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LARGE PENSION FUNDS AND THE CORPORATE GOVERNANCE PRACTICES OF BRAZILIAN COMPANIES

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ABSTRACT

We do not find any consistent evidence that the presence of the largest Brazilian pension funds as relevant shareholders is associated to higher corporate governance scores by public Brazilian companies. Even though companies with institutional investors as relevant shareholders presented a higher average corporate governance score than other companies, they were also larger and had greater past profitability than other companies, which are common attributes of firms with better corporate governance according to the literature. The impact of Brazilian institutional investors on the corporate governance quality of their investees is either negligible or cannot be captured by the proxies we employed. Finally, we note that these two pension funds may represent the policy and political views of the incumbent Brazilian government and that the actions of their board appointees may or not reflect what is understood as good corporate governance practices. **KEYWORDS:** institutional investors; pension funds; corporate governance.

RESUMO

Não encontramos nenhuma comprovação consistente de que a presença dos maiores fundos de pensão brasileiros como acionistas importantes está associada a escores de maior governança corporativa por parte de empresas brasileiras públicas. Apesar das empresas que têm investidores institucionais como acionistas importantes terem apresentado um escore de governança corporativa mais elevado do que o de outras empresas, elas também são maiores e, no passado, tiveram lucro mais expressivo do que outras empresas, o que são atributos comuns de empresas com melhor governança corporativa, segundo a literatura. O impacto dos investidores institucionais brasileiros na qualidade da governança corporativa de suas participadas é desprezível ou não pode ser captado pelos parâmetros que utilizamos. Por fim, observamos que estes dois fundos de pensão podem representar a política e as visões políticas do governo brasileiro candidato à reeleição e que as ações dos indicados pela junta talvez não reflitam o que é entendido como boas práticas de governança.

PALAVRAS-CHAVE: investidores institucionais; fundos de pensão; governança corporativa.

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1 – INTRODUCTION

Silveira *et alli* (2009) and Leal and Carvalhal-da-Silva (2007) examined the determinants of good corporate governance practices in Brazilian public companies. The presence of institutional investors as relevant shareholders may be one of them. The study of institutional investors as monitors of management is a fairly recent theme in Latin America. This article analyzes the correlation between the share ownership of the largest Brazilian pension funds and a measure of corporate governance quality of Brazilian public companies.

We concentrate on the three largest pension funds in Brazil, Previ, Petros, and Funcef, in this order, which also hold the largest relative allocations in equities. The vast majority of Brazilian pension funds invest very little in equities. These three pension funds are also indirect agents of the Brazilian government because their beneficiaries are the employees of Banco do Brasil (the largest Brazilian bank), Petrobras (the Brazilian energy giant, one of the largest companies in the world, and the largest in Latin America), and Caixa Economica Federal (the second largest Brazilian bank), all controlled by the Brazilian federal government. Crisóstomo and González (2006) report that these pension funds begin to play a more important role as shareholders during the Brazilian privatization process initiated in the 1990s. Their presence in the acquiring consortia made several privatizations possible. The agreements that materialized these consortia led them to a greater number of board seats and to a more salient role in corporate governance.

The investments of pension funds represented 15.2 percent of the Brazilian gross domestic product. Equity investments accounted for 32.5 percent of the total invested by Brazilian pension funds, with the largest ones holding relatively more. In December of 2010, Previ (US\$ 91.7 billion), Petros (US\$ 33.4 billion), and Funcef (US\$ 26.2 billion) jointly represented 46.8 percent of the total investment value of 275 pension funds (US\$ 323.1 billion), as informed by ABRAPP, the Brazilian association that represents company sponsored pension funds.

We do not find any consistently significant correlation between scores of corporate governance practices and the presence of institutional investors as relevant shareholders of public Brazilian companies, confirming the evidence in Punsuvo *et alli* (2007), who find a negative relationship between the corporate governance practices of Brazilian companies and the participation of pension funds as relevant shareholders. Silveira *et alli* (2008) also found a positive but non-significant relationship between pension fund ownership and the quality of corporate governance practices. Leal and Carvalhal-da-Silva (2007) indicate a negative impact on the market value and on the dividend yield when an institutional investor was the largest ultimate shareholder of a company. This negative relationship is

consistent with the findings presented here although it was not always significant. Crisóstomo and González (2006) do not find a difference in the performance of Brazilian companies with relevant pension fund ownership. Finally, recent preliminary evidence presented by Silveira (2011) also concludes that the presence of the largest pension funds is not related to better corporate governance practices.

Pension funds controlled by the government, which are the largest shareholders among Brazilian pension funds, may pursue a diverse agenda that includes political issues and the economic policy orientation of the incumbent government, and may enroll people who are not necessarily committed to better corporate governance practices, but that rather have political affinities with the government, as board representatives. Even though pension fund officials many times pose as champions of good corporate governance practices, we cannot present any solid evidence that ownership by the largest pension funds in Brazil translates into better corporate governance practices both from our own results and from the literature reviewed.

2 – BACKGROUND

Claessens and Fan (2002) and Gillan and Starks (2003) show that investors are willing to pay a premium for the stock of companies that have a more active and independent board of directors and that adopt good corporate governance practices. This premium is greater in Latin America and Asia and lower in Europe and in the US. A growing and important external control mechanism that is affecting corporate governance around the world is the presence of institutional investors as shareholders (Aggarwal *et alli*, 2011). Sternberg *et alli* (2011) point out that dilution of corporate control is in progress in Brazil, with a growing number of companies with shared control. They highlight the increasing importance of shareholder agreements, particularly among those companies that went public after 2004. The largest Brazilian pension funds are a frequent signatory of such agreements and their size grants them the potential role of monitoring controlling shareholders, even when they are not part of an agreement. Carvalhal-da-Silva and Leal (2006) and Sternberg *et alli* (2011), among others, on the other hand, assert that control still remains very concentrated in Brazil.

Aggarwal *et alli* (2011) argue that monitoring by institutional investors based in high investor protection countries is more effective and find a positive relationship between corporate governance practices and ownership by institutional investors. They also contend that monitoring by domestic institutional investors is less effective in low investor protection countries. Gillan and Starks (2000) pointed out that the long-term goals of pension fund

investments creates an incentive to influence the performance of their investees. Aldrichi (2003), on the other hand, emphasized the lack of incentive that institutional investors have to exert a more active role in the US because regulation discourages excessive control by investors in general, increasing their accountability regarding the performance of companies. Gillan and Starks (2000) question the monitoring effectiveness of institutional investors because they do not have the expertise needed to advise managers. They also observe that institutional investors may be imperfect monitors due to their own internal agency problems. However, even the imperfect monitoring provided by institutional investors may be welcome by minority shareholders in low investor protection countries.

Gillan and Starks (2003) underline differences in the monitoring incentives and skills between institutional and major non-institutional shareholders. The incentive to monitor and maintain efficiency may vary among institutional investors as well. They may be *pressure-sensitive*, such as banks and insurance companies, or insensitive to pressure, such as mutual funds and pension funds. Pressure sensitive investors are those that have a business relationship, potential or current, with the companies in which they invest. They may be less active in monitoring these companies and friendlier to managers than those that are insensitive to pressure. Gillan and Starks (2003) note that even though banks could have a comparative monitoring advantage due to their access to company information, they typically hold larger debt than equity stakes in the company and, therefore, their ability to monitor in the interest of minority shareholders may be clouded by those issues. These authors also call attention to a considerable difference in the role of banks as shareholders in countries such as Germany and Japan in relation to the US and the UK.

Large institutional investors may convey reliable information to other investors and have several ways of influencing the governance of a company. They may establish policies on executive compensation, participate in the board of directors, sell their shares rather than trying to instigate changes, or express their opinions aggressively by means of press or media campaigns when their suggestions are not accepted by the company. Becht *et alli* (2003) remind that holding a seat at the board of directors is, however, naturally limited by laws and regulations, which vary considerably across countries. They also note that the actions and the sizable stakes of institutional investors may affect the liquidity and the value of their shares. Gillan and Starks (2003) recount that the presence of institutional investors leads to more informative prices and, consequently, to lower monitoring costs. They observed that institutional investors have historically favored liquidity because their ability to monitor management may imply in being subject to less liquidity. This cost may be unacceptable for many institutional investors.

Becht *et alli* (2003) state that there are many difficulties to measure the effectiveness of the monitoring actions of institutional investors and to separate the effect of monitoring from other events, such as changes in the economy, in the market or in management, which is hard to observe. Institutional investors may also collude with management. These difficulties led to ambiguous empirical results. Seifert *et alli* (2005), for instance, found no conclusive results about the impact of the presence of institutional investors as shareholders in companies in the US, Japan, Germany, and the UK. Becht *et alli* (2003) report that there is little evidence that the presence of institutional investors is related to improvements in company operational performance.

3 – EMPIRICAL ANALYSIS DESIGN AND RESULTS

We elected to use the three largest pension funds in Brazil in our study of institutional investors. Previc, the National Complementary Social Security Authority, under the Ministry of Social Security, supervises Brazilian pension funds. Pension funds are subject to prudential constraints in their asset allocation, such as equities not exceeding 70 percent of their portfolio (this ceiling was 50 percent before 2009). Crisóstomo and González (2006) point out that pension funds adopted policies that encourage more activism, such as attendance to general shareholder meetings, exercise of voting rights, board membership, and closer supervision of investee management.

Previ is over 100 years old and the largest pension fund of Latin America. It published a code of best corporate governance practices that sets guidelines regarding transparency, accountability, shareholder rights, and business ethics. The code guides its investment decisions and outlines what the Previ expects from company management. Previ has historically favored investments in equity, contrasting with most Brazilian pension funds. Our calculations from data available at their website indicated equity investments of about 62 percent of their total investments in June 2011. Petros is the second largest Brazilian pension fund in both investment asset value and number of participants. Like Previ, it produced a corporate governance code that guides its investment decisions. Petros has been much more conservative than Previ regarding its equity investments. Its Annual Report for 2010 showed a 33.8 percent share of equities relative to total investments, which, in any case, is much more than most pension funds. Finally, Funcef informed on their website that 36.1 percent of their total investments was in equities.

We obtained the firm-level corporate governance scores of public Brazilian companies computed by Leal and Carvalhal-da-Silva (2007) for 1998, 2000 and 2002. The scores of this Corporate Governance Index (CGI) were obtained through objective

answers to a questionnaire comprised of 24 questions. The objective was to obtain yes or no answers to questions that could be answered from publicly available information in order to have the largest possible sample and to avoid subjectivity. The questionnaire is based on the Brazilian codes of good corporate governance practices produced by the Brazilian Institute of Corporate Governance (IBGC) and the Brazilian Securities Commission (CVM). An affirmative answer was recorded with a unit score and a negative answer with a null score. An affirmative answer denotes the presence of a good corporate governance practice. Naturally, a limitation of such device is that the presence of some corporate governance practices cannot be detected from publicly available information and no judgment can be made about the quality of the practices that the company reports. Leal and Carvalhal-da-Silva (2007) present the complete questionnaire and more details.

The index is divided into four sub-indices, each one comprised of six questions representing a dimension of corporate governance practices. The *Disclosure* dimension deals with transactions with related parties, compensation, charter sanctions for violations of corporate governance principles, auditors, and the adoption of international accounting practices. The *Board Composition and Functioning* dimension addresses the number and type of board members, the separation of chair and CEO positions, the use of committees, and the tenure of board members. The *Ethics and Conflicts of Interest* dimension considers inquiries and convictions by the authorities, the use of arbitration for dispute resolution, the presence of controlling shareholders, the percentage of non-voting shares, and deviations between control and cash flow rights. Finally, the *Shareholder Rights* dimension concentrates on easing the requirements to vote in general assemblies, granting voting rights to non-voting shares in relevant issues, conferring mandatory bid rights in control transfer transaction beyond the legal requirements, minimum liquidity requirements, and the presence of indirect control structures and shareholder agreements.

Leal and Carvalhal-da-Silva (2007) present statistics for the CGI scores and its sub-indices. There was an increase in the average score from 1998 to 2002. They also show that good corporate governance practices are related to greater market valuations, of around 7 percent for each one point in the CGI score for the average leverage company. Silveira *et alli* (2009) show that scores have been increasing as well as dispersion. The market seems to have evolved into two different categories. Companies listed for a long time that have not improved their corporate governance practices much and companies that listed more recently in the more demanding premium listing segments of the Brazilian stock exchange.

We collected percentage equity holdings of Previ, Petros, and Funcef in the companies listed at the São Paulo Stock Exchange (Bovespa) in 1998, 2000 and 2002, the same years for which we had the CGI scores. The Brazilian law mandates that

shareholders disclose ownership of five percent or more in the equity capital, voting or not. Only direct ownership rights were considered. For each relevant stake identified, we collected the percentage of voting and of all shares held by the three pension funds. The Infolinvest database was the source for this data as it contains the annual legal filings of companies. We also used a dummy variable to identify whether the controlling shareholder of the company is an institutional investor, of any kind, and other dummies to indicate if Previ or Petros have a relevant equity stake. Table 1 shows the definitions of all variables. A number of control variables have been included, as employed by Leal and Carvalhal-da-Silva (2007) and Silveira *et alli* (2009).

Table 1 - Variable Definitions

Variable	Description
CGI	The score in the CGI (Corporate Governance Index) of a company, as described in Leal and Carvalhal-da-Silva (2007)
CGI-1	Disclosure portion of the CGI score
CGI-2	Board composition and functioning portion of the CGI score
CGI-3	Ethics and conflicts of interest portion of the CGI score
CGI-4	Shareholders Rights portion of the CGI score
INST	Dummy variable indicating whether the largest shareholder is an institutional investor (1), regardless if it is one of the three pension funds analyzed
Previ	Dummy variable indicating whether Previ has relevant (greater or equal to 5 percent) equity participation
Previ%	Percentage of all company shares belonging to Previ
Petros	Dummy variable indicating whether Petros has relevant (greater or equal to 5 percent) equity participation
NM	Dummy variable indicating whether the company is listed in one of the premium listing levels (New Market) created by Bovespa in 2000, those levels require increasing demands from companies in terms of corporate governance practices, shareholder rights, and transparency. More details in Leal and Carvalhal-da-Silva (2007) and Silveira et alli (2009). This variable is present only for 2002
AGR	Dummy variable indicating the existence of a shareholders agreement (1)
Growth	Percentage growth in sales over the three preceding years
ROA	Return on assets, measured as earnings before interest and tax over total assets
Size	Natural logarithm of the book equity value

Tables 2 and 3 provide a summary of the relevant equity holdings of the three pension funds. The first fact that stands out is the limited relevant ownership of Funcef. Consequently, in the ensuing analysis we did not include Funcef. Previ, on the other hand, is a relevant shareholder in one out of every six or seven companies in the sample, with a

median voting stake of 10.3 percent and a median total capital stake of 8.5 percent. This suggests that it may be the most influential of the three largest pension funds. Petros is situated somewhere between Funcef and Previ, with relevant equity ownership in one out of every 40 companies in the sample, with a six percent of the voting and 3.2 percent median of the total equity capital.

Table 2 - Number of companies with relevant equity stakes from selected pension funds

	1998		2000		2002	
	No. Companies	% of Total	No. Companies	% of Total	No. Companies	% of Total
Previ						
As controlling shareholder	8	3.33%	8	3.39%	8	3.74%
Other holdings	26	10.83%	25	10.59%	26	12.15%
Total	34	14.17%	33	13.98%	34	15.89%
Petros						
As controlling shareholder	2	0.83%	2	0.85%	2	0.93%
Other holdings	5	2.08%	3	1.27%	3	1.40%
Total	7	2.92%	5	2.12%	5	2.34%
Funcef						
As controlling shareholder	0	0.00%	0	0.00%	0	0.00%
Other holdings	0	0.00%	1	0.42%	3	1.40%
Total	0	0.00%	1	0.42%	3	1.40%
No. companies in sample	240	100%	236	100%	214	100%

Source: InfoInvest and own calculations

Table 3 - Relative share ownership of pension funds

Year	Voting Capital				Total Capital			
	Max	Min	Mean	Median	Max	Min	Mean	Median
Previ								
1998	55.6%	0.0%	13.4%	10.1%	50.4%	1.5%	12.1%	9.5%
2000	55.5%	0.0%	13.1%	10.0%	50.3%	1.5%	10.7%	8.0%
2002	55.5%	0.0%	13.3%	10.3%	50.3%	2.3%	11.7%	8.5%
Petros								
1998	16.8%	3.6%	10.5%	12.8%	11.1%	2.1%	6.4%	7.3%
2000	14.6%	3.6%	8.5%	6.0%	9.5%	2.1%	5.1%	3.3%
2002	14.6%	3.6%	8.5%	6.0%	9.5%	2.1%	5.2%	3.2%
Funcf								
1998	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2000	0.0%	0.0%	0.0%	0.0%	5.1%	5.1%	5.1%	5.1%
2002	6.0%	0.0%	2.0%	0.0%	9.3%	2.5%	5.6%	5.1%

Source: Infolnvest and own calculations

We proceeded to analyze an initial regression model of the CGI and its sub-indices as the dependent variables, considering the other variables as potential correlates. Table 4 shows an analysis of the bivariate correlations between all right-hand side variables. All significant correlations are positive. The results in Table 4 indicate that company size is correlated with the ROA and with the shareholders agreement, premium listing, and Previ dummies, which is also correlated with the ROA and the Petros dummy. The Petros dummy is correlated with the shareholders agreement and the relevant institutional investor shareholding dummies as well. Finally, the shareholders agreement dummy is correlated with the premium-listing dummy. Thus, several right-hand side variables are significantly correlated, which is a problem for multivariate linear regression models.

Regarding the dependent, left-hand side variables, naturally there are many positive and significant correlations between the CGI scores and its partial scores, represented by its four sub-indices. Once again, the significant correlations reported in Table 4 are all positive. The shareholders agreement dummy is correlated with the CGI and three of the four sub-indices. The ROA, company size, and the Previ, Petros, and premium listing dummies are also correlated with the CGI and to some of the sub-indices.

The correlation analysis suggests that corporate governance practices are better in larger companies, which also tend to be the ones with larger ROA. Previ and Petros tend to be present as relevant shareholders in larger and better-governed companies. Self-selection problems may be important in the analysis of the potential influence of the large pension funds over the corporate governance practices of Brazilian listed companies.

Table 4 - Correlation between variables

N	Variable	Year	AGR	1	2	3	4	5	6	7	8	9	10	11
1	Growth	1998	0.07											
		2000	0.10											
		2002	-0.03											
2	ROA	1998	0.04	0.00										
		2000	0.05	0.04										
		2002	-0.06	-0.04										
3	Size	1998	0.14	0.15	0.22									
		2000	0.18	0.12	0.28									
		2002	0.18	0.08	0.23									
4	CGI-1	1998	0.21	0.12	0.12	0.46								
		2000	0.18	0.03	0.20	0.53								
		2002	0.18	-0.04	0.26	0.53								
5	CGI-2	1998	0.06	-0.01	0.13	0.30	0.23							
		2000	0.18	0.07	0.19	0.32	0.24							
		2002	0.16	0.10	0.16	0.41	0.34							
6	CGI-3	1998	0.01	0.01	0.14	0.09	-0.05	0.09						
		2000	0.07	0.02	-0.03	0.06	-0.09	0.13						
		2002	0.05	-0.05	0.04	0.06	-0.01	0.19						
7	CGI-4	1998	0.58	-0.05	0.06	0.23	0.24	0.09	-0.08					
		2000	0.56	0.15	-0.04	0.19	0.22	0.14	-0.03					
		2002	0.57	0.06	-0.02	0.23	0.27	0.23	-0.04					
8	CGI	1998	0.37	0.03	0.20	0.48	0.63	0.70	0.36	0.54				
		2000	0.42	0.12	0.15	0.48	0.59	0.74	0.38	0.56				
		2002	0.40	0.04	0.18	0.52	0.66	0.78	0.40	0.60				
9	Previ	1998	0.07	0.05	0.14	0.16	0.14	0.12	-0.03	0.16	0.18			
		2000	0.05	0.02	0.07	0.18	0.16	0.08	-0.03	0.17	0.17			
		2002	0.11	0.05	0.19	0.23	0.24	0.05	-0.01	0.17	0.18			
10	Petros	1998	0.22	0.06	-0.02	0.07	0.19	0.08	-0.05	0.16	0.17	0.43		
		2000	0.15	0.00	0.03	0.07	0.16	0.09	-0.05	0.14	0.15	0.36		
		2002	0.14	-0.02	0.06	0.05	0.15	0.00	-0.10	0.14	0.08	0.36		
11	INST	1998	0.04	0.07	-0.06	0.03	0.06	0.14	0.04	-0.07	0.08	0.09	0.13	
		2000	0.12	0.00	0.02	0.09	0.08	0.24	0.08	-0.05	0.17	0.10	0.17	
		2002	0.04	-0.03	0.02	0.12	0.06	0.18	0.07	-0.03	0.12	0.09	0.17	
12	NM	1998	-	-	-	-	-	-	-	-	-	-	-	-
		2000	-	-	-	-	-	-	-	-	-	-	-	-
		2002	0.14	0.05	0.02	0.34	0.32	0.22	0.01	0.34	0.37	0.11	0.02	0.01

Source: Infolinvest, Leal and Carvalhal-da-Silva (2007) and own calculations. All variables were defined in Table 1. Figures in bold are significant at the 5% level.

Petros is present in a few companies as a relevant shareholder and its dummy is highly correlated with the Previ dummy. By and large, its relevant shareholdings were a subset of those of Previ. Thus, the analysis of Table 5 considered only the presence of Previ as a relevant shareholder. It also considers if an institutional investor is the largest shareholder. Table 5 shows the differences in means in the scores of the CGI and its sub-indices. The statistics reported in Table 5 refer only to 2002. The results for 1998 and 2000 are the same in terms of significance and are available upon request.

Table 5 - Average corporate governance scores according to institutional investor shareholding in 2002

Index	Is Previ a relevant shareholder?	No. Obs.	Mean Score	Mean Difference
CGI	No	180	10.2	1.31
	Yes	34	11.5	
CGI-1 Disclosure	No	180	3.7	0.67
	Yes	34	4.4	
CGI-2 Board Composition and Functioning	No	180	2.2	0.17
	Yes	34	2.3	
CGI-3 Ethics and Conflicts of Interest	No	180	2.6	-0.03
	Yes	34	2.5	
CGI-4 Shareholder Rights	No	180	1.8	0.50
	Yes	34	2.3	
	Is the largest shareholder an institutional investor?	No. Obs.	Mean Score	Mean Difference
CGI	No	195	10.3	1.12
	Yes	19	11.4	
CGI-1 Disclosure	No	195	3.8	0.20
	Yes	19	4.0	
CGI-2 Board Composition and Functioning	No	195	2.1	0.84
	Yes	19	2.9	
CGI-3 Ethics and Conflicts of Interest	No	195	2.5	0.20
	Yes	19	2.0	
CGI-4 Shareholder Rights	No	195	1.9	-0.12
	Yes	19	1.7	

Source: InfoInvest, Leal and Carvalhal-da-Silva (2007) and own calculations. All variables were defined in Table 1. Figures in bold are significant at the five percent level.

The results in Table 5 suggest that the average corporate governance scores of the companies with a relevant participation of Previ and of those that have an institutional shareholder as their largest investor are significantly higher. The same is true for the *Disclosure* and *Shareholder Rights* sub-indices, but not for the *Board Composition and Functioning* and the *Ethics and Conflict of Interest* sub-indices. Thus, if present, the impact

of relevant shareholding by large institutional investors is not uniform across all corporate governance dimensions. It may well be that institutional investors may have no impact at all, and that they may simply select companies that are larger, more liquid, and with better past profitability, which also present a positive correlation with the corporate governance scores. Nevertheless, it is interesting to note that institutional investors do not seem to select companies that score higher in board composition and functioning and that better address potential for conflicts of interest.

Table 6 presents the results of our regression models for 2002, even though the correlation results reported above render them unreliable. The results for 1998 and 2000 are qualitatively the same and are available upon request. The coefficients for the Previ dummy are not significant and their signs are not consistent across all corporate governance scores used as dependent variables. The same occurs for the dummy of an institutional investor as the largest shareholder. The coefficient for the percent share of Previ in the equity capital of companies is not significant as well. There is no evidence from Table 6 that suggests that an additional causality analysis should be performed for institutional ownership. Thus, we do not provide any additional tests to account for self-selection and endogeneity. The significant results for some of the control variables, such as size, the ROA, and the shareholders agreement and premium listing dummies are consistent with those found by Leal and Carvalhal-da-Silva (2007) and Silveira *et alli* (2009). The positive coefficients for the shareholders agreement dummy is not surprising given that Sternberg *et alli* (2011) indicated that they are more common among companies listed in the premium lists because they have more dispersed ownership.

Table 6 - Linear regressions of institutional ownership on corporate governance scores in 2002

Variable	CGI	CGI- 1	CGI- 2	CGI- 3	CGI- 4	CGI	CGI	CGI- 1	CGI- 2	CGI- 3	CGI- 4
Constant	2.04	0.39	-1.56	2.14	1.07	1.93	2.09	0.29	-1.33	2.20	0.94
Previ	0.15	0.27	-0.27	-0.08	0.22	–	–	–	–	–	–
Previ%	–	–	–	–	–	-0.01	–	–	–	–	–
INST	–	–	–	–	–	–	0.55	-0.03	0.64	0.17	-0.22
Size	0.54	0.23	0.25	0.03	0.03	0.54	0.53	0.24	0.23	0.02	0.04
ROA	0.03	0.01	0.01	0.00	0.00	0.03	0.03	0.02	0.01	0.00	0.00
Growth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AGR	1.97	0.20	0.34	0.09	1.34	2.01	1.97	0.22	0.31	0.08	1.37
NM	1.49	0.47	0.32	-0.02	0.71	1.49	1.50	0.48	0.32	-0.02	0.72
Adj. R ²	0.39	0.33	0.18	-0.02	0.39	0.39	0.40	0.33	0.20	-0.02	0.39

Source: InfolInvest, Leal and Carvalhal-da-Silva (2007) and own calculations. The dependent variables are in the top row and the "explanatory" variables in the first column. All variables were defined in Table 1. Figures in bold are significant at the five percent level.

4 – FINAL REMARKS

Our results are consistent with those of Punsuvo *et alli* (2007) and Silveira *et alli* (2008), among others that have examined the impact of shareholding by institutional investors on corporate governance practices in Brazil. We provide no evidence of a potential impact of these investors in general, and of the two largest Brazilian pension funds, Previ and Petros, in particular, on the corporate governance scores of the companies they invest. We also detected that institutional investors do not seem to select companies that score higher in board composition and functioning and that address potential for conflicts of interest better.

A number of things could be happening. First of all, our corporate governance scores may not be refined enough to capture the influence of these investors or, alternatively, their influence is only felt over a longer time frame. Our corporate governance scores capture the presence or absence of certain practices that are reported in public documents and, thus, cannot ascertain many aspects of the quality of the corporate governance practices of a company, nor can it say anything about the quality of the practices it detects. Our scores, however, are highly correlated with listing in Bovespa premium listing segments and with company size. It is reasonable to expect that larger companies would have the means and incentives to pursue better corporate governance practices.

On the other hand, it is quite possible that Previ and Petros prefer to have their more relevant shareholdings in companies that are larger and that showed higher past profitability, which also happen to be the ones with greater corporate governance scores. Thus, it could well be that all of these variables are endogenous and that Previ and Petros, as well as other institutional investors, regard liquidity as a key characteristic their investees should have. Finally, it is quite possible that these two very large pension funds represent the interests of the incumbent Brazilian government regarding its economic policies and political views. Those appointed to represent Previ and Petros at company boards may be committed to these political and economic directives, which may or may not be consistent with corporate governance practices commonly regarded as good. If this is the case, then the impact of any relevant shareholding of these pension funds could have on the quality of the corporate governance of their investee firms might not be detected. It is certain that more research is needed about this topic, but so far the literature has not identified any consistent results about the positive impact of the larger Brazilian pension funds on the performance and the corporate governance quality of their investees.

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LARGE PENSION FUNDS AND THE CORPORATE GOVERNANCE PRACTICES OF BRAZILIAN COMPANIES

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ABSTRACT

We do not find any consistent evidence that the presence of the largest Brazilian pension funds as relevant shareholders is associated to higher corporate governance scores by public Brazilian companies. Even though companies with institutional investors as relevant shareholders presented a higher average corporate governance score than other companies, they were also larger and had greater past profitability than other companies, which are common attributes of firms with better corporate governance according to the literature. The impact of Brazilian institutional investors on the corporate governance quality of their investees is either negligible or cannot be captured by the proxies we employed. Finally, we note that these two pension funds may represent the policy and political views of the incumbent Brazilian government and that the actions of their board appointees may or not reflect what is understood as good corporate governance practices. **KEYWORDS:** institutional investors; pension funds; corporate governance.

RESUMO

Não encontramos nenhuma comprovação consistente de que a presença dos maiores fundos de pensão brasileiros como acionistas importantes está associada a escores de maior governança corporativa por parte de empresas brasileiras públicas. Apesar das empresas que têm investidores institucionais como acionistas importantes terem apresentado um escore de governança corporativa mais elevado do que o de outras empresas, elas também são maiores e, no passado, tiveram lucro mais expressivo do que outras empresas, o que são atributos comuns de empresas com melhor governança corporativa, segundo a literatura. O impacto dos investidores institucionais brasileiros na qualidade da governança corporativa de suas participadas é desprezível ou não pode ser captado pelos parâmetros que utilizamos. Por fim, observamos que estes dois fundos de pensão podem representar a política e as visões políticas do governo brasileiro candidato à reeleição e que as ações dos indicados pela junta talvez não reflitam o que é entendido como boas práticas de governança.

PALAVRAS-CHAVE: investidores institucionais; fundos de pensão; governança corporativa.

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1 – INTRODUCTION

Silveira *et alli* (2009) and Leal and Carvalhal-da-Silva (2007) examined the determinants of good corporate governance practices in Brazilian public companies. The presence of institutional investors as relevant shareholders may be one of them. The study of institutional investors as monitors of management is a fairly recent theme in Latin America. This article analyzes the correlation between the share ownership of the largest Brazilian pension funds and a measure of corporate governance quality of Brazilian public companies.

We concentrate on the three largest pension funds in Brazil, Previ, Petros, and Funcef, in this order, which also hold the largest relative allocations in equities. The vast majority of Brazilian pension funds invest very little in equities. These three pension funds are also indirect agents of the Brazilian government because their beneficiaries are the employees of Banco do Brasil (the largest Brazilian bank), Petrobras (the Brazilian energy giant, one of the largest companies in the world, and the largest in Latin America), and Caixa Economica Federal (the second largest Brazilian bank), all controlled by the Brazilian federal government. Crisóstomo and González (2006) report that these pension funds begin to play a more important role as shareholders during the Brazilian privatization process initiated in the 1990s. Their presence in the acquiring consortia made several privatizations possible. The agreements that materialized these consortia led them to a greater number of board seats and to a more salient role in corporate governance.

The investments of pension funds represented 15.2 percent of the Brazilian gross domestic product. Equity investments accounted for 32.5 percent of the total invested by Brazilian pension funds, with the largest ones holding relatively more. In December of 2010, Previ (US\$ 91.7 billion), Petros (US\$ 33.4 billion), and Funcef (US\$ 26.2 billion) jointly represented 46.8 percent of the total investment value of 275 pension funds (US\$ 323.1 billion), as informed by ABRAPP, the Brazilian association that represents company sponsored pension funds.

We do not find any consistently significant correlation between scores of corporate governance practices and the presence of institutional investors as relevant shareholders of public Brazilian companies, confirming the evidence in Punsuvo *et alli* (2007), who find a negative relationship between the corporate governance practices of Brazilian companies and the participation of pension funds as relevant shareholders. Silveira *et alli* (2008) also found a positive but non-significant relationship between pension fund ownership and the quality of corporate governance practices. Leal and Carvalhal-da-Silva (2007) indicate a negative impact on the market value and on the dividend yield when an institutional investor was the largest ultimate shareholder of a company. This negative relationship is

consistent with the findings presented here although it was not always significant. Crisóstomo and González (2006) do not find a difference in the performance of Brazilian companies with relevant pension fund ownership. Finally, recent preliminary evidence presented by Silveira (2011) also concludes that the presence of the largest pension funds is not related to better corporate governance practices.

Pension funds controlled by the government, which are the largest shareholders among Brazilian pension funds, may pursue a diverse agenda that includes political issues and the economic policy orientation of the incumbent government, and may enroll people who are not necessarily committed to better corporate governance practices, but that rather have political affinities with the government, as board representatives. Even though pension fund officials many times pose as champions of good corporate governance practices, we cannot present any solid evidence that ownership by the largest pension funds in Brazil translates into better corporate governance practices both from our own results and from the literature reviewed.

2 – BACKGROUND

Claessens and Fan (2002) and Gillan and Starks (2003) show that investors are willing to pay a premium for the stock of companies that have a more active and independent board of directors and that adopt good corporate governance practices. This premium is greater in Latin America and Asia and lower in Europe and in the US. A growing and important external control mechanism that is affecting corporate governance around the world is the presence of institutional investors as shareholders (Aggarwal *et alli*, 2011). Sternberg *et alli* (2011) point out that dilution of corporate control is in progress in Brazil, with a growing number of companies with shared control. They highlight the increasing importance of shareholder agreements, particularly among those companies that went public after 2004. The largest Brazilian pension funds are a frequent signatory of such agreements and their size grants them the potential role of monitoring controlling shareholders, even when they are not part of an agreement. Carvalhal-da-Silva and Leal (2006) and Sternberg *et alli* (2011), among others, on the other hand, assert that control still remains very concentrated in Brazil.

Aggarwal *et alli* (2011) argue that monitoring by institutional investors based in high investor protection countries is more effective and find a positive relationship between corporate governance practices and ownership by institutional investors. They also contend that monitoring by domestic institutional investors is less effective in low investor protection countries. Gillan and Starks (2000) pointed out that the long-term goals of pension fund

investments creates an incentive to influence the performance of their investees. Aldrichi (2003), on the other hand, emphasized the lack of incentive that institutional investors have to exert a more active role in the US because regulation discourages excessive control by investors in general, increasing their accountability regarding the performance of companies. Gillan and Starks (2000) question the monitoring effectiveness of institutional investors because they do not have the expertise needed to advise managers. They also observe that institutional investors may be imperfect monitors due to their own internal agency problems. However, even the imperfect monitoring provided by institutional investors may be welcome by minority shareholders in low investor protection countries.

Gillan and Starks (2003) underline differences in the monitoring incentives and skills between institutional and major non-institutional shareholders. The incentive to monitor and maintain efficiency may vary among institutional investors as well. They may be *pressure-sensitive*, such as banks and insurance companies, or insensitive to pressure, such as mutual funds and pension funds. Pressure sensitive investors are those that have a business relationship, potential or current, with the companies in which they invest. They may be less active in monitoring these companies and friendlier to managers than those that are insensitive to pressure. Gillan and Starks (2003) note that even though banks could have a comparative monitoring advantage due to their access to company information, they typically hold larger debt than equity stakes in the company and, therefore, their ability to monitor in the interest of minority shareholders may be clouded by those issues. These authors also call attention to a considerable difference in the role of banks as shareholders in countries such as Germany and Japan in relation to the US and the UK.

Large institutional investors may convey reliable information to other investors and have several ways of influencing the governance of a company. They may establish policies on executive compensation, participate in the board of directors, sell their shares rather than trying to instigate changes, or express their opinions aggressively by means of press or media campaigns when their suggestions are not accepted by the company. Becht *et alli* (2003) remind that holding a seat at the board of directors is, however, naturally limited by laws and regulations, which vary considerably across countries. They also note that the actions and the sizable stakes of institutional investors may affect the liquidity and the value of their shares. Gillan and Starks (2003) recount that the presence of institutional investors leads to more informative prices and, consequently, to lower monitoring costs. They observed that institutional investors have historically favored liquidity because their ability to monitor management may imply in being subject to less liquidity. This cost may be unacceptable for many institutional investors.

Becht *et alli* (2003) state that there are many difficulties to measure the effectiveness of the monitoring actions of institutional investors and to separate the effect of monitoring from other events, such as changes in the economy, in the market or in management, which is hard to observe. Institutional investors may also collude with management. These difficulties led to ambiguous empirical results. Seifert *et alli* (2005), for instance, found no conclusive results about the impact of the presence of institutional investors as shareholders in companies in the US, Japan, Germany, and the UK. Becht *et alli* (2003) report that there is little evidence that the presence of institutional investors is related to improvements in company operational performance.

3 – EMPIRICAL ANALYSIS DESIGN AND RESULTS

We elected to use the three largest pension funds in Brazil in our study of institutional investors. Previc, the National Complementary Social Security Authority, under the Ministry of Social Security, supervises Brazilian pension funds. Pension funds are subject to prudential constraints in their asset allocation, such as equities not exceeding 70 percent of their portfolio (this ceiling was 50 percent before 2009). Crisóstomo and González (2006) point out that pension funds adopted policies that encourage more activism, such as attendance to general shareholder meetings, exercise of voting rights, board membership, and closer supervision of investee management.

Previ is over 100 years old and the largest pension fund of Latin America. It published a code of best corporate governance practices that sets guidelines regarding transparency, accountability, shareholder rights, and business ethics. The code guides its investment decisions and outlines what the Previ expects from company management. Previ has historically favored investments in equity, contrasting with most Brazilian pension funds. Our calculations from data available at their website indicated equity investments of about 62 percent of their total investments in June 2011. Petros is the second largest Brazilian pension fund in both investment asset value and number of participants. Like Previ, it produced a corporate governance code that guides its investment decisions. Petros has been much more conservative than Previ regarding its equity investments. Its Annual Report for 2010 showed a 33.8 percent share of equities relative to total investments, which, in any case, is much more than most pension funds. Finally, Funcef informed on their website that 36.1 percent of their total investments was in equities.

We obtained the firm-level corporate governance scores of public Brazilian companies computed by Leal and Carvalho-da-Silva (2007) for 1998, 2000 and 2002. The scores of this Corporate Governance Index (CGI) were obtained through objective

answers to a questionnaire comprised of 24 questions. The objective was to obtain yes or no answers to questions that could be answered from publicly available information in order to have the largest possible sample and to avoid subjectivity. The questionnaire is based on the Brazilian codes of good corporate governance practices produced by the Brazilian Institute of Corporate Governance (IBGC) and the Brazilian Securities Commission (CVM). An affirmative answer was recorded with a unit score and a negative answer with a null score. An affirmative answer denotes the presence of a good corporate governance practice. Naturally, a limitation of such device is that the presence of some corporate governance practices cannot be detected from publicly available information and no judgment can be made about the quality of the practices that the company reports. Leal and Carvalho-da-Silva (2007) present the complete questionnaire and more details.

The index is divided into four sub-indices, each one comprised of six questions representing a dimension of corporate governance practices. The *Disclosure* dimension deals with transactions with related parties, compensation, charter sanctions for violations of corporate governance principles, auditors, and the adoption of international accounting practices. The *Board Composition and Functioning* dimension addresses the number and type of board members, the separation of chair and CEO positions, the use of committees, and the tenure of board members. The *Ethics and Conflicts of Interest* dimension considers inquiries and convictions by the authorities, the use of arbitration for dispute resolution, the presence of controlling shareholders, the percentage of non-voting shares, and deviations between control and cash flow rights. Finally, the *Shareholder Rights* dimension concentrates on easing the requirements to vote in general assemblies, granting voting rights to non-voting shares in relevant issues, conferring mandatory bid rights in control transfer transaction beyond the legal requirements, minimum liquidity requirements, and the presence of indirect control structures and shareholder agreements.

Leal and Carvalho-da-Silva (2007) present statistics for the CGI scores and its sub-indices. There was an increase in the average score from 1998 to 2002. They also show that good corporate governance practices are related to greater market valuations, of around 7 percent for each one point in the CGI score for the average leverage company. Silveira *et alli* (2009) show that scores have been increasing as well as dispersion. The market seems to have evolved into two different categories. Companies listed for a long time that have not improved their corporate governance practices much and companies that listed more recently in the more demanding premium listing segments of the Brazilian stock exchange.

We collected percentage equity holdings of Previ, Petros, and Funcef in the companies listed at the São Paulo Stock Exchange (Bovespa) in 1998, 2000 and 2002, the same years for which we had the CGI scores. The Brazilian law mandates that

shareholders disclose ownership of five percent or more in the equity capital, voting or not. Only direct ownership rights were considered. For each relevant stake identified, we collected the percentage of voting and of all shares held by the three pension funds. The Infolinvest database was the source for this data as it contains the annual legal filings of companies. We also used a dummy variable to identify whether the controlling shareholder of the company is an institutional investor, of any kind, and other dummies to indicate if Previ or Petros have a relevant equity stake. Table 1 shows the definitions of all variables. A number of control variables have been included, as employed by Leal and Carvalhal-da-Silva (2007) and Silveira *et alli* (2009).

Table 1 - Variable Definitions

Variable	Description
CGI	The score in the CGI (Corporate Governance Index) of a company, as described in Leal and Carvalhal-da-Silva (2007)
CGI-1	Disclosure portion of the CGI score
CGI-2	Board composition and functioning portion of the CGI score
CGI-3	Ethics and conflicts of interest portion of the CGI score
CGI-4	Shareholders Rights portion of the CGI score
INST	Dummy variable indicating whether the largest shareholder is an institutional investor (1), regardless if it is one of the three pension funds analyzed
Previ	Dummy variable indicating whether Previ has relevant (greater or equal to 5 percent) equity participation
Previ%	Percentage of all company shares belonging to Previ
Petros	Dummy variable indicating whether Petros has relevant (greater or equal to 5 percent) equity participation
NM	Dummy variable indicating whether the company is listed in one of the premium listing levels (New Market) created by Bovespa in 2000, those levels require increasing demands from companies in terms of corporate governance practices, shareholder rights, and transparency. More details in Leal and Carvalhal-da-Silva (2007) and Silveira et alli (2009). This variable is present only for 2002
AGR	Dummy variable indicating the existence of a shareholders agreement (1)
Growth	Percentage growth in sales over the three preceding years
ROA	Return on assets, measured as earnings before interest and tax over total assets
Size	Natural logarithm of the book equity value

Tables 2 and 3 provide a summary of the relevant equity holdings of the three pension funds. The first fact that stands out is the limited relevant ownership of Funcef. Consequently, in the ensuing analysis we did not include Funcef. Previ, on the other hand, is a relevant shareholder in one out of every six or seven companies in the sample, with a

median voting stake of 10.3 percent and a median total capital stake of 8.5 percent. This suggests that it may be the most influential of the three largest pension funds. Petros is situated somewhere between Funcef and Previ, with relevant equity ownership in one out of every 40 companies in the sample, with a six percent of the voting and 3.2 percent median of the total equity capital.

Table 2 - Number of companies with relevant equity stakes from selected pension funds

	1998		2000		2002	
	No. Companies	% of Total	No. Companies	% of Total	No. Companies	% of Total
Previ						
As controlling shareholder	8	3.33%	8	3.39%	8	3.74%
Other holdings	26	10.83%	25	10.59%	26	12.15%
Total	34	14.17%	33	13.98%	34	15.89%
Petros						
As controlling shareholder	2	0.83%	2	0.85%	2	0.93%
Other holdings	5	2.08%	3	1.27%	3	1.40%
Total	7	2.92%	5	2.12%	5	2.34%
Funcef						
As controlling shareholder	0	0.00%	0	0.00%	0	0.00%
Other holdings	0	0.00%	1	0.42%	3	1.40%
Total	0	0.00%	1	0.42%	3	1.40%
No. companies in sample	240	100%	236	100%	214	100%

Source: InfolInvest and own calculations

Table 3 - Relative share ownership of pension funds

Year	Voting Capital				Total Capital			
	Max	Min	Mean	Median	Max	Min	Mean	Median
Previ								
1998	55.6%	0.0%	13.4%	10.1%	50.4%	1.5%	12.1%	9.5%
2000	55.5%	0.0%	13.1%	10.0%	50.3%	1.5%	10.7%	8.0%
2002	55.5%	0.0%	13.3%	10.3%	50.3%	2.3%	11.7%	8.5%
Petros								
1998	16.8%	3.6%	10.5%	12.8%	11.1%	2.1%	6.4%	7.3%
2000	14.6%	3.6%	8.5%	6.0%	9.5%	2.1%	5.1%	3.3%
2002	14.6%	3.6%	8.5%	6.0%	9.5%	2.1%	5.2%	3.2%
Funcf								
1998	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2000	0.0%	0.0%	0.0%	0.0%	5.1%	5.1%	5.1%	5.1%
2002	6.0%	0.0%	2.0%	0.0%	9.3%	2.5%	5.6%	5.1%

Source: Infolnvest and own calculations

We proceeded to analyze an initial regression model of the CGI and its sub-indices as the dependent variables, considering the other variables as potential correlates. Table 4 shows an analysis of the bivariate correlations between all right-hand side variables. All significant correlations are positive. The results in Table 4 indicate that company size is correlated with the ROA and with the shareholders agreement, premium listing, and Previ dummies, which is also correlated with the ROA and the Petros dummy. The Petros dummy is correlated with the shareholders agreement and the relevant institutional investor shareholding dummies as well. Finally, the shareholders agreement dummy is correlated with the premium-listing dummy. Thus, several right-hand side variables are significantly correlated, which is a problem for multivariate linear regression models.

Regarding the dependent, left-hand side variables, naturally there are many positive and significant correlations between the CGI scores and its partial scores, represented by its four sub-indices. Once again, the significant correlations reported in Table 4 are all positive. The shareholders agreement dummy is correlated with the CGI and three of the four sub-indices. The ROA, company size, and the Previ, Petros, and premium listing dummies are also correlated with the CGI and to some of the sub-indices.

The correlation analysis suggests that corporate governance practices are better in larger companies, which also tend to be the ones with larger ROA. Previ and Petros tend to be present as relevant shareholders in larger and better-governed companies. Self-selection problems may be important in the analysis of the potential influence of the large pension funds over the corporate governance practices of Brazilian listed companies.

Table 4 - Correlation between variables

N	Variable	Year	AGR	1	2	3	4	5	6	7	8	9	10	11	
1	Growth	1998	0.07												
		2000	0.10												
		2002	-0.03												
2	ROA	1998	0.04	0.00											
		2000	0.05	0.04											
		2002	-0.06	-0.04											
3	Size	1998	0.14	0.15	0.22										
		2000	0.18	0.12	0.28										
		2002	0.18	0.08	0.23										
4	CGI-1	1998	0.21	0.12	0.12	0.46									
		2000	0.18	0.03	0.20	0.53									
		2002	0.18	-0.04	0.26	0.53									
5	CGI-2	1998	0.06	-0.01	0.13	0.30	0.23								
		2000	0.18	0.07	0.19	0.32	0.24								
		2002	0.16	0.10	0.16	0.41	0.34								
6	CGI-3	1998	0.01	0.01	0.14	0.09	-0.05	0.09							
		2000	0.07	0.02	-0.03	0.06	-0.09	0.13							
		2002	0.05	-0.05	0.04	0.06	-0.01	0.19							
7	CGI-4	1998	0.58	-0.05	0.06	0.23	0.24	0.09	-0.08						
		2000	0.56	0.15	-0.04	0.19	0.22	0.14	-0.03						
		2002	0.57	0.06	-0.02	0.23	0.27	0.23	-0.04						
8	CGI	1998	0.37	0.03	0.20	0.48	0.63	0.70	0.36	0.54					
		2000	0.42	0.12	0.15	0.48	0.59	0.74	0.38	0.56					
		2002	0.40	0.04	0.18	0.52	0.66	0.78	0.40	0.60					
9	Previ	1998	0.07	0.05	0.14	0.16	0.14	0.12	-0.03	0.16	0.18				
		2000	0.05	0.02	0.07	0.18	0.16	0.08	-0.03	0.17	0.17				
		2002	0.11	0.05	0.19	0.23	0.24	0.05	-0.01	0.17	0.18				
10	Petros	1998	0.22	0.06	-0.02	0.07	0.19	0.08	-0.05	0.16	0.17	0.43			
		2000	0.15	0.00	0.03	0.07	0.16	0.09	-0.05	0.14	0.15	0.36			
		2002	0.14	-0.02	0.06	0.05	0.15	0.00	-0.10	0.14	0.08	0.36			
11	INST	1998	0.04	0.07	-0.06	0.03	0.06	0.14	0.04	-0.07	0.08	0.09	0.13		
		2000	0.12	0.00	0.02	0.09	0.08	0.24	0.08	-0.05	0.17	0.10	0.17		
		2002	0.04	-0.03	0.02	0.12	0.06	0.18	0.07	-0.03	0.12	0.09	0.17		
12	NM	1998	-	-	-	-	-	-	-	-	-	-	-	-	-
		2000	-	-	-	-	-	-	-	-	-	-	-	-	-
		2002	0.14	0.05	0.02	0.34	0.32	0.22	0.01	0.34	0.37	0.11	0.02	0.01	

Source: Infolinvest, Leal and Carvalhal-da-Silva (2007) and own calculations. All variables were defined in Table 1. Figures in bold are significant at the 5% level.

Petros is present in a few companies as a relevant shareholder and its dummy is highly correlated with the Previ dummy. By and large, its relevant shareholdings were a subset of those of Previ. Thus, the analysis of Table 5 considered only the presence of Previ as a relevant shareholder. It also considers if an institutional investor is the largest shareholder. Table 5 shows the differences in means in the scores of the CGI and its sub-indices. The statistics reported in Table 5 refer only to 2002. The results for 1998 and 2000 are the same in terms of significance and are available upon request.

Table 5 - Average corporate governance scores according to institutional investor shareholding in 2002

Index	Is Previ a relevant shareholder?	No. Obs.	Mean Score	Mean Difference
CGI	No	180	10.2	1.31
	Yes	34	11.5	
CGI-1 Disclosure	No	180	3.7	0.67
	Yes	34	4.4	
CGI-2 Board Composition and Functioning	No	180	2.2	0.17
	Yes	34	2.3	
CGI-3 Ethics and Conflicts of Interest	No	180	2.6	-0.03
	Yes	34	2.5	
CGI-4 Shareholder Rights	No	180	1.8	0.50
	Yes	34	2.3	
	Is the largest shareholder an institutional investor?	No. Obs.	Mean Score	Mean Difference
CGI	No	195	10.3	1.12
	Yes	19	11.4	
CGI-1 Disclosure	No	195	3.8	0.20
	Yes	19	4.0	
CGI-2 Board Composition and Functioning	No	195	2.1	0.84
	Yes	19	2.9	
CGI-3 Ethics and Conflicts of Interest	No	195	2.5	0.20
	Yes	19	2.0	
CGI-4 Shareholder Rights	No	195	1.9	-0.12
	Yes	19	1.7	

Source: InfoInvest, Leal and Carvalhal-da-Silva (2007) and own calculations. All variables were defined in Table 1. Figures in bold are significant at the five percent level.

The results in Table 5 suggest that the average corporate governance scores of the companies with a relevant participation of Previ and of those that have an institutional shareholder as their largest investor are significantly higher. The same is true for the *Disclosure* and *Shareholder Rights* sub-indices, but not for the *Board Composition and Functioning* and the *Ethics and Conflict of Interest* sub-indices. Thus, if present, the impact

of relevant shareholding by large institutional investors is not uniform across all corporate governance dimensions. It may well be that institutional investors may have no impact at all, and that they may simply select companies that are larger, more liquid, and with better past profitability, which also present a positive correlation with the corporate governance scores. Nevertheless, it is interesting to note that institutional investors do not seem to select companies that score higher in board composition and functioning and that better address potential for conflicts of interest.

Table 6 presents the results of our regression models for 2002, even though the correlation results reported above render them unreliable. The results for 1998 and 2000 are qualitatively the same and are available upon request. The coefficients for the Previ dummy are not significant and their signs are not consistent across all corporate governance scores used as dependent variables. The same occurs for the dummy of an institutional investor as the largest shareholder. The coefficient for the percent share of Previ in the equity capital of companies is not significant as well. There is no evidence from Table 6 that suggests that an additional causality analysis should be performed for institutional ownership. Thus, we do not provide any additional tests to account for self-selection and endogeneity. The significant results for some of the control variables, such as size, the ROA, and the shareholders agreement and premium listing dummies are consistent with those found by Leal and Carvalhal-da-Silva (2007) and Silveira *et alli* (2009). The positive coefficients for the shareholders agreement dummy is not surprising given that Sternberg *et alli* (2011) indicated that they are more common among companies listed in the premium lists because they have more dispersed ownership.

Table 6 - Linear regressions of institutional ownership on corporate governance scores in 2002

Variable	CGI	CGI- 1	CGI- 2	CGI- 3	CGI- 4	CGI	CGI	CGI- 1	CGI- 2	CGI- 3	CGI- 4
Constant	2.04	0.39	-1.56	2.14	1.07	1.93	2.09	0.29	-1.33	2.20	0.94
Previ	0.15	0.27	-0.27	-0.08	0.22	–	–	–	–	–	–
Previ%	–	–	–	–	–	-0.01	–	–	–	–	–
INST	–	–	–	–	–	–	0.55	-0.03	0.64	0.17	-0.22
Size	0.54	0.23	0.25	0.03	0.03	0.54	0.53	0.24	0.23	0.02	0.04
ROA	0.03	0.01	0.01	0.00	0.00	0.03	0.03	0.02	0.01	0.00	0.00
Growth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AGR	1.97	0.20	0.34	0.09	1.34	2.01	1.97	0.22	0.31	0.08	1.37
NM	1.49	0.47	0.32	-0.02	0.71	1.49	1.50	0.48	0.32	-0.02	0.72
Adj. R ²	0.39	0.33	0.18	-0.02	0.39	0.39	0.40	0.33	0.20	-0.02	0.39

Source: InfolInvest, Leal and Carvalhal-da-Silva (2007) and own calculations. The dependent variables are in the top row and the "explanatory" variables in the first column. All variables were defined in Table 1. Figures in bold are significant at the five percent level.

4 – FINAL REMARKS

Our results are consistent with those of Punsuvo *et alli* (2007) and Silveira *et alli* (2008), among others that have examined the impact of shareholding by institutional investors on corporate governance practices in Brazil. We provide no evidence of a potential impact of these investors in general, and of the two largest Brazilian pension funds, Previ and Petros, in particular, on the corporate governance scores of the companies they invest. We also detected that institutional investors do not seem to select companies that score higher in board composition and functioning and that address potential for conflicts of interest better.

A number of things could be happening. First of all, our corporate governance scores may not be refined enough to capture the influence of these investors or, alternatively, their influence is only felt over a longer time frame. Our corporate governance scores capture the presence or absence of certain practices that are reported in public documents and, thus, cannot ascertain many aspects of the quality of the corporate governance practices of a company, nor can it say anything about the quality of the practices it detects. Our scores, however, are highly correlated with listing in Bovespa premium listing segments and with company size. It is reasonable to expect that larger companies would have the means and incentives to pursue better corporate governance practices.

On the other hand, it is quite possible that Previ and Petros prefer to have their more relevant shareholdings in companies that are larger and that showed higher past profitability, which also happen to be the ones with greater corporate governance scores. Thus, it could well be that all of these variables are endogenous and that Previ and Petros, as well as other institutional investors, regard liquidity as a key characteristic their investees should have. Finally, it is quite possible that these two very large pension funds represent the interests of the incumbent Brazilian government regarding its economic policies and political views. Those appointed to represent Previ and Petros at company boards may be committed to these political and economic directives, which may or may not be consistent with corporate governance practices commonly regarded as good. If this is the case, then the impact of any relevant shareholding of these pension funds could have on the quality of the corporate governance of their investee firms might not be detected. It is certain that more research is needed about this topic, but so far the literature has not identified any consistent results about the positive impact of the larger Brazilian pension funds on the performance and the corporate governance quality of their investees.

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