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Theoretical-empirical Article

Financial Management in Practice: Analysis of Brazilian Survey Data

Gestão Financeira na Prática: Análise de Dados do Levantamento Brasileiro

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ABSTRACT

Objective: this article replicates in Brazil a survey — previously applied in North America and Europe — to inquire CFOs about the cost of capital, capital budgeting, and capital structure. **Method:** we rigorously translated and validated the questionnaire before administering it over the internet. We delivered the questionnaire to 1,699 Brazilian private and public firms and received 160 responses, with a return rate of 9.4%. We analyzed the responses conditioned to firm characteristics. **Results:** the results of the financial policy survey in Brazil indicate that firms employ NPV and IRR as preferred investment techniques and the CAPM and its variations as the method for computing the cost of equity capital. They are also concerned with the cost of debt and transaction costs of market instruments, and they use internal funds as their main investment funding source. The conditional analysis indicates that large, listed, and regulated firms behave differently regarding financial decisions than their counterparts. **Conclusion:** the main takeaway from this study is that the institutional environment (markets, institutions, instruments, and the economy) is an important determinant of the practice of corporate finance.

Keywords: survey research; corporate finance; emerging markets; Brazil.

RESUMO

Objetivo: este artigo tem o objetivo de reproduzir no Brasil uma pesquisa — anteriormente aplicada na América do Norte e Europa — que consulta o ponto de vista de CFOs sobre custo de capital, orçamento de capital e estrutura de capital. **Método:** o questionário foi rigorosamente traduzido e validado antes de ser aplicado pela internet. O questionário foi enviado a 1.699 empresas públicas e privadas brasileiras e 160 respostas foram recebidas, com uma taxa de retorno de 9,4%. As respostas foram analisadas condicionadas às características das empresas. **Resultados:** os resultados da pesquisa indicam que as empresas brasileiras empregam o VPL e a TIR como técnicas preferenciais de investimento e o CAPM e suas variações como o método de cálculo do custo do capital próprio. Também se preocupam com o custo da dívida e os custos de transação dos instrumentos de mercado, e utilizam os recursos internos como principal fonte de financiamento para investimento. A análise condicional indica que grandes empresas, listadas e regulamentadas se comportam de maneira diferente em relação às decisões financeiras do que suas contrapartes. **Conclusão:** a conclusão principal deste estudo é que o ambiente institucional (mercados, instituições, instrumentos e a economia) é um determinante importante da prática de finanças corporativas no Brasil.

Palavras-chave: levantamento; finanças corporativas; mercados emergentes; Brasil.

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INTRODUCTION

This article has the objective of reproducing in Brazil a survey — previously applied in two different continents, North America and Europe — to inquire about the cost of capital, capital budgeting, and capital structure. The survey utilized in this article is the Graham and Harvey's (2001) survey and its extended form employed by Brounen, de Jong, and Koedijk (2004). Our survey also bears some similarities with Bancel and Mittoo's (2004) survey. Percival (1993) criticizes the academics' focus on how they believe managers should act instead of studying what they do and why. Neuhauser (2007) considers that the survey method, using primary data, can improve our knowledge of most finance topics. We asked managers in Brazil about their decisions on the cost of capital, capital budgeting, and capital structure.

This survey's uniqueness is based on the fact that it allows interpreting how organizations interact within a different set of institutions. This exploration should shed some light on the decisions made by organizations — more specifically, by their agents — in reaction to a different set of constraints. This study is thus unique in providing revealing insights into the corporate experience of capital budgeting, cost of capital, and capital structure reported by Brazilian CFOs at the beginning of the century.

For concision's sake, we do not provide an explicit literature review on the theoretical background of the topics addressed in our survey. However, we do refer the interested reader to recent and thorough literature surveys that provide an in-depth view of such topics: Jagannathan, Liberti, Liu, and Meier (2017) for cost of capital, Graham and Leary (2011) for capital structure, Colla, Ippolito, and Li (2020) for debt structure, Almeida, Campello, Cunha, and Weisbach (2014) for liquidity management, and Farre-Mensa, Michaely, and Schmalz (2014) for payout policy.

Survey studies in finance have a long tradition in the literature. Although most studies focused on the United States (e.g. Block, 1999; Brav, Graham, Harvey, & Michaely, 2005; Bruner, Eades, Harris, & Higgins, 1998; Epps & Mitchem, 1994; Gitman & Forrester, 1977; Gitman & Mercurio, 1982; Graham & Harvey, 2001; Lintner, 1956; Poterba & Summers, 1995; Stanley & Block, 1984), international surveys have been documented as well. Most studies focused on the United Kingdom (Arnold & Hatzopoulos, 2000; Beattie, Goodacre, & Thomson, 2006; Dhanani, 2005; Pike, 1996; Sangster, 1993). Interestingly, cross-country comparative studies have been relatively rare. Notable exceptions are Bancel and Mittoo (2004), who surveyed 16 European countries about capital structure, Brounen, de Jong, and Koedijk (2004), who focused on four major European countries, and Maquieira, Preve, and Sarria-Allende (2012), who surveyed seven Latin American countries: Argentina, Chile, Colombia, Ecuador, Peru, Uruguay, and Venezuela, but unfortunately could not get any responses from Brazil, the biggest economy of the region. To the best of our knowledge, no financial survey focusing on Brazilian firms has been published in English so far.

In Brazil, the literature records a few survey studies in finance. Fensterseifer, Galesne, and Ziegelmann (1987) investigate the capital budgeting techniques of 153 Brazilian firms. Fensterseifer and Saul (1993) update the previous paper by also studying the cost of capital and the sensitivity of investment to the short-term business cycle in 132 firms. Eid (1996) surveys 161 firms regarding their capital structure decisions. Saul (1999) implements the most comprehensive finance survey in Brazil to date by updating all the previous surveys, studying issues of capital budgeting, cost of capital, and capital structure decisions of more than 150 Brazilian CFOs. More recently, Campos, Jucá, and Nakamura (2016) survey managers in Brazil about their practices regarding the cost of capital. The authors collected survey data from 40 listed Brazilian companies and concluded, among other things, that CFOs use the weighted average cost of capital (WACC) approach for computing their companies' overall cost of capital and the capital assets pricing model (CAPM) for the equity cost of capital, adjusted to particularities of the Brazilian context.

Our results indicate that Brazilian firms employ NPV and IRR as preferred investment techniques, and the CAPM and its variations as the main method for computing the cost of equity capital. They use internal funds as their principal investment funding source, and they pay attention to the cost of debt and transaction costs of market instruments. In addition, the conditional analysis indicates that large, listed, growth, and regulated firms behave significantly differently regarding financial decisions than their counterparts. Moreover, the main takeaway from this research is that the institutional environment (i.e., markets, institutions, instruments, and the economy) is an essential element of the practice of corporate finance.

This paper contributes to the literature in several ways. First, it explores the field study method in finance in an emerging market, which is not an ordinary approach in finance. Second, researchers could use our results to review their beliefs and improve existing theories or create new ones. Third, it enables a better understanding of the decision-making process of financial managers. Fourth, despite its age, this survey presents the largest breadth (topics covered) and depth (number of respondents) combination among finance surveys conducted in Brazil. Finally, we make the original data we collected freely available to any interested researcher for future replication and comparison of this

survey. We believe that this way we are contributing to the advancement of the understanding of the interplay between financial theory and practice in Brazil.

The remainder of the paper is presented in three parts. The next section details the research method and procedures used. The third section presents and discusses the results. The last section concludes the paper.

METHOD

Rather than producing yet another survey, we make use of the same questionnaire previously administered to North American and European financial executives, to allow for future direct comparisons across countries. In order to achieve such comparability, it is necessary to ensure that the survey questions have the same meaning for respondents despite differences in language, culture, and institutional setting. We followed the methods put forward by Vallerand (1989) and Hernández-Nieto (2002) to the translation and validation of the Duke Special Survey on Corporate Policy employed by Graham and Harvey (2001) for the Brazilian context. The first step was to receive authorization from the original authors, which was kindly granted. Next, we employed the method of back-translation to make sure the content of the questionnaire was not changed in the translation to Portuguese. Then, we investigated the content validity of the questionnaire according to the coefficient of content validity (CVC) suggested by Hernández-Nieto (2002). Finally, we investigated the validity, reliability, and internal consistency of the questionnaire using exploratory principal components factor analysis. Details of the method are described in Balbinotti, Benetti, and Terra (2007); therefore, in the interest of brevity, we report here only the details about the respondents and the results.

The target population was comprised of 1,699 firms. Of these firms, 256 are public corporations from the São Paulo Stock Exchange (Bovespa) directory and the remaining 1,443 are private firms from the Brazilian Micro and Small Business Support Service (Sebrae) directory in the states of São Paulo (704 firms) and Rio Grande do Sul (739 firms). Only private firms classified as 'medium' and 'large' in the Sebrae directory were selected.

First, each firm received an email directed to its chief financial officer (CFO) or equivalent explaining the purposes of the survey and the link to the website. Next, the CFO was contacted by telephone as a follow-up. Following Klassen and Jacobs (2001), several ways to answer the questionnaire were offered to the CFOs: by post, by fax, by email, and by a website constructed specifically to that end. The usual confidentiality assurances were given in writing to all participants. CFOs were invited to participate in two successive waves. The first one started on July 15, 2005, and the second one started on August 15, 2005. The data collection was concluded on September 30, 2005.

In total, 160 questionnaires returned (9.4% return rate). This return rate is similar to those of previous surveys: 392 firms for a 9% return rate (Graham & Harvey, 2001), 313 firms for a 5% return rate (Brounen, De Jong, & Koedijk, 2004), 87 firms for a 12% return rate (Bancel & Mittoo, 2004), 290 firms for a response rate between 9% and 10% (Maquieira, Preve, & Sarria-Allende, 2012), and 40 firms for an 8.9% return rate (Campos, Jucá, & Nakamura, 2016). More than 80% of the questionnaires received were filled out through the website, while only one questionnaire (0.6%) was returned by e-mail, in line with the conclusions of the experiment of Dommeyer and Moriarty (2000). The detailed breakdown of the returned questionnaires is presented in Table 1.

Table 1. Questionnaire return breakdown.

Media	Firms Contacted	First Wave July 15, 2005		Second Wave August 15, 2005		Total		Return Rate
Email		0	0.0%	1	0.6%	1	0.6%	
Website		80	50.0%	53	33.1%	133	83.1%	
Fax		3	1.9%	2	1.3%	5	3.1%	
Post		8	5.0%	13	8.1%	21	13.1%	
Total	1,699	91	56.9%	69	43.1%	160	100.0%	9.42%

The website shuffled the order of the questions for each new respondent as a way to avoid that the questions at the beginning of the questionnaire were more likely to be answered. We found no evidence that some questions have been answered more frequently than others for ordering reasons.

We also tested for non-response bias alongside the lines of Graham and Harvey (2001). We tested whether the mean responses of the firms in the first wave (i.e., those that answered our first invitation) differ significantly from those in the second wave (i.e., those firms that had to be contacted twice before answering the survey) using the bicaudal

Student's t-test of mean difference for unpaired samples. There are statistically significant differences in only six (nine) out of 88 questions at the 5% (10%) level. We concluded that non-response bias is likely small and therefore should not affect the results reported here.

Summary statistics and data issues

Summary statistics about the firms in our sample are presented in Table 2. The companies' sales range from less than R$ 70 million (27%) to at least R$ 1.5 billion (1.4%). Brazilian firms are not very internationalized, 45% of them declared that they do not have any foreign sales while foreign sales represent more than 49% of total sales for only 10% of the companies in the sample. The manufacturing industry represents 38% of the sample. It is the most common industry surveyed in this research. Among listed firms, the median price/earnings ratio is 10.2 and 45.45% of the firms have price/earnings ratios between five and ten. The other 54.55% of the respondent companies are equally divided between price/earnings ratio lower than five and higher than ten. The firms are not highly levered, 62% of respondents have a long-term debt ratio of 19% or less. Only 13% of respondent firms have a long-term debt ratio of 40% or higher. Sixty-eight percent of respondents declared that their companies have either a flexible target debt ratio or none at all. Most firms are regulated utilities (62%), pay dividends (63%), and calculate the cost of equity (58%). However, the use of the capital assets pricing model (CAPM) is not widespread, only 23% of the respondents declared that they 'always' use the CAPM. Finally, most responding firms did not seriously consider issuing common stock (75%), convertible debt (84%), or foreign debt (63%). Table 2 also presents descriptive statistics for the CEOs. Most of them (57%) are 50 years old or older. The executives do not change jobs frequently, 44% of them are in the same job for more than nine years. The typical CEO education is an undergraduate degree, and only 28.6% have any sort of graduate education. However, 14.3% responded 'other' as their education degree, suggesting a non-negligible number of CEO with less than a college education.

We compare our sample averages to the North American sample of Graham and Harvey (2001)[1]. In order to test whether the difference between the two samples is statistically significant, we applied the bicaudal Student's t-test of mean difference for unpaired samples. Our sample significantly differs from that one in the following aspects: size (smaller), foreign sales (less internationalized), ownership (fewer public corporations), regulation (more utilities), managerial ownership (larger share of managerial ownership), and the age of the CEO (older). Figure 1 presents a comparison of both samples in more visual detail.

Table 2. Firm and CEO characteristics in North America and Brazil.

Firm and CEO characteristics	North America			Brazil			Difference	
	No	Mean	%	N	Mean	%	Z	P-value
a. Sales revenue	378	3.79	74.3%	71	2.56	56.3%	3.346	0.001***
b. Foreign sales	374	2.08	71.1%	69	1.87	55.1%	2.856	0.004***
c. Industry	351	3.81	84.9%	68	3.65	80.9%	0.845	0.398
d. Public or private	373	1.36	63.8%	70	1.51	48.6%	2.616	0.009***
e. Pay dividends?	371	1.46	53.9%	70	1.37	62.9%	-1.308	0.191
f. Regulated utility?	348	1.94	93.7%	70	1.40	38.6%	12.316	0.000***
g. If all options were exercised, what percent of common stock would be owned by the top three officers?	318	1.91	26.7%	54	2.54	51.9%	-2.912	0.004***
h. CEO education	354	1.95	21.8%	21	1.43	14.3%	0.976	0.330
i. Age of CEO	368	2.93	73.1%	68	2.65	57.4%	2.821	0.005***
j. CEO tenure (time in current job)	366	1.98	36.1%	68	2.15	44.1%	-1.175	0.241

Note. The table presents summary statistics from North American (Graham & Harvey, 2001) and Brazilian surveys. No is the number of valid responses for each question; Mean is the average score for each question (0-4 for Likert scale questions, 0-1 for 'yes/no' questions; % is the percentage of scores above 2 for Likert scale questions ('always' and 'almost always'/'important' and 'very important') and the percentage of 'yes' in the 'yes/no' questions; Z is the statistic for the difference of proportions between the North American and the Brazilian samples; * significant at the 10% level; ** significant at the 5% level; *** significant at the 1% level.

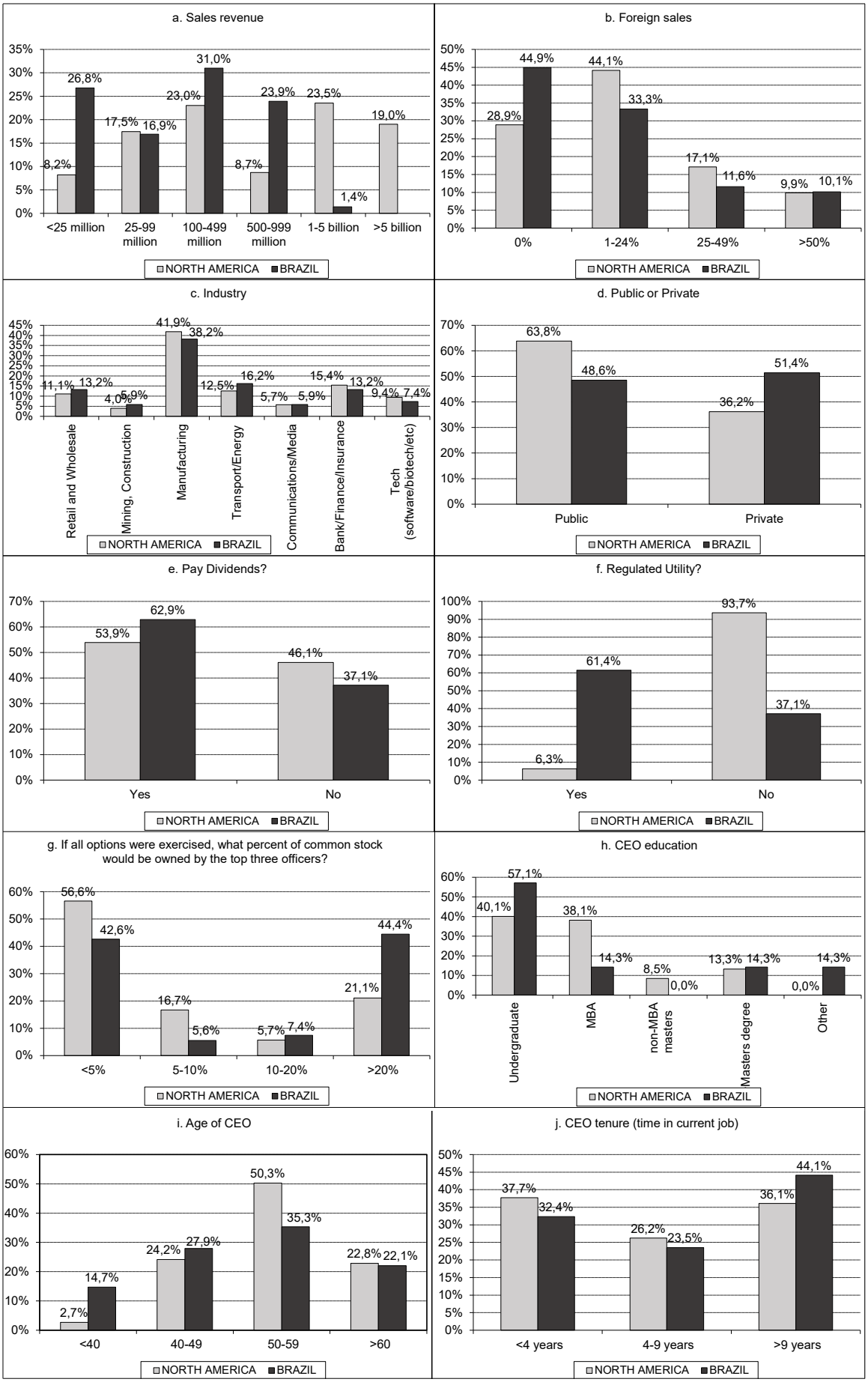

Figure 1. Sample characteristics.

The correlations for the demographic variables are shown in Table 3. Small firms have a lower incidence of paying dividends, a lower propensity to be listed, and CEOs with lower tenure. Public firms have a higher price/earnings ratio and lower leverage. Manufacturing firms are less regulated and have higher leverage. Regulated firms have higher foreign revenues and lower leverage.

The index of mean square contingency (ϕ) is reported. This statistic measures the correlation of ordered groups of attributes. Cross-tabulations are conducted by size ('large' firms have sales of at least R$ 300 million), growth ('growth' firms have P/E ratios greater than ten), leverage ('high' have a debt-asset ratio greater than 0.25), whether the firm pays dividends ('yes'), industry ('manufacturing' versus all others), public or private firms ('listed'), CEO age (older than 49 versus younger than 50), CEO tenure ('long' is nine or more years on the job), whether the firm is a regulated utility ('regulated'), and whether foreign sales are greater than 25%.

Finally, the dispersion of the responses is moderate. The average coefficient of variation for all the responses of the survey is 0.9027. For concision's sake, we omit the detailed descriptive statistics tables, but they are available in the dataset shared online.

RESULTS

In this section, we present the results of our univariate analyses on the survey responses conditional on each separate firm characteristic. The results are grouped according to capital budgeting methods, cost of capital, and capital structure.

Table 3. Demographic correlations of control variables from the survey.

	Size (small to large)	P/E (low to high)	Debt/Assets (low to high)	Dividends (yes to no)	Industry (manufac-turing to others)	Listed (yes to no)	CEO age (young to old)	CEO tenure (short to long)	Regulated (yes to no)
P/E	-0.036								
Debt/Assets	0.135	-0.181							
Dividends	-0.404***	0.018	-0.243						
Industry	0.257**	0.169	0.350**	-0.191					
Listed	-0.553***	0.489**	-0.306**	0.518***	-0.111				
CEO age	-0.048	-0.045	0.222	0.038	-0.098	-0.138			
CEO tenure	-0.325***	-0.267	-0.239	0.128	-0.250**	0.179	0.139		
Regulated	-0.064	0.045	-0.440***	0.168	-0.463***	-0.041	0.065	0.247**	
Foreign revenues	0.108	0.204	-0.036	0.165	-0.224	0.106	-0.175	-0.010	0.281**

Note. The index of mean square contingency or (ϕ) is reported. This statistic measures the correlation of ordered groups of attributes. Cross-tabulations are conducted by size (large firms have sales of at least R$ 300 million), growth (growth has a P/E ratio greater than 10), leverage (high has debt-asset greater than 0.25), whether the firm pays dividends, industry (manufacturing versus all others), listed, age (older than 49 versus younger than 50), CEO tenure (long is nine or more years on the job), whether the firm is regulated, whether foreign sales are greater than 25%. ***, **, * denote 'significantly different from zero' at the 1%, 5%, and 10% level, respectively.

Capital budgeting methods

Managers answered how frequently they use the different capital budgeting techniques on a scale of zero to four (zero meaning 'never,' four meaning 'always'). Only the net present value (NPV) and the internal rate of return (IRR) are indicated as 'always' or 'almost always' for more than 60% of the respondents. The results are shown in Table 4.

The responses conditional on firms' and executives' characteristics give us some additional information. Listed firms are significantly more likely to use NPV and IRR than unlisted firms. The same occurs with the size and dividend payment conditioners: large and dividends-paying firms are significantly more likely to use NPV and IRR than small firms and firms not paying dividends (firms that auto-declared to have paid some form of dividends or not in the questionnaire). The most commonly used capital budgeting technique among manufacturing and small firms is the payback period.

The use of the earnings multiple approach is not common, only 36.78% declared to use the method 'always' or 'almost always'. Despite the rare use of such a method, it is significantly more used by large (sales of at least R$ 300 million) and value firms (P/E ratios greater than ten).

Table 4. Survey responses to the question: How frequently does your firm use the following techniques when deciding which projects or acquisitions to pursue?

	% 'always' or 'almost always'	Size			P/E		Leverage		Pay dividends		Industry	
		Mean	Small	Large	Growth	Non-G	Low	High	Yes	No	Manu.	Others
a. Net present value (NPV)	62.77	2.71	2.19	3.36***	3.64	3.10	2.79	2.93	3.16	2.27**	2.73	2.93*
b. Internal rate of return (IRR)	60.22	2.60	1.90	3.28***	3.55	3.20	2.45	2.86*	3.02	2.04	2.73	2.74
f. Payback period	53.49	2.45	2.47	2.44	2.20	2.60	2.21	1.86	2.59	2.24	2.75	2.19
j. Sensitivity analysis ('good' vs. 'fair' vs. 'bad')	48.86	2.33	2.17	2.53	2.55	3.00	2.59	2.21	2.39	2.32	2.44	2.27
c. Hurdle rate	48.35	2.16	1.50	2.41	3.00	2.90	2.00	1.93	2.31	1.52	1.88	2.21
g. Discounted payback period	42.35	2.06	1.83	2.24	2.40	2.44	1.93	1.67	2.35	1.56	2.12	1.97**
h. Profitability index	41.46	1.89	2.07	1.76	1.78	2.44	2.00	1.54	1.94	1.84	2.18	1.74
i. Accounting rate of return	40.96	2.06	2.21	1.94	2.30	2.30	2.23	1.64	2.11	2.00	2.39	1.83
d. Earnings multiple approach	36.78	1.78	1.53	1.74**	1.20	1.90**	1.86	1.14	1.56	1.68	1.76	1.53
e. Adjusted present value (APV)	33.73	1.77	1.31	2.24	1.90	2.30	1.93	2.21	1.87	1.67	1.87	1.78
k. Value at risk (VaR) or other simulation analysis	31.71	1.67	1.37	1.76	1.70	1.67	1.73	1.23	1.41	1.88	1.59	1.57
l. We incorporate the 'real options' of a project	18.52	1.26	1.52	0.84**	1.36	1.33	1.11	1.15	0.91	1.50**	1.39	1.00**
	% 'always' or 'almost always'	Listed			CEO age		CEO tenure		Regulated		Foreign sales	
		Mean	Yes	No	> 49	Younger	Long	Short	Low	High	Yes	No
a. Net present value (NPV)	62.77	2.71	3.38	2.34***	2.66	2.92	2.92	2.61	2.69	3.00	2.96	2.47
b. Internal rate of return (IRR)	60.22	2.60	3.35	2.09***	2.55	2.76	2.72	2.59	2.61	2.69	2.72	2.43
f. Payback period	53.49	2.45	2.48	2.38	2.57	2.29	2.40	2.52	2.37	2.61	2.45	2.36
j. Sensitivity analysis ('good' vs. 'fair' vs. 'bad')	48.86	2.33	2.47	2.22	2.38	2.27	2.34	2.38	2.17	2.68	2.28	2.57
c. Hurdle rate	48.35	2.16	2.50	1.59	2.04	1.95	2.19	1.67	1.93	2.16	1.87	2.36
g. Discounted payback period	42.35	2.06	2.32	1.76	2.14	1.91	1.63	2.50**	2.08	1.95*	2.04	2.00
h. Profitability index	41.46	1.89	1.97	1.81	1.85	2.00	1.68	2.13	1.85	2.00	1.77	2.25
i. Accounting rate of return	40.96	2.06	1.97	2.13	1.89	2.15	1.76	2.25	1.95	2.26	2.02	2.08
d. Earnings multiple approach	36.78	1.78	1.71	1.58	1.75	1.60	1.71	1.58	1.44	1.88	1.42	2.36
e. Adjusted present value (APV)	33.73	1.77	2.20	1.44	1.81	1.86	1.85	1.67	1.80	1.77	1.69	2.31
k. Value at risk (VaR) or other simulation analysis	31.71	1.67	1.70	1.43	1.31	1.74	1.56	1.30	1.59	1.59	1.52	1.67
l. We incorporate the 'real options' of a project	18.52	1.26	0.75	1.52**	1.33	1.03	0.97	1.48*	1.11	1.23	0.98	1.54

Note. ***, **, and * denote 'significantly different from zero' at the 1%, 5%, and 10% levels, respectively, in a bicaudal Student's t-test of mean difference for unpaired samples. All table columns are defined in Table 3.

The discounted payback period is significantly more used by manufacturing than other industries, firms with CEOs who are less than nine years on the job, and unregulated firms. Real options are the less popular method among the respondents, and this method is significantly more used by unlisted firms and firms not paying dividends.

Sensitivity analysis is only the fourth most used method; however, this method is the most used by firms with less than 25% of foreign sales and companies that do not pay dividends.

Cost of capital

The respondents answered three questions about the cost of capital. We asked managers if they estimate the cost of equity capital, and if yes, how they determine it; which risk factors are used in project valuation; and how frequently their company uses some discount rates when evaluating a new project in an overseas market. Respondents rated the possible answers on a scale of zero (never) to four (always). Here, we are interested in whether Brazilian firms consider the company-wide risk or the project-specific risk when evaluating a project.

Table 5 presents the results for how managers determine the cost of equity capital. We found that only 43% of managers estimate the cost of equity capital and the most common method is the CAPM, but including some extra 'risk factors,' which is used by 49% of respondents 'always' or 'almost always'. Campos et al. (2016) found a higher level of CAPM adoption, but it does not necessarily indicate that the popularity of this method has increased in Brazil. Our sample is formed by 51.4% of private companies that have a much lower level of CAPM use.

The CAPM, the beta approach, is the second most popular method. Thirty-seven percent of respondents claim to use it 'always' or 'almost always'. Next to it comes 'By regulatory decisions' and 'With average historical returns on common stock' used by 35% and 33% of respondents, respectively.

There is not much difference in the cross-sectional analysis. We found that growth firms are significantly more likely to use the CAPM and some extra 'risk factors' than value firms. Low leverage companies have a higher propensity to estimate the cost of equity capital using the CAPM and some extra 'risk factors' than high leverage firms.

Table 5. How managers determine their firm's cost of equity capital.

	% 'always' or 'almost always'	Size			P/E		Leverage		Pay dividends		Industry	
		Mean	Small	Large	Growth	Non-G	Low	High	Yes	No	Manu.	Others
c. Using the CAPM but including some extra 'risk factors'	48.89	1.91	1.23	2.26	2.86	2.00*	2.07	2.00**	2.13	1.55	2.18	1.74
b. Using the capital asset pricing model (CAPM, the beta approach)	36.96	1.78	0.92	2.33	2.71	1.29	2.00	1.22	2.12	1.36	1.91	1.79
e. By regulatory decisions	34.88	1.58	1.67	1.59	0.83	2.29	1.25	2.00	1.39	2.00	1.75	1.57
a. With average historical returns on common stock	33.33	1.45	0.93	1.83*	1.71	1.57	1.69	0.70*	1.81	0.80**	1.83	1.11
d. Whatever our investors tell us they require	33.33	1.80	2.36	1.50	2.57	1.38*	1.80	1.56	1.67	2.27	2.00	1.78
f. Back out from discounted dividend/earnings model, e.g.: price = dividend/(cost of capital growth)	26.19	1.19	1.62	1.05	1.00	1.25	1.20	0.78	0.96	1.80	1.83	0.86**
	% 'always' or 'almost always'	Listed			CEO age		CEO tenure		Regulated		Foreign sales	
		Mean	Yes	No	> 49	Younger	Long	Short	Low	High	Yes	No
c. Using the CAPM but including some extra 'risk factors'	48.89	1.91	2.52	1.00	2.06	1.74	1.95	1.71	1.87	2.08	1.93	1.75
b. Using the capital asset pricing model (CAPM, the beta approach)	36.96	1.78	2.43	1.06	1.88	1.85*	1.85	1.71	1.50	2.67	1.79	2.00*
e. By regulatory decisions	34.88	1.58	1.81	1.31**	2.07	1.28	1.83	1.46	1.59	1.55	1.52	2.20
a. With average historical returns on common stock	33.33	1.45	1.88	0.93	1.64	1.35	1.20	1.79*	1.05	2.17	1.35	1.83
d. Whatever our investors tell us they require	33.33	1.80	1.79	1.88	1.56	2.00	1.74	1.86	1.80	2.00	1.86	1.71
f. Back out from discounted dividend/earnings model, e.g.: price = dividend/(cost of capital growth)	26.19	1.19	1.25	1.27	1.53	1.05	1.21	1.31	1.00	1.64**	1.14	1.83

Note. ***, **, and * denote 'significantly different from zero' at the 1%, 5%, and 10% levels, respectively, in a bicaudal Student's t-test of mean difference for unpaired samples. All table columns are defined in Table 3.

The third most cited answer is that firms estimate the cost of equity capital by relying on regulatory decisions (34.9%) and this factor is more important for listed firms. They estimate the cost of equity capital by regulatory decisions significantly more than unlisted firms. When we analyzed the estimation of the cost of equity capital with average historical returns on common stock controlling for leverage, paying dividends, and CEO tenure, we identified that this method is significantly

more used for low leverage, paying dividends companies, as well as those firms whose CEOs have shorter tenure.

We obtained a few answers from risk factors used by managers to adjust the discount rate or cash flows when they are valuing a project. Only nine managers (5.6%) answered this question, thus it is not possible to analyze the responses conditional on firm characteristics. The most common risk factor among the respondents is the 'ratio of the market value of the firm to its book value of assets'. This option is selected as 'always' or 'almost always' for 66.67% of the respondents who declared to use some risk factor to adjust the discount rate or cash flows.

Table 6 presents the results for how often companies use some discount rates when evaluating a new project in an overseas market. Most selected the 'discount rate for their entire company' as their most frequent discount rate to evaluate the project. Sixty-two percent of respondents claim to use 'always' or 'almost always' this alternative. Low leverage firms are significantly more likely to use the discount rate for the entire company than firms with higher debt ratios.

A risk-matched discount rate for a particular project is the second most chosen alternative. Fifty-four percent of respondents 'always' or 'almost always' use a risk-matched discount rate. This is the most common answer for unregulated firms, and it is significantly more used for them than for regulated firms.

Table 6. How frequently the company uses some discount rates when evaluating a new project in an overseas market.

	% 'always' or 'almost always'	Size			P/E		Leverage		Pay dividends		Industry	
		Mean	Small	Large	Growth	Non-G	Low	High	Yes	No	Manu.	Others
a. The discount rate for our entire company	61.63	2.63	2.66	2.82	3.00	2.60	2.86	2.53**	2.76	2.72	3.04	2.55
d. A risk-matched discount rate for this particular project (considering both country and industry)	54.32	2.52	2.36	2.63	3.00	3.00	2.64	3.00	2.63	2.33	2.43	2.61
b. The discount rate for the overseas market (country discount rate)	39.74	1.83	1.75	2.09	2.00	2.20	2.30	1.00	1.92	2.04	2.18	1.92
c. A divisional discount rate (if the project line of business matches a domestic division)	35.44	1.72	1.86	1.62	2.27	2.22	2.22	1.25	1.81	1.67	1.95	1.61
e. A different discount rate for each component cash flow that has a different risk characteristic (e.g.: depreciation vs. operating cash flows)	28.75	1.50	1.70	1.14*	1.67	1.30	1.44	1.64	1.34	1.46	1.18	1.50
	% 'always' or 'almost always'	Listed			CEO age		CEO tenure		Regulated		Foreign sales	
		Mean	Yes	No	> 49	Younger	Long	Short	Low	High	Yes	No
a. The discount rate for our entire company	61.63	2.63	2.97	2.52	2.89	2.68*	2.79	2.64	2.56	3.04	2.69	2.87
d. A risk-matched discount rate for this particular project (considering both country and industry)	54.32	2.52	2.74	2.26	2.46	2.49	2.39	2.48	2.58	2.42**	2.46	2.57
b. The discount rate for the overseas market (country discount rate)	39.74	1.83	2.03	1.88	2.15	1.70	1.74	2.04	1.82	2.23	1.74	2.43**
c. A divisional discount rate (if the project line of business matches a domestic division)	35.44	1.72	1.72	1.69	1.81	1.67	1.39	2.04**	1.54	2.14	1.52	2.31
e. A different discount rate for each component cash flow that has a different risk characteristic (e.g.: depreciation vs. operating cash flows)	28.75	1.50	1.27	1.52	1.58	1.29	1.28	1.48	1.46	1.26	1.34	1.43

Note. ***, **, and * denote 'significantly different from zero' at the 1%, 5%, and 10% levels, respectively, in a bicaudal Student's t-test of mean difference for unpaired samples. All table columns are defined in Table 3.

Table 7. What factors affect how managers choose the appropriate amount of debt for their firm.

	% 'always' or 'almost always'	Size			P/E		Leverage		Pay dividends		Industry	
		Mean	Small	Large	Growth	Non-G	Low	High	Yes	No	Manu.	Others
h. The volatility of our earnings and cash flows	0.49	2.20	2.41	2.09	1.67	2.40	2.33	1.79	2.11	2.43	2.32	2.11
g. Financial flexibility (we restrict debt, so we have enough internal funds available to pursue new projects when they come along)	0.48	2.22	2.19	2.13	2.11	2.50	2.23	2.57	2.35	1.82	2.10	2.14
e. The transactions costs and fees for issuing debt	0.47	2.07	1.67	2.34	2.40	2.20	1.97	2.20	2.08	1.95	1.86	2.18
a. The tax advantage of interest deductibility	0.40	1.94	1.30	2.31	2.20	2.40	2.16	1.57	2.10	1.45	2.00	1.78
i. We limit debt, so our customers/suppliers are not worried about our firm going out of business	0.35	1.80	1.74	1.76	1.60	1.80	2.18	1.27	1.87	1.55	1.67	1.67
b. The potential costs of bankruptcy, near-bankruptcy, or financial distress	0.32	1.45	1.42	1.44*	1.00	2.10	1.56	1.00*	1.31	1.64	1.50	1.49
d. Our credit rating (as assigned by rating agencies)	0.32	1.61	1.07	2.03	2.40	1.67	1.10	1.86	1.82	1.23	1.05	1.95
n. We restrict our borrowing so that profits from new/future projects can be captured fully by shareholders and do not have to be paid out as interest to debtholders	0.29	1.42	1.15	1.50	1.11	1.60	1.38	1.71	1.47	1.09	1.29	1.30
c. The debt levels of other firms in our industry	0.23	1.35	1.00	1.73**	1.33	1.60	1.07	1.50*	1.55	1.14	1.10	1.53
j. We try to have enough debt that we are not an attractive takeover target	0.20	1.14	0.89	1.27*	1.22	1.20	1.28	0.79	1.29	0.77	0.95	1.19
f. The personal tax cost our investors face when they receive interest income	0.13	0.97	0.93	0.94*	1.00	1.60	0.82	1.14	1.16	0.55**	0.81	1.00
k. If we issue debt our competitors know that we are very unlikely to reduce our output/sales	0.12	0.85	0.93	0.88	0.67	1.10**	0.86	0.64	0.84	1.00	1.05	0.78
m. To ensure that upper management works hard and efficiently, we issue sufficient debt to make sure that a large portion of our cash flow is committed to interest payments	0.08	0.64	0.37	0.91***	0.33	0.60	0.54	0.71	0.76	0.50	0.43	0.78
l. A high debt ratio helps us bargain for concessions from our employees	0.08	0.52	0.56	0.48	0.11	0.60***	0.48	0.43	0.58	0.41	0.33	0.58

Continues

Table 7. What factors affect how managers choose the appropriate amount of debt for their firm (Continued).

	% 'always' or 'almost always'	Listed			CEO age		CEO tenure		Regulated		Foreign sales	
		Mean	Yes	No	> 49	Younger	Long	Short	Low	High	Yes	No
h. The volatility of our earnings and cash flows	0.49	2.20	1.89	2.53	1.96	2.34	1.97	2.38	1.95	2.70	2.29	2.07
g. Financial flexibility (we restrict debt, so we have enough internal funds available to pursue new projects when they come along)	0.48	2.22	2.14	2.17	1.96	2.25*	1.90	2.33	2.08	2.26	2.02	2.50
e. The transactions costs and fees for issuing debt	0.47	2.07	2.40	1.72	1.85	2.24	2.06	1.96	2.03	2.04	2.04	2.00
a. The tax advantage of interest deductibility	0.40	1.94	2.35	1.39	1.85	1.97	1.78	2.15	1.68	2.17	1.76	2.33
i. We limit debt, so our customers/suppliers are not worried about our firm going out of business	0.35	1.80	1.72	1.77	1.92	1.50	1.38	2.08	1.65	1.91	1.96	1.21
b. The potential costs of bankruptcy, near-bankruptcy, or financial distress	0.32	1.45	1.46	1.40	1.65	1.16	1.06	1.75	1.31	1.61	1.53	1.21**
d. Our credit rating (as assigned by rating agencies)	0.32	1.61	2.27	0.97	1.50	1.64	1.75	1.28	1.76	1.38	1.60	1.47
n. We restrict our borrowing so that profits from new/future projects can be captured fully by shareholders and do not have to be paid out as interest to debtholders	0.29	1.42	1.69	1.03	1.12	1.58*	1.36	1.25	1.11	1.70***	1.38	1.29
c. The debt levels of other firms in our industry	0.23	1.35	1.62	1.19	1.46	1.28	1.38	1.33	1.46	1.30	1.47	1.14**
j. We try to have enough debt that we are not an attractive takeover target	0.20	1.14	1.28	0.94	1.31	0.97	0.81	1.50	1.11	1.09	1.27	0.64***
f. The personal tax cost our investors face when they receive interest income	0.13	0.97	1.24	0.65**	0.88	1.00	0.72	1.13	1.00	0.83	0.93	0.86
k. If we issue debt our competitors know that we are very unlikely to reduce our output/sales	0.12	0.85	0.86	0.94	1.00	0.81	0.81	0.96	0.84	1.00	0.96	0.79
m. To ensure that upper management works hard and efficiently, we issue sufficient debt to make sure that a large portion of our cash flow is committed to interest payments	0.08	0.64	1.07	0.29***	0.77	0.59	0.91	0.29***	0.76	0.52	0.73	0.50
l. A high debt ratio helps us bargain for concessions from our employees	0.08	0.52	0.66	0.39	0.54	0.50	0.66	0.29***	0.54	0.48	0.56	0.43

Note. ***, **, and * denote 'significantly different from zero' at the 1%, 5%, and 10% levels, respectively, in a bicaudal Student's t-test of mean difference for unpaired samples. All table columns are defined in Table 3.

Capital structure

We surveyed managers about debt, equity, debt maturity, convertible debt, foreign debt, target debt ratios, credit ratings, and actual debt ratios. Table 7 shows the most important factors that affect how managers choose the appropriate amount of debt for their firm. Three factors have almost the same importance. The volatility of earnings and cash flows, financial flexibility, and transaction costs and fees for issuing debt are declared 'important' or 'very important' for 49%, 48%, and 47% of respondents, respectively.

There is not much difference conditional on firm characteristics for these three main factors. Only financial flexibility is significantly more important for younger CEOs than for older CEOs.

Jensen (1986) considers that debt helps prevent such firms from wasting resources on low-return projects because it reduces their free cash flow. We found very little evidence that firms discipline managers in this way. Only 8% of respondents use debt for this purpose 'always' or 'almost always'.

Only 17.5% of respondent managers answered that their firm has seriously considered issuing debt in foreign countries. Most of them expressed their concerns about the cost of domestic debt relative to foreign debt.

This finding is readily associated with the high level of real interest rates practiced in Brazil since the adoption of inflation targeting by the Central Bank in 1999 and the commitment of the government to generate primary fiscal surpluses. This factor is significantly more important conditional on four firm characteristics: growth, manufacturing, listed, and regulated companies. The results are presented in Table 8.

We asked managers about the factors that affect the firm's debt policy. The results are shown in Table 9. Insufficient internal funds are the most important factor in the decision to issue debt, 65% of respondents selected this alternative as 'important' or 'very important'. This is consistent with the pecking-order theory. This factor is significantly more important for listed firms than unlisted firms and also for firms with younger CEOs.

Such behavior for listed firms is also confirmed by David, Nakamura, and Bastos (2009) and Campos et al. (2016). Tani and Albanez (2016) analyzed whether high levels of corporate governance imply less adherence to the pecking-order theory, and they found that the pecking-order theory works better in the segment with lower corporate governance. This result suggests that more information asymmetry leads to more reliance on debt to finance the flow of funds deficit. These findings are in contrast to ours, that listed firms are more likely to behave as suggested by the pecking-order theory.

The second more important factor is the manager's feeling that market interest rates are particularly low. Market timing is especially important for listed firms.

Managers in Brazil are concerned with transaction costs, again an indication of a less developed capital market. This concern is significantly more important for regulated firms.

We asked managers about the factors that affect their firm's choice between short- and long-term debt and we found that the most important factors are matching the maturity of their debt with the life of their assets (40% of responses as 'important' or 'very important') and issuing long-term debt to minimize the risk of having to refinance in 'bad times' (35% of responses as 'important' or 'very important'). The results are presented in Table 10.

Matching the maturity of their debt with the life of their assets is significantly more important for growth firms than for value firms. There is no statistical difference in responses conditional on each separate firm characteristic to issue long-term debt to minimize the risk of having to refinance in 'bad times.'

Table 8. What factors affect the firm's decisions about issuing foreign debt.

	% 'always' or 'almost always'	Size			P/E		Leverage		Pay dividends		Industry	
		Mean	Small	Large	Growth	Non-G	Low	High	Yes	No	Manu.	Others
e. Foreign interest rates may be lower than domestic interest rates	0.69	2.73	3.00	2.78	3.33	1.50*	2.75	3.00	2.76	3.00	3.38	2.47**
a. Favorable tax treatment relative to Brazil (e.g.: different corporate tax rates)	0.32	1.82	1.83	1.90	2.17	1.67	2.13	1.56	1.95	1.71	2.00	1.76**
b. Keeping the 'source of funds' close to the 'use of funds'	0.31	1.35	1.00	1.50	1.33	1.20	1.00	1.56	1.29	1.57	1.14	1.38***
c. Providing a 'natural hedge' (e.g.: if the foreign currency devalues, we are not obligated to pay interest in Brazilian real)	0.25	1.46	1.83	1.35**	1.50	2.00	1.50	1.44*	1.56	1.29	2.13	1.00**
d. Foreign regulations require us to issue debt abroad	0.14	0.71	0.00	0.95***	0.57	0.80	1.13	0.33*	0.89	0.29**	0.75	0.59

Continues

Table 8. What factors affect the firm's decisions about issuing foreign debt (Continued).

	% 'always' or 'almost always'	Listed			CEO age		CEO tenure		Regulated		Foreign sales	
		Mean	Yes	No	> 49	Younger	Long	Short	Low	High	Yes	No
e. Foreign interest rates may be lower than domestic interest rates	0.69	2.73	3.25	2.00***	2.78	2.87	2.59	3.50	2.73	3.00*	3.13	2.63
a. Favorable tax treatment relative to Brazil (e.g.: different corporate tax rates)	0.32	1.82	2.00	1.63	1.90	1.88	1.84	2.17	1.76	2.11**	1.88	2.13
b. Keeping the 'source of funds' close to the '"use of funds'	0.31	1.35	1.63	0.88	0.89	1.67	1.18	2.00	1.13	1.78	1.13	2.00
c. Providing a 'natural hedge' (e.g.: if the foreign currency devalues, we are not obligated to pay interest in Brazilian real)	0.25	1.46	1.53	1.33	0.90	1.81	1.16	2.50**	0.94	2.44	1.31	2.00*
d. Foreign regulations require us to issue debt abroad	0.14	0.71	0.82	0.56	1.30	0.38***	0.83	0.57	0.60	0.90	0.47	1.22

Note. ***, **, and * denote 'significantly different from zero' at the 1%, 5%, and 10% levels, respectively, in a bicaudal Student's t-test of mean difference for unpaired samples. All table columns are defined in Table 3.

Table 9. What factors affect the firm's debt policy.

	% 'always' or 'almost always'	Size			P/E		Leverage		Pay dividends		Industry	
		Mean	Small	Large	Growth	Non-G	Low	High	Yes	No	Manu.	Others
a. We issue debt when our recent profits (internal funds) are not sufficient to fund our activities	0.65	3.06	3.29	2.97	3.44	2.50	2.83	3.80	3.03	3.25	3.38	2.97
c. We issue debt when interest rates are particularly low	0.58	2.80	2.70	2.91	3.40	2.50	2.90	3.07	2.92	2.64	2.77	2.81
e. We delay issuing debt because of transactions costs and fees	0.47	2.39	2.19	2.49	3.11	2.00	2.61	2.29	2.56	1.95	2.57	2.21***
f. We delay retiring debt because of recapitalization costs and fees	0.38	2.11	1.85	2.31	3.22	1.60	2.00	2.57***	2.24	1.86	2.00	2.21
h. We issue debt when we have accumulated substantial profits	0.22	1.66	1.67	1.73	2.00	1.60	1.61	1.93	1.79	1.55	1.33	1.97***
b. Using debt gives investors a better impression of our firm's prospects than issuing stock	0.21	1.67	1.92	1.53	1.89	1.60	1.52	2.00*	1.67	1.77	1.75	1.74
g. Changes in the price of our common stock	0.20	1.66	1.52	1.82	2.78	1.80	1.36	2.14***	1.89	1.32***	1.81	1.67
d. We use debt when our equity is undervalued by the market	0.19	1.57	1.59	1.58	2.33	1.78	1.43	1.79**	1.81	1.23***	1.55	1.66*
	% 'always' or 'almost always'	Listed			CEO age		CEO tenure		Regulated		Foreign sales	
		Mean	Yes	No	> 49	Younger	Long	Short	Low	High	Yes	No
a. We issue debt when our recent …	0.46	2.06	3.17	3.06**	3.04	3.23**	3.06	3.24	3.20	2.96	3.13	3.21
c. We issue debt when interest …	0.27	1.80	3.03	2.61*	2.67	2.94	2.84	2.76	2.65	3.08	2.82	2.93
e. We delay issuing debt because …	0.23	1.39	2.73	2.00	2.41	2.30	2.21	2.46	2.14	2.67*	2.48	2.00
f. We delay retiring debt because …	0.14	1.11	2.63	1.61	2.08	2.12	2.15	1.96	2.16	2.00	2.18	1.93*
h. We issue debt when we have …	0.09	0.66	1.86	1.55	1.92	1.53*	1.69	1.75	1.97	1.26***	1.69	1.79
g. Changes in the price of our …	0.08	0.66	2.17	1.23***	1.50	1.84**	1.59	1.79	1.73	1.61	1.62	1.93
b. Using debt gives investors a …	0.06	0.67	1.68	1.73	1.60	1.81	1.57	1.83	1.80	1.57	1.65	1.93
d. We use debt when our equity …	0.03	0.57	1.89	1.32***	1.40	1.74	1.42	1.79*	1.57	1.61	1.60	1.57

Note. ***, **, and * denote 'significantly different from zero' at the 1%, 5%, and 10% levels, respectively, in a bicaudal Student's t-test of mean difference for unpaired samples. All table columns are defined in Table 3.

Table 10. What factors affect the firm's choice between short- and long-term debt.

	% 'always' or 'almost always'	Size			P/E		Leverage		Pay dividends		Industry	
		Mean	Small	Large	Growth	Non-G	Low	High	Yes	No	Manu.	Others
b. Matching the maturity of our debt with the life of our assets	0.40	2.00	1.89	2.06	2.67	1.40*	2.04	1.47	1.95	2.04	1.96	1.97
g. We issue long-term debt to minimize the risk of having to refinance in 'bad times'	0.35	1.80	1.79	1.80	1.80	1.80	1.96	1.69	1.92	1.50	2.05	1.62
a. We issue short-term when short-term interest rates are low compared to long-term rates	0.26	1.66	2.14	1.40	1.78	1.00*	1.63	1.40	1.76	1.68	1.87	1.57
c. We issue short-term when we are waiting for long-term market interest rates to decline	0.20	1.18	1.21	1.26	1.22	1.00	1.19	1.13	1.14	1.36	1.27	1.14
e. We expect our credit rating to improve, so we borrow short-term until it does	0.18	0.94	1.45	0.60***	0.56	0.70	0.78	0.80	0.66	1.48***	0.91	0.92
d. We borrow short-term so that returns from new projects can be captured more fully by shareholders, rather than committing to pay long-term profits as interest to debtholders	0.17	0.97	1.07	0.83	0.33	1.10***	0.88	0.64	0.97	0.92*	0.91	0.97
f. Borrowing short-term reduces the chance that our firm will want to take on risky projects	0.16	1.03	1.54	0.57***	0.22	0.56**	1.00	0.64	0.68	1.54	1.13	0.84
	% 'always' or 'almost always'	Listed			CEO age		CEO tenure		Regulated		Foreign sales	
		Mean	Yes	No	> 49	Younger	Long	Short	Low	High	Yes	No
b. Matching the maturity of our debt with …	0.40	2.00	2.10	1.88	2.11	1.86	1.76	2.31	1.75	2.39	2.06	1.86
g. We issue long-term debt to minimize …	0.35	1.80	1.93	1.59	2.23	1.46	1.91	1.56	1.76	1.76	1.88	1.31
a. We issue short term when short-term …	0.26	1.66	1.60	1.82	2.00	1.53	1.61	1.93	1.63	1.91	1.86	1.43
c. We issue short-term when we are …	0.20	1.18	1.20	1.19	1.50	1.08	1.27	1.22	1.08	1.50	1.15	1.64
e. We expect our credit rating to improve …	0.18	0.94	0.80	1.06*	1.08	0.94	1.00	1.04	0.95	1.05	0.98	1.07
d. We borrow short-term so that returns …	0.17	0.97	0.97	0.88	1.33	0.66***	1.00	0.85	1.03	0.82	0.94	1.00
f. Borrowing short-term reduces the …	0.16	1.03	0.77	1.21	0.92	0.94	1.00	0.88	0.97	1.09	0.96	1.23

Note. ***, **, and * denote 'significantly different from zero' at the 1%, 5%, and 10% levels, respectively, in a bicaudal Student's t-test of mean difference for unpaired samples. All table columns are defined in Table 3.

It is also important to notice that the availability of long-term debt financing in Brazil is restricted. Capital market instruments are extensively used only by a handful of large corporations and the majority of private firms rely mostly on bank credit to finance their operations. Bank credit is usually of shorter maturity than capital market instruments, so perhaps the answers reflect this environment. These results are also shown in Table 10.

CONCLUDING REMARKS

This study presents preliminary evidence on the practice of finance in an emerging market at the beginning of the XXI century. After rigorously translating and validating the survey instrument, we administered it to 1,699 Brazilian firms in two waves. We received 160 responses (for a return rate of 9.4%), which we compare to the results gathered by Graham and Harvey (2001) and Brounen et al. (2004).

The results of the financial policy survey in Brazil indicate that firms employ NPV and IRR as preferred investment techniques and the CAPM and its variations as the method for computing the cost of equity capital. In accordance with the findings from North America and Europe, only 5.6% of Brazilian CFOs adjust either the discount rate or the cash flow for specific risks in project valuation. They are also concerned with the cost of debt, transaction costs of market instruments, and use internal funds as their main investment funding source. In addition, the conditional analysis indicates that large, listed, growth, and regulated firms behave significantly differently regarding financial decisions than their counterparts. Therefore, the most important takeaway from this study is that the institutional environment (i.e., markets, institutions, instruments, and the economy) is an important determinant of the practice of corporate finance.

Brazilian firms are smaller, less internationalized, more closely held, and operate more in the utility sector than North American firms, and Brazilian CFOs are younger than North American ones. Regarding financial policies, several contrasts are documented between the two groups of CFOs. A preliminary analysis of the results raises the hypothesis that differences in the practice of finance emerge from the institutional environment specific to Brazil.

Field research in corporate finance enables a better understanding of the decision-making process of financial managers. Cross-cultural field research such as this one may help highlight the role of the legal, institutional, and macroeconomic frameworks in the financial manager's decisions. Therefore, cross-country comparative field studies are a promising path for the furthering of financial theory.

The results also failed to provide support to pecking-order, trade-off, and market-timing theories that posit capital structure is merely an accumulation of past attempts to time the equity market. Graham and Harvey (2001) argue that the relatively low support for these capital structure theories indicates either that there is a problem with the theories or that practitioners are ignoring them. We conjecture that the reason for these discrepancies may be that no one theory is good enough and that these theories are complementary rather than substitutes.

Overall, our results show that, despite this survey being conducted in an emerging country, the practice of corporate finance is similar among CFOs in North America and Europe. At least it used to be so in the late XX and early XXI centuries.

Accordingly, the findings of our survey may not be as relevant to the present compared to when Brazilian CFOs were engaging with capital budgeting, cost of capital, and capital structure decisions before IFRS implementation for the first time, the global financial crisis of 2007-2008, and after COVID-19. Nonetheless, they do provide insights as to the kinds of concerns that may arise in emerging markets, from a Brazilian CFO perspective, and so are likely to be relevant to any emerging country taking into consideration the cost of capital, capital budgeting, and capital structure decisions.

This study has the limitation of being a single country, one-time survey. Nonetheless, it makes a valuable addition to the current understanding in the field of corporate finance in general and the Brazilian scenario in particular. This study not only evaluates the capital budgeting techniques used by Brazilian firms but also studies their practices for the cost of capital and capital structure decisions. The study documents the impact of certain variables such as the size of firms, regulation, industry, sales revenue, CEO's age, and CEO's education level on the capital budgeting practices. Additionally, investment practices in Brazil are consistent with academic theory. The results present a higher sophistication among the larger, listed, growth, and regulated firms with highly qualified CEOs.

Financial literature promotes the advantage of NPV being consistent with shareholders' wealth maximization and sustains that the IRR method is tricky because of its many shortcomings. However, this survey suggests the increasing preference for IRR and NPV as investment techniques for Brazilian firms when compared to earlier surveys (for instance, Fensterseifer, Galesne, & Ziegelmann, 1987; Fensterseifer & Saul, 1993; Saul, 1999). As future research, we suggest the administration of the same survey again (after the IFRS adoption, the global financial crisis, and the COVID-19 pandemic) to contrast these results. That would give the finance community an insight into the evolution of the practice of finance in the past couple of decades — and how it has been affected by such profound events. In addition, in the financial theory, there is a large number of investment practices not frequently used by Brazilian firms (as real options, Monte Carlo simulation, MIRR, and other advanced methods). An investigation into the reasons for this lack of use can help improve the investment practices of Brazilian firms. As a final suggestion, we believe that developing surveys for single topics each time (capital budgeting, capital structure, and cost of capital) can open an opportunity to investigate in more depth some aspects not investigated here, as well as to approximate the practice of finance to its subjacent theory.

NOTE

1. Retrieved from http://faculty.fuqua.duke.edu/~charvey/Research/GHSurvey/GH_JFE2001.XLS on July 30, 2006.

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Data Availability

The authors claim that all data used in the research have been made publicly available through the Harvard Dataverse platform and can be accessed at:

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