EkBis
Jurnal Ekonomi dan Bisnis
Journal of Economics and Business

Ekbis: Jurnal Ekonomi dan Bisnis
Vol. 6, No. 2, 2022, 87 – 99

Article

The Influence of the Destination of IPO Capital Resources on the Shares Return

[1]Yuri Bragancini Giacometti, [2]Tabajara Pimenta Junior, [3]Marcelo Augusto Ambrozini, and [4]Luiz Eduardo Gaio

[1 2 3 4] Universidade de São Paulo, Brazil

* Corresponding author: taba.jr@usp.br

Article Info
Article History
Received : March 26th, 2022
Revised : September 13th, 2022
Accepted : December 07th, 2022
Published : December 15h, 2022

Article DOI:
10.14421/EkBis.2022.6.2.1557

Published by:
FEBI UIN SunanKalijaga Yogyakarta

ABSTRACT

In the IPO process, a prospectus is published that gathers relevant information for investors, including the funds raised destination. This study involved data from the period that covered two important crises for the Brazilian market – Subprime, in 2008, and President Impeachment, in 2016 – that preceded the actual Covid19 Crisis. From a sample of 103 IPOs that occurred between 2006 and 2015, historical series of stock quotes from 2006 to 2017, and using the event study procedure, we verified whether there were differences between the cumulative abnormal returns in the period after the IPO, of two groups of shares. One group was composed of companies that disclosed that the funds raised in the IPO would be used for direct investments (production, technologies, acquisitions, etc.), and the other group was composed of companies that announced that the resources would be applied in other destinations (indebtedness, working capital, credit to clients, etc.). We also seek to explain the behavior of returns accumulated abnormal returns, considering multiple linear regressions based on seven independent variables. The results showed that the announcement of direct investments with the funds raised in the IPO can generate positive abnormal returns in the very short term and showed signs of a relationship between the investment information and the behavior of the abnormal returns accumulated over one year after the IPO.

Keywords: Capital Opening; Investment Decisions; IPO; Capital Market.
JEL Classification: G1, G12, G14, O16

How to cite: Giacometti, Y.B., Junior, T.P., Ambrozini, M.A., Gaio, L.E. (2022). The Influence of the Destination of IPO Capital Resources on the Shares Return. *EkBis: Jurnal Ekonomi dan Bisnis, 6*(2), 87-98. https://doi.org/10.14421/EkBis.2022.6.2.1557

INTRODUCTION

For each IPO (Initial Public Offering) process there is prior disclosure of a launch prospectus, that, in principle, gathers information relevant to potential investors. However, there is a general perception in the market that such prospectuses do not provide information with the necessary coverage and details. There is a problem of informational asymmetry that could be eliminated

with a better quality of the information provided (Michala, 2019) (Kao & Chen, 2020). The main criticisms related to this item refer to the following points: (i) omission of information details in the prospectus; (ii) how the resource allocation should be verified; (iii) lack of rights restrictions, mainly of a punitive nature due to non-compliance with the allocation of resources where indicated.

Regarding the destination that the company intends to give to the resources raised in the IPO, there is an interesting distinction in the investors' perception, of the resources that will be used in direct investments (production, technologies, acquisitions, etc.), and how much resources are available for other purposes (reduction of debt, working capital, credit to clients, etc.). Companies that raise capital to make direct investments transmit a positive expectation of growth, perpetuity, of realization of projects generating value, and in the final analysis, convey the idea of the existence of investment opportunities that other companies may not have.

From another perspective, companies with good investment opportunities tend to finance their projects with debts, rather than equity capital obtained by issuing shares (Ahmad et al., 2021). Thus, the realization of an IPO with the objective of financing investments would transmit negative signals to the market. Perception can be positive, however, when certain conditions of the organization, the economic environment in which the company operates, and the market, are favorable to the IPO. A period dominated by investors' optimism about the future can change the perception given by the company of the funds raised and their intended use. Companies tend to issue shares during these windows of opportunity (Rossi & Marotta, 2010).

However, there is also an asymmetry of information between the perception given by companies and the perception of investors. Company managers have better information and privileged information about the projects they intend to carry out for potential investors in the capital market. The question of perception and asymmetric information has been seminally addressed by Akerlof (1970).

In Brazil, it is mandatory to include in the Launch Prospectus information about the destination that the company intends to give to the funds raised in the IPO, but the level of detail of this information is quite variable and generally superficial. It was only CVM Instruction no. 480 of December 7, 2009, which created the Reference Form in which the disclosure of more comprehensive information on the allocation of funds raised in the period after the IPO, became mandatory.

An interesting question emerges from this explanation: considering the alleged information insufficiency of the Launch Prospectuses of the IPO processes, and considering the implications of the perception and asymmetry of information present in these operations, will the actions of the companies that declare the funds raised in the IPO are aimed at direct investments, have a better performance in the capital market than shares of companies that declare other destinations for the funds raised?

The objective of this study is therefore to verify if the shares of the companies that intend to make direct investments with the resources raised in IPO processes, offered different returns in the period after raising capital, from those offered by the companies that indicated other destinations rather than investments, for the funds raised in the IPO.

LITERATURE REVIEW

Several studies have been conducted with data from Brazilian publicly traded companies, aiming to increase knowledge about the relationship between investment announcements and the subsequent behavior of share returns. The

studies of Lucchesi & Famá (2007), Lyra & Olinquevitch (2007), Fortunato et al. (2012), Sales (2012), Oliveira & Martelanc (2014), and Oliveira & Kayo (2015) are examples.

The study by Lucchesi & Famá (2007) verified the impact of the announcements of investment decisions of Brazilian companies on their share prices. The data were for the period from January 1996 to December 2003. The announcements were categorized into four groups: increase in the level of investment compared to the previous year; reduction in the level of investment compared to the previous year; increase in the level of investment compared to the current year; reduction in the level of investment to the current year. The results showed a cumulative positive abnormal return, with an average of 2.8 %, for the shares of companies that published announcements of increases in the investment level compared to the previous year. For the other cases, statistically significant accumulated abnormal returns were not detected.

Lyra & Olinquevitch (2007) obtained results in line with those obtained by Lucchesi & Famá (2007). They applied the event-study method, considering the changes in permanent and fixed assets included in the financial statements of companies, such as indicating investment decisions and detected market reactions to this type of indication, particularly given by companies that adopt the maximization of wealth for shareholders as a driver of its strategic management.

Fortunato et al. (2012) studied how the performance of publicly traded companies with shares traded on the Brazilian stock exchange is influenced by the capital investments made by the companies. The sample consisted of 508 companies. The researchers observed the behavior of two variables of company performance, market value and EBIT (Earnings Before Interest and Taxes) in regressions with panel data, with CAPEX as one of the independent variables. The results showed that the market value of the company has a positive relationship with the capital investments made by it in the current year and the two previous years. No statistically consistent result, however, was obtained to support a relationship between investments and EBIT.

Sales (2012) sought to detect a possible relationship between the information on the destination of the funds raised in the IPO and the abnormal return on the first trading day of the shares on the stock exchange. Using data from a group of 105 companies that carried out their IPOs between January 2007 and December 2011, they sought to relate various destinations to the resources with the abnormal share return on the first trading day. They applied multivariate regressions and found that there was no statistically consistent relationship between the information on the destination of the funds raised and the abnormal return on the first day of trading of the shares.

To identify the determinants of the IPO processes of Brazilian companies, Oliveira & Martelanc (2014) used logistic regression on accounting information, market information, and specific characteristics of the companies that offered their capital in Brazil in the period from 2005 to 2010. The results obtained indicated that the investments were a relevant variable. Companies that made an IPO invested significantly in their growth, in addition to reducing their debts. The study also found that the IPOs are an option to adjust the companies' capital structures, as well as being a catalyst for raising new funds. Another important finding was that the profitability of the companies that offered the capital became higher, as well as their market value.

To evaluate the behavior of long-term returns in the period following the IPO on the Brazilian stock exchange, Oliveira & Kayo (2015) studied the

initial public offerings that occurred in the country in the years 2004 and 2011. In the study, they measured the short-term and long-term share returns and found that short-term performance was positive but significantly lower than that of several countries and other IPOs conducted in Brazil even in past decades. The long-term performance of the IPOs was negative, corroborating several international studies. In addition, for companies that made their IPOs in 2007, when the country was experiencing a period of intense investment, negative returns were observed earlier, suggesting that there was a significant overvaluation of prices at the time of the launch of its shares.

Yan et al. (2019) clarify that IPO prospectuses play an important role in enhancing investors' ability to value companies that are about to go public. Exploring data from a sample of 1,320 IPO prospectuses from the Chinese stock market for the period 2007 to 2016, they found that the uncertain or negative tone of IPO prospectus texts was significantly associated with initial stock returns and the volatility of these returns. In addition, the results showed the presence of imprecise, or not very objective, information in the prospects was related to the long-term returns of the shares.

METHODOLOGY

To accomplish the objective of this study, we performed two sets of procedures. First, following the Study of Events technique, we calculated the average cumulative abnormal returns at different periods for two portfolios and checked for differences between them. One of the portfolios was composed of the shares of the companies that declared that the funds raised in the IPO were destined for investments – the Investment Portfolio, and the other portfolio was comprised of the shares of the companies that declared that the funds raised in the IPO operations would have a different investment destination – Alternative Portfolio. We then applied multiple linear regression to explain the behavior of cumulative abnormal returns, considering seven independent variables: market value, book-to-market index, offer volume, primary allotment, corporate governance level, indebtedness, and destination of the resources raised in the IPO operation. These methodological procedures were based on the texts of Araújo & Oliveira (2015), and Spanos & Angelis (2016). The breakdown is presented below.

We adopted the date of the event, the date of the IPO announcement, and we adopted the periods of 21, 126, 252, and 504 business days after the date of the event, for which the average returns were calculated. These periods are equivalent to one month, six months, one year, and two years when only working days are considered. The events of interest were selected from two reference databases, Economatica, and the B3 stock exchange.

In the next stage, we performed the calculations of normal and abnormal returns. We adopted as a benchmark for the expected return the behavior of the Ibovespa index portfolio, in the same way as Sales (2012) and Araújo & Oliveira (2015).

Algebraically, the abnormal return is given by Equation 1.

$$AR_{i,t} = R_{i,t} - E\left[\frac{R_{i,t}}{X_t}\right] \qquad [1]$$

Where:

$AR_{i,t}$ is the abnormal return of share i at period t;

$R_{i,t}$ is the observed return of share i at period t;

$E[R_{i,t}/X_t]$ is the expected return of share i at period t.

We obtained, from Economatica e B3 databases, the time series of share returns of each of the companies, under the heading of continuous capitalization, as logarithmic returns, according to Equation 2.

$$R_{i,t} = ln\left(\frac{P_{i,t}}{P_{i,t-1}}\right) \quad [2]$$

Where:

$R_{i,t}$ is the return of share i at date t;

$P_{i,t}$ is the daily closing price of share i at date t;

$P_{i,t-1}$ is the daily closing price of share i at date t-1;

We calculated the cumulative abnormal returns (CAR) using Equation 3.

$$CAR(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{i,t} \quad [3]$$

Where:

$CAR(t_1, t_2)$ is the abnormal cumulative return in the time interval t1 a t2;

t_1, t_2 demarcate the time interval in the event window;

$AR_{i,t}$ is the abnormal return of share i at date t.

And:

$$CAR_i(t_1, t_2) \sim N[0, \sigma^2(t_1, t_2)]$$

The mean values of the abnormal returns were obtained using Equation 4.

$$\overline{AR_t} = \frac{1}{N}\sum_{i=1}^{N} AR_{i,t} \quad [4]$$

Where:

$\overline{AR_t}$ is the sample mean of the abnormal returns at date t;

N is the number of events in the sample;

$AR_{i,t}$ is the abnormal return of share i at date t.

The cumulative mean return of the sample with N events can be calculated with Equation 5:

$$\overline{CAR_t}(t_1, t_2) = \frac{1}{N}\sum_{i=1}^{N} CAR_i(t_1, t_2) \quad [5]$$

Where:

$\overline{CAR_t}(t_1, t_2)$ is the sample cumulative return average in the time interval t1 to t2;

$CAR_i(t_1, t_2)$ is the abnormal cumulative return in the time interval t1 to t2;

N is the number of events in the sample.

Having obtained the CAR values for both portfolios and for all time windows, we applied normality tests on the CAR time series, and then performed parametric tests comparing averages based on Student's t statistics.

To find an explanation for the behavior of accumulated abnormal returns - CAR, we also performed multiple linear regressions, with estimation by Ordinary Least Squares, considering seven independent variables, described below, whose choice was based on the works of Minardi et al. (2013) and Araújo & Oliveira (2015):

- Market value (MV) of the company, given by the logarithm of the market value, calculated by the product of the share price in the IPO with the total number of shares of the company. It is expected that higher market values will reflect lower CAR values;
- Book-to-market (BTM) index given by the ratio between the equity value of the share and the price of the share in the IPO. Higher BTM values are expected to reflect higher CAR values;
- Offer Volume (OFFER), given by the logarithm of the value of the offer made, calculated by the product of the number of shares offered in the IPO at the offer price. It is expected that higher supply volume values will reflect higher CAR values;
- Primary allotment (PRIM), which represents the relative value of the shares that were present only in the primary offer, and is given by the ratio between the value of the primary offer and the total value of the offer. It is expected that higher PRIM values will reflect higher CAR values.

- Corporate Governance Level (CG), represented by a dummy variable that assumes unit value when the company is in the special listing segment of the Novo Mercado (NM) of BM&FBovespa and a null value when this is not the case. Companies listed in the Novo Mercado are expected to reflect higher CAR values;
- Indebtedness Debt-to-Assets (DTA), given by the ratio of the total liabilities of the company to its total assets. The DTA values are from the quarter before the IPO. Lower DTA values are expected to reflect higher CAR values;
- Investment (INVEST), represented by a dummy variable that assumes unit value when the company declared that the destination of funds raised in the IPO is investments, and assumes zero value when the destination of the resources is anything other than investments. It is expected that companies that have opted to invest the funds raised in the IPO will present higher CAR values.

Five linear regression equations were constructed, one for each time window of the event, according to the model given by Equation 6:

$$CAR_{i,t} = \alpha + \beta_1 MV_{i,j} + \beta_2 BTM_{i,j} + \beta_3 OFFER_{i,j} + \beta_4 PRIM_{i,j} + \beta_5 DTA_{i,j} + \beta_6 CG_{i,j} + \beta_7 INVEST_{i,j} + \varepsilon_i \quad [6]$$

In addition to this complete regression model, with all seven variables, three other models were employed. Equations 7 to 9 show the variables considered in each of them.

In the model expressed by Equation 7, we derive the variable Market Value (MV) from the company, since we detected its high correlation with the variable Offer Volume (OFFER):

$$CAR_{i,t} = \alpha + \beta_1 BTM_{i,j} + \beta_2 OFFER_{i,j} + \beta_3 PRIM_{i,j} + \beta_4 DTA_{i,j} + \beta_5 CG_{i,j} + \beta_6 INVEST_{i,j} + \varepsilon_i \quad [7]$$

The next model applied was a simple linear regression, considering only the variable INVEST as independent, according to Equation 8:

$$CAR_{i,t} = \alpha + \beta . INVEST_{i,j} + \varepsilon_i \quad [8]$$

Finally, we applied the regression model given by Equation 9, which does not include the INVEST variable, separately for each group of companies:

$$CAR_{i,t} = \alpha + \beta_1 BTM_{i,j} + \beta_2 OFFER_{i,j} + \beta_3 PRIM_{i,j} + \beta_4 DTA_{i,j} + \beta_5 CG_{i,j} + \varepsilon_i \quad [9]$$

The validation of the regression models' assumptions assumed was carried out through tests applications: for residues independence, the Durbin-Watson test; for homoscedasticity (constant variance of residues), the White's test; for residue normality – the Kolmogorov-Smirnov test; and regarding the absence of multicollinearity between the regressors, the independent variables correlation matrix.

RESULT AND DISCUSSION

For the period contemplated in the study, we detected the occurrence of a total of 137 IPO operations. Of this total, twelve companies closed the capital, seven companies were incorporated by others, and fifteen did not offer complete time series. Thus, there were 103 operations in the sample. We divided the companies into two groups. In one, we allocated companies that disclosed that funds raised in the IPO would be used for investments. In the other group, we allocated companies that disclosed other destinations for the funds raised. We consider in the sample only IPO operations and discard follow-on operations. Table 1 shows the selection.

Table 1
Sample Composition
(companies that performed IPO)

	Destination of funds raised in the IPO		
Year	Investiments	Others	Total
2006	13	13	26
2007	41	23	64
2008	1	3	4
2009	3	3	6
2010	7	4	11
2011	10	1	11
2012	1	2	3
2013	4	6	10
2014	1	0	1
2015	0	1	1
Population	81	56	137
Excluded	16	18	34
Sample	65	38	103

Source: CVM (2020)

Table 2 shows the accumulated average returns for both portfolios, considering the different periods (event windows). Also present in this table are the statistical tests of means comparison, based on Student's t statistics.

Table 2
Cumulative average returns

Period [days]	$\overline{CAR_t}$		t-Statistic	p-value
	Investiment Portfolio	Alternative Portfolio		
21	0.53%	-1.20%	2.164	0.033
126	0.11%	0.05%	0.443	0.661
252	0.30%	-0.70%	-1,507	0.135
504	-0.21%	-0.28%	-1.278	0.204

Source: Processed data (2021)

Only for the 21 days (very short term) was a statistically significant difference detected, at the 5 % confidence level, between the cumulative average returns of both portfolios. Nominal values express the sharp difference between returns. The portfolio formed with the companies that invested the funds raised in the IPO produced a positive cumulative average return of 0.53 %, while the other portfolio suffered a negative accumulated average return of -1.20 %. For all other periods, the null hypothesis of equality of means cannot be rejected.

Table 3 presents the values of the descriptive statistics of the five independent variables, not dummies, already separated for each portfolio. Table 3 also presents the means comparison tests of the variables between the two groups.

The results of the means comparison test, presented in Table 3, show that the null hypothesis of equality of means was not rejected for any of the variables, at a level of 5 % of statistical significance. This means that it cannot be said that the mean values of the variables are different for both groups of companies.

We observed the correlation matrices between variables and CARs for each time window (21, 126, 252, and 504 days). Table 4 is an example that includes the CAR variable of 21 days. The main contribution of correlation matrices was to indicate the need to remove the variable Market Value (MV) in the regression models. This is because the variable presents high values and a statistically significant correlation with the variable Offer Volume (OFFER).

Table 3
Regression model descriptive statistics

Investment Portfolio					
Statistic	MV	BTM	OFFER	PRIM	DTA
Mean	15.0288	0.3411	13.6673	0.7421	0.2533
Median	13.9952	0.2902	13.1224	0.8025	0.1628
Standard Deviation	16.1364	0.2934	14.2821	0.2641	0.2546
Minimum	7.8856	0.0136	9.9379	0.1228	0.0000
Maximum	18.1967	1.4942	16.3282	1.0000	0.9217
Alternative Portfolio					
Statistic	MV	BTM	OFFER	PRIM	DTA
Mean	15.2859	0.4546	14.0312	0.6922	0.2946
Median	14.3966	0.3532	13.2244	0.9443	0.2231
Standard Deviation	15.8533	0.3338	14.5411	0.4104	0.3543
Minimum	6.7053	0.0000	10.9244	0.1129	0.0000
Maximum	17.3419	1.2849	16.1379	1.0000	1.4242
Mean Comparison Test					
t – Statistic	-0.517	-1.811	-1.040	0.794	-0.826
p – value	0.606	0.073	0.301	0.428	0.411

Source: Processed data (2021)

The correlation between these two variables is 0.643, as observed in Table 4, and indicates the presence of multicollinearity. In the other matrices, the correlations between the MV and OFFER variables presented equally relevant values.

Table 4
Matrix of correlations between variables and CAR of 21 days

	CAR	MV	BTM	OFFER	PRIM	DTA	CG	INVEST
CAR	1							
MV	0.123	1						
BTM	-0.122	0.018	1					
OFFER	0.091	**0.643***	0.032	1				
PRIM	0.100	-0.158	-0.039	-0.173	1			
DTA	-0.043	0.076	0.077	**0.229***	**0.242***	1		
CG	-0.174	-0.017	0.077	0.188	-0.184	**-0.204***	1	
INVEST	0.016	-0.048	-0.178	-0.074	0.078	-0.070	0.061	1

Source: Processed data (2021) * Level of statistical significance of 5%.

It should be noted that the correlation between CAR dependent variables for any time windows and any other variables considered in the study does not present significant levels. The highest value obtained, although not very expressive, was the negative correlation (-0.223) between the CAR variables, for 126 days, and the variable Market Value (MV). Table 5 shows the values obtained.

Table 5

Matrix of correlations between independent and dependent variables

	CAR_{21} dias	CAR_{126} dias	CAR_{252} dias	CAR_{504} dias
MV	0.123	**-0.223***	0.001	0.073
BTM	-0.122	0.087	0.102	0.065
OFFER	0.091	-0.176	0.017	0.119
PRIM	0.100	-0.074	-0.098	0.045
DTA	-0.043	-0.130	-0.027	0.088
CG	-0.174	0.171	0.036	-0.159
INVEST	0.016	-0.012	0.008	0.070

Source: Processed data (2021)

* Level of statistical significance of 5%.

In Regression A, all variables were tested together and in Regression B, the variable MV was removed due to high correlation with the variable OFFER. In Regression C, we consider only the independent variable related to the investment decision, or not, of funds raised in the IPO. In Regressions D and E, variables without the INVEST dummy were tested for groups of companies.

The results of the five regression models for each dependent variable, the CAR of 21, 126, 252, and 504 days, are presented in Table 6.

Table 6

Results of Regressions

		Regression A	Regression B	Regression C	Regression D	Regression E
Dependent Variable CAR of 21 days	α	-0.182	-0.192	0.309	-0.131	-0.161
	MV	0.005	-	-	-	-
	BTM	-0.500	-0.049	-	-0.027	-0.095
	OFFER	0.023	0.291	-	0.022	0.032
	PRIM	0.054	0.534	-	0.112	0.004
	DTA	-0.073	-0.076	-	-0.793	-0.073
	CG	-0.088	-0.093	-	-0.057	-0.125
	INVEST	-0.003	-0.022	0.001	-	-
	R^2	0.085	0.025	-0.010	0.080	0.135
	F sig	0.282	0.349	0.961	0.467	0.415
		Regression A	Regression B	Regression C	Regression D	Regression E
Dependent Variable CAR of 126 days	α	1.039	1.088	0.013	0.587	1.574
	MV	-0.025	-	-	-	-
	BTM	-0.500	0.061	-	0.134	-0.053
	OFFER	-0.029	-0.059	-	-0.035	-0.080
	PRIM	-0.054	-0.048	-	-0.018	-0.100
	DTA	-0.042	-0.027	-	-0.045	-0.008
	CG	0.123	0.145	-	0.111	0.183
	INVEST	-0.008	-0.010	-0.004	-	-
	R^2	0.101	0.087	-0.010	0.060	0.196
	F sig	0.168	0.318	0.938	0.255	0.238
		Regression A	Regression B	Regression C	Regression D	Regression E
Dependent Variable CAR of 252 days	α	0.195	0.206	0.081	0.279	-0.095
	MV	-0.005	-	-	-	-
	BTM	0.092	0.091	-	0.207	-0.022
	OFFER	0.000	-0.006	-	-0.002	-0.003
	PRIM	-0.099	-0.970	-	-0.373	0.065
	DTA	-0.030	-0.270	-	0.141	-0.069
	CG	0.032	0.037	-	-0.169	0.261

	INVEST	-0.158	-0.159	**-0.170***	-	-
	R^2	0.052	0.052	0.039	0.071	0.056
	F sig	0.640	0.561	**0.046***	0.581	0.499
		Regression A	Regression B	Regression C	Regression D	Regression E
Dependent Variable CAR of 504 days	α	-2.248	-2.206	-0.007	-1.704	-2.957
	MV	-0.021	-	-	-	-
	BTM	0.129	0.127	-	0.117	0.229
	OFFER	0.144	0.119	-	0.099	0.146
	PRIM	0.107	0.112	-	-0.219	0.366
	DTA	-0.031	-0.190	-	0.092	-0.109
	CG	-0.417	-0.398	-	-0.450	-0.379
	INVEST	-0.164	-0.164	-0.204	-	-
	R^2	0.069	0.068	0.021	0.042	0.100
	F sig	0.434	0.512	0.152	0.469	0.472

Source: Processed data (2021) * Level of statistical significance of 5%.

None of the 20 regressions had a minimally expressive R2, and 19 regressions were not significant at the 5 % level of statistical significance. The results showed a significant regression being only Regression C for CAR of 252 days as a dependent variable. In this regression, the β coefficient of INVEST variable, value -0.170, also has statistical significance at the 5 % level. Given the magnitude of CAR252 values and considering that INVEST assumes binary values 0 or 1, the significant β coefficient obtained with equally significant regression has an expressive value (-0.170). This result suggests that the allocation of funds raised in IPO operations is relevant information for abnormal returns occurrence, not in short term, but in the period after one year from the launch of the share.

When we tested residuals from the 19 non-significant regressions, we detected variance heterogeneity, which leads to a violation of the normal error distribution assumption. This causes even more relevant errors to be generated in the estimated values, which makes the regressions unfeasible. The Shapiro-Wilk test of residues normality confirmed the non-normality condition of the regression errors.

As an adjustment procedure, we eliminated variables that did not present statistical significance, in each regression model and for each time window. In this new regression model, the variables MV, BTM, and DTA were eliminated, as shown in Equation 10, and then, depending on the results, the remaining variables were recombined into new regressions.

$$CAR_{i,t} = \alpha + \beta_1 OFFER_{i,j} + \beta_2 PRIM_{i,j} + \beta_3 CG_{i,j} + \beta_4 INVEST_{i,j} + \varepsilon_i \qquad [Equation\ 10]$$

The results showed, however, that none of the regressions, with any combination of variables, has statistical significance at the 5 % level.

CONCLUSION AND RECOMMENDATION

The objective was to detect if the type of destination of the funds, announced in the prospectus of share issuance, exerts some influence on shares' future returns behavior. The use of the event studies technique showed that only in the very short term, a window of 21 days after the IPO, the shares' cumulative abnormal returns of companies that announced that they would make direct investments, showed to be superior to the shares of the other group of companies. Based on this result, we conclude that the announcement of the destination of funds raised in IPO can generate abnormal positive returns in the case of direct investments. The average cumulative abnormal return obtained by shares of the other group of companies was not only lower, but negative, for this period of 21 days.

In fact, we cannot say that there is a causal relationship, but only a relationship, a movement of precedence.

We also sought to find an explanation for the behavior of cumulative abnormal returns, considering several models of multiple linear regressions based on seven independent variables. The results showed that the information on the resources raised in the IPO is intended for direct investments and is relevant to explain the behavior of accumulated returns only in the time horizon of one year, i.e. 252 business days. However, we conclude that this result should be considered only as an indication of the existence of a relationship between the destination information and the behavior of the return, since regression did not present a minimally expressive, although statistically valid, R2. No other variable revealed any strong explanation of the accumulated abnormal returns in any of the scenarios.

The conclusions were based on results obtained under the premise that the information disclosed in the prospectuses for the issuance of IPO processes are totally reliable and significantly minimize information asymmetries. This premise can be relaxed and this fact indicates an interesting path for future research. In addition, it may be advisable to include variables in the regression models that control the effects of market timing and significant movements in the interest rate, a benchmark for the country's economy. We also suggest for future research that serial autocorrelation tests be carried out on the data, in the generation of estimates, and/or with the application of Generalized Method of Moments – GMM.

REFERENCES

Ahmad, M. M., Hunjra, A. I., & Taskin, D. (2021). Do asymmetric information and leverage affect investment decisions? *The Quarterly Review of Economics and Finance*. https://doi.org/10.1016/J.QREF.2021.05.001

Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *Quarterly Journal of Economics*, *84*(3), 488–500. https://doi.org/10.2307/1879431

Araújo, J. P. de, & Oliveira, M. R. G. de. (2015). Análise da Influência dos Fundos de Private Equity e Venture Capital no Retorno das Ações das Empresas Investidas. *Revista de Finanças Aplicadas*, *1*(1), 1–30. https://doi.org/10.7444/228

CVM – Comissão de Valores Mobiliários (2020). *Relatório anual CVM 2018*. https://www.gov.br/cvm/pt-br/centrais-de-conteudo/publicacoes/relatorios/anual

Fortunato, G., Funchal, B., & Motta, A. P. da. (2012). Impacto dos investimentos no desempenho das empresas brasileiras. *RAM. Revista de Administração Mackenzie*, *13*, 75–98. https://www.scielo.br/j/ram/a/y4tQHscCPwdrcBHQPsjR73g/abstract/?lang=pt#

Kao, L., & Chen, A. (2020). How a pre-IPO audit committee improves IPO pricing efficiency in an economy with little value uncertainty and information asymmetry. *Journal of Banking & Finance*, *110*, 105688. https://doi.org/10.1016/J.JBANKFIN.2019.105688

Lucchesi, E. P., & Famá, R. (2007). O impacto das decisões de investimento das empresas no valor de mercado das ações negociadas na Bovespa no período de 1996 a 2003. *Revista de Administração*, *42*(2), 249–260. http://rausp.usp.br/wp-content/uploads/files/v4202249.pdf

Lyra, R. L. W. C. de, & Olinquevitch, J. L. (2007). Análise do conteúdo informacional dos investimentos em ativos imobilizados: um estudo de eventos em empresas negociadas na Bovespa. *Revista Universo Contábil*, *3*(2), 39–54. https://doi.org/10.4270/RUC.20073

Michala, D. (2019). Are private equity backed initial public offerings any different? Timing, information asymmetry and post-IPO survival. *Journal of Corporate Finance*, *59*, 31–47. https://doi.org/10.1016/J.JCORPFIN.2016.10.005

Minardi, A. M. A. F., Ferrari, G. L., & Tavares, P. C. A. (2013). Performances of Brazilian IPOs backed by private equity. *Journal of Business Research*, *66*(3), 448–455. https://doi.org/10.1016/J.JBUSRES.2012.04.012

Oliveira, B. C. de, & Kayo, E. K. (2015). Desempenho de ações de empresas brasileiras após seu IPO: evidências de curto e de longo prazo. *REGE - Revista de Gestão*, *22*(2), 173–186. https://doi.org/10.5700/REGE557

Oliveira, B. C. de, & Martelanc, R. (2014). IPO Determinants of Brazilian Companies. *Brazilian Review of Finance*, *12*(2), 135–161. https://doi.org/10.12660/RBFIN.V12N2.2014.10388

Rossi, J. L., & Marotta, M. (2010). Equity market timing: testando através dos IPOs no mercado brasileiro.

Revista Brasileira de Finanças, *8*(1), 85–101.

Sales, G. A. W. (2012). *Estudo da destinação dos recursos captados em ofertas públicas de ações no Brasil e seus efeitos*. https://doi.org/10.11606/D.12.2012.TDE-29112012-185235

Spanos, G., & Angelis, L. (2016). The impact of information security events to the stock market: A systematic literature review. *Computers & Security*, *58*, 216–229. https://doi.org/10.1016/J.COSE.2015.12.006

Yan, Y., Xiong, X., Meng, J. G., & Zou, G. (2019). Uncertainty and IPO initial returns: evidence from the tone analysis of China's IPO prospectuses. *Pacific-Basin Finance Journal*, *57*, 101075. https://doi.org/10.1016/j.pacfin.2018.10.004