previous and post four years	Compustat
<i>Idiosyncratic Risk</i>	The variance of the residual from the standard market model adjusted for nonsynchronous trading by adding five leads and lags of market return	CRSP
<i>CEO Tenure</i>	The number of years that the current CEO has served in the firm as reported in the ExecuComp database	ExecuComp

Table 1: Descriptive statistics and univariate analysis

This table reports industry affiliations, business strategy components, and summary statistics for measures of key variables used in this study. Panel A provides the number of firms with respect to their strategic business orientations in each two-digits SIC-coded industry. Panel B presents summary statistics for composite business strategy measure and its six components. Panel C provides summary statistics for all variables used for empirical tests in this study. Panel D presents the univariate analysis (mean difference t-test) of important loan features. Our final/regression sample consists of 28,038 firm-year observations with 4,367 unique firms covering the period of 1992-2017. All continuous variables are winsorized at the top and bottom 1% level. Appendix A provides more details of all variables.

Panel A: Industry affiliation

SIC	Industry affiliation	Full sample (N=81,597)		Prospect (N=5,665)		All others (N=75,932)	
		N	%	N	%	N	%
01-09	Agriculture, forestry, and fishing	369	0.45	32	0.56	337	0.44
10-14	Mining	4332	5.31	368	6.50	3964	5.22
15-17	Construction	1144	1.40	60	1.06	1084	1.43
20-39	Manufacture	43808	53.69	3162	55.82	40646	53.53
40-48	Transport & communications	3804	4.66	329	5.81	3475	4.58
50-51	Wholesale trade	4159	5.10	275	4.85	3884	5.12
52-59	Retail trade	7320	8.97	288	5.08	7032	9.26
70-89	Service	16040	19.66	1114	19.66	14926	19.66
99	Others	621	0.76	37	0.65	584	0.77

Panel B: Business strategy component

Variable	Full sample (N=81,597)			Prospect (N=5,665)	Analyzer (N=70,755)	Defender (N=5,177)
	Mean	SD	Median	Median	Median	Median
Strategy	17.94	3.63	18.00	25.00	18.00	11.00
RDS5	0.36	11.28	0.00	0.14	0.00	0.00
EMPS5	0.01	0.09	0.01	0.01	0.01	0.00
REV5	104.28	2,906	9.90	52.43	9.58	2.57
SGA5	1.13	19.18	0.26	0.72	0.26	0.14
EMPSTD5	1.15	5.04	0.15	0.12	0.17	0.05
CAP5	0.27	0.22	0.21	0.11	0.21	0.38

Panel C: Regression variables

<i>Variable</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>P25</i>	<i>P50</i>	<i>P75</i>
<i>Allindrawn</i>	28,038	211.683	142.180	100.000	200.000	275.000
<i>Ln (spreads)</i>	28,038	5.085	0.816	4.605	5.298	5.617
<i>Strategy</i>	28,038	17.780	3.425	15.000	18.000	20.000
<i>Strategy types</i>	28,038	1.989	0.340	2.000	2.000	2.000
<i>Defender</i>	28,038	0.064	0.244	0.000	0.000	0.000
<i>Analyzer</i>	28,038	0.884	0.320	1.000	1.000	1.000
<i>Prospect</i>	28,038	0.052	0.223	0.000	0.000	0.000
<i>Assets (bln)</i>	28,038	5.522	13.953	0.302	1.131	4.014
<i>Firm size</i>	28,038	6.985	1.913	5.711	7.031	8.298
<i>Roa</i>	28,038	0.016	0.114	-0.000	0.035	0.069
<i>Leverage</i>	28,038	0.340	0.227	0.186	0.311	0.458
<i>Market-to-book</i>	28,038	1.336	0.861	0.793	1.082	1.596
<i>Upfront fee</i>	6,236	53.411	72.293	12.500	35.000	75.000
<i>Ln (Upfront fee)</i>	6,107	3.455	1.076	2.708	3.573	4.317
<i>Facility amount</i>	28,038	351.21	591.48	36.79	135.00	400.00
<i>Ln (Facility amount)</i>	28,038	4.714	1.730	3.605	4.905	5.991
<i>Maturity</i>	28,038	47.545	22.214	35.000	59.000	60.000
<i>Ln (Maturity)</i>	28,038	3.696	0.654	3.555	4.078	4.094
<i>Term loan</i>	28,038	0.125	0.331	0.000	0.000	0.000
<i>Revolver</i>	28,038	0.563	0.496	0.000	1.000	1.000
<i>Takeover</i>	28,038	0.112	0.315	0.000	0.000	0.000
<i>LBO</i>	28,038	0.021	0.142	0.000	0.000	0.000
<i>Merger</i>	28,038	0.001	0.035	0.000	0.000	0.000
<i>Workcap</i>	28,038	0.169	0.375	0.000	0.000	0.000
<i>Otherpr</i>	28,038	0.003	0.058	0.000	0.000	0.000
<i>Debtrepay</i>	28,038	0.151	0.358	0.000	0.000	0.000
<i>Corppurp</i>	28,038	0.391	0.488	0.000	0.000	1.000

Panel D: Univariate analysis (mean difference t-test)

<i>Strategy</i>	<i>Spreads</i>	<i>Facility amount</i>	<i>Covenant</i>
<i>All others (1)</i>	210.718	355.071	2.613
<i>Prospect (2)</i>	229.199	281.100	2.716
<i>Diff [2-1]</i>	18.481***	-73.971***	0.103***
<i>t-stat.</i>	(4.85)	(-4.66)	(2.59)

Table 2: Main results

This table presents our main results. The dependent variable is the natural logarithm of the interest amount paid by borrowers annually over LIBOR in basis points. The main variable of interest in the first three columns is Strategy. The strategy variable is a proxy for a firm's business strategy that comes from a discrete score with values ranging from 6 to 30, where high (middle) [low] values indicate prospector (analyzer) [defender] firms, respectively. Model (1) controls for firm characteristics, model (2) controls for firm and loan characteristics, model (3) controls for the firm, loan, and board characteristics. In models (4) to (7), we also look for different strategy component dummies, and control variables are the same as in model (2). All variable definitions appear in Appendix A. The sample period is from 1992 to 2017. All model specifications include two-digits SIC coded industry and year fixed effects. T-statistics are computed using standard errors corrected for clustering at the firm-level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>Ln (Spreads)</i>						
<i>Strategy</i>	0.013*** (6.14)	0.008*** (4.20)	0.007*** (2.61)				
<i>Defender</i>				-0.017 (-0.63)			
<i>Analyzer</i>					-0.036* (-1.85)		
<i>Prospect</i>						0.092*** (3.62)	
<i>Prospect_pd</i>							0.087** (2.32)
<i>Firm size</i>	-0.225*** (-38.69)	-0.128*** (-18.04)	-0.118*** (-12.04)	-0.126*** (-17.82)	-0.126*** (-17.78)	-0.126*** (-17.87)	-0.129*** (-7.09)
<i>ROA</i>	-0.743*** (-13.85)	-0.879*** (-16.82)	-1.082*** (-10.41)	-0.911*** (-17.57)	-0.911*** (-17.56)	-0.897*** (-17.26)	-0.970*** (-8.52)
<i>Leverage</i>	0.898*** (26.40)	0.739*** (23.40)	0.842*** (15.77)	0.726*** (22.91)	0.722*** (22.64)	0.727*** (22.89)	0.582*** (8.17)
<i>Market-to-book</i>	-0.179*** (-16.76)	-0.159*** (-17.30)	-0.163*** (-12.86)	-0.152*** (-16.74)	-0.152*** (-16.62)	-0.155*** (-16.82)	-0.116*** (-6.11)
<i>Ln(facilityamt)</i>		-0.149*** (-19.45)	-0.176*** (-15.99)	-0.150*** (-19.69)	-0.150*** (-19.66)	-0.149*** (-19.54)	-0.113*** (-7.55)
<i>Ln (Maturity)</i>		0.155*** (14.71)	0.229*** (15.97)	0.156*** (14.78)	0.156*** (14.81)	0.156*** (14.74)	0.116*** (4.04)
<i>Term_Loan</i>		-0.057*** (-3.77)	0.009 (0.41)	-0.057*** (-3.80)	-0.058*** (-3.82)	-0.057*** (-3.82)	-0.073* (-1.85)
<i>Revolver</i>		-0.189*** (-18.79)	-0.208*** (-14.79)	-0.190*** (-18.87)	-0.190*** (-18.89)	-0.190*** (-18.87)	-0.181*** (-7.07)
<i>Takeover</i>		0.262*** (12.11)	0.332*** (12.06)	0.267*** (12.40)	0.268*** (12.43)	0.266*** (12.30)	0.267*** (4.09)
<i>LBO</i>		0.691*** (16.19)	0.880*** (13.61)	0.692*** (16.23)	0.693*** (16.22)	0.692*** (16.21)	0.638*** (7.45)
<i>Merger</i>		0.157 (1.28)	0.206 (1.39)	0.154 (1.28)	0.155 (1.29)	0.145 (1.19)	-0.088 (-0.43)
<i>Workcap</i>		0.038* (1.94)	0.095*** (3.62)	0.038** (1.96)	0.038** (1.97)	0.038* (1.94)	-0.027 (-0.56)
<i>Otherpr</i>		-0.050 (-0.48)	-0.240 (-1.51)	-0.053 (-0.51)	-0.052 (-0.51)	-0.048 (-0.47)	0.303 (1.52)
<i>Debtrepay</i>		0.120*** (6.15)	0.192*** (7.00)	0.122*** (6.26)	0.123*** (6.27)	0.122*** (6.23)	0.053 (1.04)
<i>Corppurp</i>		-0.027 (-1.54)	0.002 (0.10)	-0.027 (-0.02)	-0.027 (-0.02)	-0.027 (-0.02)	-0.095** (-1.54)
<i>CEO Age</i>			-0.002 (-1.56)				
<i>Tenure</i>			-0.005** (-2.07)				
<i>Female</i>			0.005 (0.09)				
Constant	6.878*** (102.36)	6.547*** (92.75)	6.473*** (50.29)	6.682*** (105.08)	6.709*** (101.77)	6.680*** (105.20)	6.785*** (39.49)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	28038	28038	16480	28038	28038	28038	3252
Adj. R2	0.462	0.548	0.590	0.547	0.547	0.548	0.490

Table 3: Business strategy and corporate risk

This table presents the results on the relation between business strategy and corporate risk measures, proxied by idiosyncratic risk, the standard deviation of sales growth, and the standard deviation of return on assets. Idiosyncratic risk is the variance of the residual from the standard market model adjusted for nonsynchronous trading by adding five leads and lags of the market return. The key dependent variable is Strategy that comes from a discrete score with values ranging from 6 to 30, where high (middle) [low] values indicate prospector (analyzer) [defender] firms, respectively. All other independent variables are defined in Appendix A. The sample period is from 1992 to 2017. All model specifications include two-digits SIC coded industry and year fixed effects. T-statistics are computed using standard errors corrected for clustering at the firm-level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Variable	(1)	(2)	(3)
	<i>Idiosyn risk</i>	<i>Stdsalegrowth</i>	<i>StdROA</i>
<i>Strategy</i>	0.014*** (4.88)	0.021*** (13.76)	0.002*** (5.24)
<i>Firm size</i>	-0.295*** (-47.04)	-0.023*** (-9.30)	-0.012*** (-16.50)
<i>ROA</i>	-2.209*** (-27.81)	-0.309*** (-8.34)	-0.375*** (-27.08)
<i>Leverage</i>	0.500*** (9.38)	0.071*** (3.50)	0.007 (1.05)
<i>Market-to-book</i>	-0.095*** (-8.25)	-0.013*** (-3.20)	0.012*** (8.68)
<i>Capex</i>	0.207*** (2.63)	0.336*** (6.76)	0.028*** (2.75)
<i>Constant</i>	4.074*** (46.66)	-0.030 (-0.82)	0.100*** (10.67)
<i>Industry FE</i>	Yes	Yes	Yes
<i>Year FE</i>	Yes	Yes	Yes
<i>N</i>	26588	27772	27772
<i>Adj. R2</i>	0.616	0.220	0.295

Table 4: Robustness checks

This table presents our robustness results. We conduct robustness tests from three main perspectives: 1. changing dependent variable, 2. changing model specification, and 3. changing independent variable and model specification. In the first two columns, we show the relationship between different loan features other than the loan spreads (i.e., the facility amount and the total number of loan covenants) and Strategy. In models (3) to (5), we use firm fixed effects instead of industry fixed effects in our main analysis (presented in Columns (1) to (3) - hereby C1 to C3) of Table 2 – hereby T2). In models (6) to (8), we repeat models (3) to (5) using *Strategy_types* as the key independent variable instead of Strategy. *Strategy_types* is a categorical variable that takes value 1, 2, or 3 if STRATEGY score is between 6 and 12, 13 and 23, 24 and 30, respectively. T-statistics are computed using standard errors corrected for clustering at the firm-level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>Ln (facilityamt)</i>	<i>Covenant</i>			<i>Ln (Spreads)</i>			
<i>Strategy</i>	-0.015*** (-4.44)	0.010** (2.48)	0.011*** (3.21)	0.012*** (4.01)	0.012*** (3.19)			
<i>Strategy types</i>						0.051** (2.15)	0.048** (2.24)	0.062** (2.21)
<i>Other Controls</i>	<i>T2 C2 – facility</i>	<i>T2 C2</i>	<i>T2 C1</i>	<i>T2 C2</i>	<i>T2 C3</i>	<i>T2 C1</i>	<i>T2 C2</i>	<i>T2 C3</i>
<i>Constant</i>	-0.406*** (-3.04)	1.979*** (12.13)	6.724*** (53.66)	6.631*** (53.88)	6.329*** (32.17)	6.759*** (52.22)	6.684*** (53.28)	6.358*** (31.79)
<i>Industry FE</i>	Yes	Yes	No	No	No	No	No	No
<i>Firm FE</i>	No	No	Yes	Yes	Yes	Yes	Yes	Yes
<i>Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	28038	16428	28038	28038	16480	28038	28038	16480
<i>Adj. R2</i>	0.670	0.287	0.642	0.703	0.719	0.642	0.702	0.718