Are Banking Dividends Different? Evidence from the Brazilian Banking Sector

RENATA DE ARAUJO WEBER

Universidade Federal do Rio Grande do Sul – UFRGS

raweber@ea.ufrgs.br

Dr. JAIRO LASER PROCIANOY

Universidade Federal do Rio Grande do Sul – UFRGS

jlprocianoy@ea.ufrgs.br

ABSTRACT

This research was intended to shed new light over the debate whether banks are different from non-banks. Our focus is to determine the main factors that influence the dividend policy in banking institutions and to compare the findings to theories and other models developed for non-banking companies.

Based in the literature review, we selected a set of variables that appear to influence dividend payment in other economies and tested them to predict dividend payments of a sample of 181 financial institutions that operated in the Brazilian market during 2001 and 2006. We have also compared the dividend payment pattern of this banking sample to a non-banking sample.

The regression models confirmed that profitability is the main driver of banking dividend payments in Brazil. Similar evidence was presented by Lintner in 1956, based in the North American manufacture industry.

The comparison between banking and non-banking companies in Brazil showed that banks are not different from other industries, although tests in different countries will be needed over time to permanently establish this idea.

KEYWORDS

- Dividend Policy
- Banking
- Financial Institutions
- Signaling Theory

1. INTRODUCTION

The existence of regulations constraining the action of banks may make the governance of these institutions different from non-financial firms (Magalhaes *et al.*, 2008). Nonetheless, the debate whether banks are different from non-financial firms is far from conclusive and goes back to Fama (1985)'s famous question whether "**are banks different?**".

Previous researches have shown that financial institutions distribute a larger parcel of their profits to shareholders than other industries in the US market (Tully, 2006). An analogous pattern of dividend distribution was found for the Brazilian market (Procianoy and Verdi, 2003). The higher financial leverage and the tight financial sector regulation, however, have made financial institutions excluded of the sample in the greater part of dividend policy studies (Lintner, 1956; Rozeff, 1982; Brennam and Thakor, 1990; Procianoy and Poli, 1993; Alli *et al.*, 1993; Heineberg and Procianoy, 2000; Fenn and Liang, 2001; Grullon and Michaely, 2002).

Intended to supply this gap, researchers have directed their focus to the financial sector in recent years. The evidences found, however, are controversial. On the one hand, some authors have found divergences among the financial sector and other sectors of the economy (Casey and Dickens, 2000; Baker, Veit and Powell, 2001; Raghavan, 2005).

On the other hand, some authors have found that there is no significant difference (Nnadi and Akpomi, 2005; Bodla *et al.*, 2007, Caprio *et al.*, 2007). As stated by one of those authors, "the same core corporate control mechanisms that influence the governance of non-financial firms also influence bank operations" (Caprio *et al.*, 2007).

This research tries to shed new light to this debate by confronting banking dividend behavior to dividend policy theories developed for other industries. Our main objectives are to identify the determinants of profit distribution by banks in Brazil and to compare the findings to theories and other studies found in the literature. The knowledge developed here can help authors better understand the banking dividend payment behavior.

Brazil is an excellent case for study because it is one of the biggest emerging markets, along with China, Russia and India. Its economic stability, attained since the introduction of the Real Economic Plan in 1994, with its inflation-targeting policy, has made dividend payments important to investors. When Brazilian investors have to deal with a double digit monthly inflation, dividends could not be considered as part as their investments, because the value declared by the companies was easily corroded by inflation until its payment to investors (Procianoy, 2006).

Also, Brazilian banking system is very mature, with worldwide multinational banking presence, what approaches it to the other global economy. Furthermore, Brazil has been adopting all the Basel Committee risk management recommendations and has been an active member to promote its adoption by the countries members of Mercosur, the South America common market[1].

For this study, we made use of a rich database from the Brazilian Central Bank. This database contains financial statements from every banking institution that had operated in the Brazilian market since 2001. The econometric analyses were carried on through an unbalanced panel data regression set with fixed effects, the fixed effects being the six years under study. The panel set is called unbalanced because, to avoid the survivorship bias, we kept in the sample institutions with less than six years of observation.

From the descriptive analysis, we have that the institutions that have distributed the larger annual average amount of profits to shareholders during the sample period were commercial banks, financial conglomerates, public companies, federal owned and private with foreign participation banks.

The regression models showed that the profitability is the main driver of banking dividend policy in Brazil. This evidence is in accordance with the evidences presented by Lintner (1956) for the North American manufacture industry. The comparison with Heineberg and Procianoy (2003)'s studies for Brazilian non-banking companies demonstrated that banks are not different from other industries.

The main contribution of this paper was to deliver information about dividend policy in order to supply a gap in the literature – the question whether banks are different from non-banks. The evidence found made us concluded that banks are not different from other industries in Brazil, although tests in different countries will be needed over time to permanently establish this idea.

This paper is divided as the following: after this introduction, in Section 2, we provide a brief literature review addressing the most important theories related to dividend policy, banking regulation, banking dividends and some particularities of profit distribution in the Brazilian market. After that, section 3 presents the methodology supporting this research, followed by Section 4, describing the sample used. In Section 5 we present the results found and in Section 6 we discuss final considerations for this research.

---

[1] The Mercosur countries members have established a commission coordinated by their central banks (Sub-Group Number 4) that meets semi-annually to discuss the implementation of risk management strategies in the Latin America countries. Source: http://www.bcb.gov.br/?SGT4

2. LITERATURE REVIEW

The Dividend Policy addresses the decisions managers have to take between distribute the company's profits to shareholders or holding them for reinvestment in the company. The profit distribution is strongly related to great part of the financial decisions, such as capital structure, merger and acquisitions, asset pricing and capital budget theories (Allen and Michaelly, 2002).

So far in the Dividend Policy literature, we have three main groups of theories. For the first group, headed by Miller and Modigliani (1961), the profit distribution by a company does not affect its market value and is, therefore, irrelevant. If the profits would not been distributed, but reinvested in the company, shareholders will receive at least this same amount through the increase of their share's value in the market.

For the second group of researches, leaded by Gordon (1963), the profit distribution by a company would reduce its investor's uncertainty. It means that rational investors would prefer to receive their share in the company's profits today than to wait for future (and uncertain) capital gains later. Jensen and Meckling (1976) have contributed to this vision assuming that dividend payments to shareholders are an attempt to minimize the Agency Conflict[2], as they reduce the free cash flow under the manager's disposal. As a result, dividend payments would have a positive effect on the company's market value.

In oppose to that, we have the third group of thought, based in the studies presented by Brennan (1970). To demonstrate the essential conditions for the market equilibrium under uncertainty when investors are located in different tax shields, the author extended the CAPM model to incorporate the effect of taxes paid by investors on dividends and capital gains. The relation evidenced by the author was that, given the same risk level, investors require a greater return as the dividend rate paid by the company increases.

In the empirical field, Litzenberger and Ramaswamy (1979) found evidences that companies' stocks with the biggest dividend payout rates do have a higher expected return, supporting Brennan's theory. Black and Scholes (1974), however, did not found evidences that the expected return of stocks with high dividend levels were higher than the expected return of stocks with low dividend levels in the US market.

Connecting the capital structure to the dividend policy theories, we have the Pecking Order Theory. Under this theory, the managers would prefer to finance their investments with internal sources of capital (profit reinvestments), because they are not subjected to external monitoring by the market. When they need outside funding, they would prefer to issue debt instead of equity, to avoid the risk of the company being undervalued by the investors (Donaldson, 1961).

The Signaling Theory links the dividend policy and the information asymmetry. This theory is based in the fact that the managers could have much more information about the company's future profits than the market has, so they could be signaling their profit expectations through dividend payments (Miller and Rock, 1985).

Moreover, the dividend policy is strongly related to the investment policy. For the Residual Dividend Theory, the company makes better to its shareholders when it holds profits and invests them in opportunities with a better relationship risk and return than the investors could get investing by their selves (Grullon *et al.*, 2002).

Because the banking sector is highly regulated, aspects related to this regulation and its relation to the dividend policy will be discussed in the topic that follows.

---

[2] The Agency Conflict appears when there is a separation between the ownership and the management in the company. The managers would have an incentive to expropriate wealth from the owners; the last being subjected to monitoring costs in their efforts to control the manager's actions (Jensen; Meckling, 1976).

2.1. Banking Regulation Effects

The strong regulation the financial institutions are subjected was pointed by various authors as one of the reasons that make it difficult the research in the financial industry (Rozeff, 1982; Brennam and Thakor, 1990; Procianoy and Poli, 1993; Fenn and Liang, 2001).

On worldwide level, the banking regulation is based on the policies defined by the Basel Committee on Banking Supervision. This Committee, created in 1974 by the Central Bank Governors from the G-10 countries[3], promotes a discussion forum on subjects that aim to promote the quality of banking supervision.

The main outputs of this forum had been the Basel Capital Accords, sets of norms to be followed by signatory countries. The first Basel Capital Accord, in 1988, established that the banks would have to keep proportional equity to their assets, weighed by the risk of their operations.

The Committee published an amended to the Basel Accord, in January 1996, raising the capital requirement to cover for market risks. The amended closed the most urgent gaps on the agreement, but its more important contribution was to point the path that would be followed in a broader text reformulation.

The New Capital Accord, or Basel II, have extended the possibility for the bank to define and measure all the risks it is subjected to (including operational risks along with the credit and market risks), remaining to the supervisor to approve the risk calculation methodology and the strategies used for its management. The New Accord is being implemented gradually in the developed economies since 2004, as so on in emerging countries.

The regulation on the capital needed to cover for risks the financial institutions are subjected to was defined gradually by the Basle Committee. This increasing risk supervision sophistication could have exerted some influence on the profit distribution by financial institutions, because the new capital requirement standards limit their financial leverage.

In summary, the banks have to increase their equity if they want to have more operations, because their risks would increase. The company could increase its equity by two main ways: by reinvesting profits instead of distributing them to shareholders or by calling capital from new or existing investors. Accordingly to the Pecking Order, the first one would be preferable.

In opposition, we have that banks face lower capital costs than other industries. They can use the money from investors and lend it to third parties under a higher interest rate. By that point of view, they have an incentive to distribute all their free cash flow to shareholders, and then go to the market when they need money to finance their operations.

2.3. Banking Dividends Studies

Literature about banking dividends is scarce. Great part of the dividend policy empirical studies found had excluded from the sample the financial sector because of its peculiar characteristics (Lintner, 1956; Rozeff, 1982; Brennam and Thakor, 1990; Alli *et al.*, 1993; Procianoy and Poli, 1993; Heineberg and Procianoy, 2000; Fenn and Liang, 2001; Grullon and Michaely, 2002).

Bessler and Nohel (1999) tested the contagion effects in stock returns associated with announcements of dividend cuts by money-center banks. They found that dividend cuts had induced negative abnormal returns in the stocks of non-announcing money-center banks and, to a lesser extent, in stocks of large regional banks.

Casey and Dickens (2000) affirmed that the banking dividend policy is distinct from other industries tested previously. Based in Rozeff's model (1982), the authors found that the dividend policy main drivers for North American commercial banks were the projected growth of profits and

---

[3] The G-10 refers to countries members of the International Monetary Fund: Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States.

the number of shareholders. They haven't found any significance for the past growth level, Beta coefficient and insider ownership, as observed in models for industries. The results found, however, did not present robustness in tests using a previous sample period, thus weakening their conclusions.

Baker, Veit and Powell (2001) surveyed 188 financial and non-financial companies listed in Nasdaq that had declared quarter dividend payments during 1996 and 1997. The results indicated significant divergences in nine of the 22 dividend payments influence factors in answers from financial firms and non-financial. The four factors that appear to influence the dividend policy the most, although, were the same for both groups. The weights attributed by the managers in different groups that were different[4].

The authors Kato, Kunimura and Yoshida (2002) did not search for dividend policy determinative factors, but for how it becomes related with profit management in Japanese banks before and after a legislation change related to profit distribution.

Nnadi and Akpomi (2005) attempted to explain the tax effect on the dividend policy of Nigerian banks. The determinative factors found were current profits, past dividends, target capital structure, financial leverage, shareholders' needs for dividends, legal restrictions, desire for signaling and for conformity with the industry level of dividend payment.

Rghavan (2005) studied the role of share repurchases as signals for future profits and as agency cost reduction in North American banks with asset above of US$ 2 billion between 1988 and 2000. It was found strong support to the agency costs reduction theory. The use of share repurchases as a signal of future profits for banking companies, however, contradicts the results found for the non-financial sector.

Cloyd, Robinson and Weaver (2005) studied public and private banks to analyze if banks subject to the North American regulation increased their profit distribution after the dividend tax reducing for individual investors. They found that the control structure influence the dividend policy, since private banks increased their dividend payout in a larger extension than public banks.

Bodla, Pal and Sura (2007) aimed to apply to the Indian banking sector the Lintner (1956)'s dividend policy model. Past dividends and current profits had been the main drivers for banking dividends in India. The same pattern was observed when the sample was segregated in public and private banks. In addition, it was found support to the signaling theory.

2.4. Profit Distribution in Brazil

For the Brazilian market, the most common mechanisms used by companies for profit distribution are the payment of dividends in cash and the payment of Equity Interest[5]. Repurchase of shares and stock dividends, common mechanisms in the United States, are not used very frequently by Brazilian companies (Silva *et al*., 2005). Procianoy and Moreira (2001) suggested that it would be rational for companies, instead of repurchase shares, to pay out special dividends to stockholders and authorize them to buy new stock in the market.

The main reason for that is the fiscal treatment for profit distribution in Brazil. Since 1996, dividends paid to shareholders have been totally exempted from taxes. On the other hand, capital gains are taxed on 15%. The only exception to this rule is an incentive for small investors in OTC common stocks. Since 2005, they have been exempted from taxes on capital gains when their selling operations amount less than R$ 20,000 monthly (US$ 8,700).

Also, Brazilian legislators have created in 1995 a mechanism of profit distribution not previous found in any other country: the companies are allowed to pay Equity Interest to shareholders and the amount paid can be deduced from the company taxable income. For the

---

[4] The most important factors for the financial sector (non-financial sector) were: 1º (2º) profit stability; 2º (1º) past dividend payout; 3º (4º) level of current profits; and 4º (3º) level of projected profits.
[5] Equity Interest is a free translation for the Brazilian mechanism known as *"Juros sob o Capital Próprio"*.

amount paid as Equity Interest be deducted, however, it cannot be greater than the variation of the Long-Term Interest Rate (TJLP), fixed by the Brazilian Monetary Council.

The amount received as Equity Interest by shareholders, conversely, is taxed on 15%. This income tax paid can be compensated later, in the annual income tax adjustment, for companies subjected to the real income taxation. For individual investors and companies subjected to the presumed income taxation, the tax paid is definitive.

Another particularity of the Brazilian market is that all public companies have to pay at least 25% of their annual adjusted profits to shareholders either through dividends or Equity Interest payments (or a combination of both). This obligation can bias our study towards an over-distribution of profits. Because of that, we are going to introduce a dummy variable to identify public from private companies.

3. METHODOLOGY

To test if banking dividends are different from other industries dividends, we have selected a set of variables that appear to influence dividend payment in other studies. The variable selection was based in the literature review and was supported by classic dividend policy empirical models like the ones from Lintner (1956), Rozeff (1982), Lauenstein (1987) and Alli *et al.* (1993).

The econometrical technique of Unbalanced Panel Data Regression with Fixed Effects will be used for this research. Panel data suggests that individuals, firms, states or countries are heterogeneous, thus avoiding the risk of obtaining biased results. Moreover, by combining time series of cross-section observations, panel data gives more informative data, more variability, less collinearity among variables, more degrees of freedom and more efficiency (Baltagi, 2001).

The panel is unbalanced because we do not have information from all the 181 financial institutions during every sample year. We choose to keep in the sample the institutions we have information for less than the six years under study to avoid the survivorship bias we would incur if we had kept in the sample only institutions that have survived all the sample period. The panel fixed effects are related to the six years under study.

As the dependent variable, the variable we want to explain or predict, we used the amount of profits (the sum of dividend and Equity Interest) the company had distributed yearly to its shareholders (**DIVIDEND**).

As explicative, or independent, variables, we selected the Net Profit (**PROFIT**), seen as a proxy for transaction costs. We anticipate that an institution that presents high profitability could obtain the funds needed easily in the market and by a lesser cost, so it could had sustained a greater profit distribution to its shareholders (Rozeff, 1982). It is expected, therefore, a positive relation of this variable with the profit distribution.

To compute for the risk, we choose the amount of liabilities (**DEBT**) the company shows in its balance sheet. We thought that the greater are the companies' liabilities, the better would it be to hold its profits for reinvestment, because external capital becomes more expensive with the financial leverage. We expect, therefore, a negative relation of this variable with the dependent.

The amount of the cash and cash equivalents was used to demonstrate the institution's financial slack (**SLACK**), as stated by Alli *et al.* (1993). Accordingly to the Pecking Order Theory, the funding for dividend payments would be provided first by internal funds, therefore a positive relation of this variable with the dependent is expected.

As a proxy for the company's investments, the value of the Long-Term Asset was used (**FIXED**). In accordance with the residual theory, companies that are increasing their investments would pay less dividends to shareholders, thus a negative relation between the variables is expected.

The amount of income tax paid by the institution annually (**TAXES**) was used as a proxy for the tax influence on profit distribution to shareholders. It is expected that an institution subjected to

a heavy tax shield would made use of the Equity Interest payment tax deductibility permitted by the Brazilian law, increasing its profit distribution to reduce its annual income tax (a positive relation).

The Basle Index (**BASLE**), the rate of capital needed to cover for risks the institution is subjected, was used as a proxy for the regulation effect in the banking industry. It is expected that institutions with the Basle Index lesser than the minimum (11%) had diminished the profit distribution to shareholders, thus holding profits to allow equity increases. Therefore, a positive relation between the variables is expected.

To test the importance of the dividend policy stability, we conceived the variable **PAST_DIV** referring to the profit value distributed to shareholders in the previous year. A positive relation is expected; in view of the managers' reluctance in reduce the level of profit distribution.

Four dummy variables were used to identify qualitative differences among the different institutions operating in the Brazilian's banking sector. These variables worked as control variables in search of dividend policy peculiarities within different institutions.

To distinguish between individual institutions and those operating under a financial conglomerate, the dummy **INST_TYPE** was used. This variable assumes the value 0 for individual institutions or the value 1 for financial conglomerates. A greater incidence of profit distribution is expected for financial conglomerates, because the holding companies are benefited with the possibility of compensate later the tax paid in the profit distribution, according to Brazilian legislation. We expect, therefore, a positive relation with this variable and the dependent variable.

The variable **GROUP_INST** differentiates commercial banks (Group 1) from development, investment and saving banks (Group 2). A negative relation could be revealed, in the case that commercial banks had a greater payout than non-commercial banks, or a positive relation, in the contrary case. We cannot foresee this variable behavior because we did not find any other study that has made this same segregation.

The dummy variable **CONTROL** identifies the institution controlling group: Federal Government (1), State Government (2), Private National (3), Private with Foreign Control (4) or Private with Foreign Participation (5). We expect a positive relation between the variables, because we look forward to find greater dividend payout in institutions under private sector control and lesser profit distribution by government controlled banks.

The **CAPITAL** variable was intended to identify private (0) and public institutions (1). Given the influence of information asymmetry, we expect that public companies distribute a larger part of their profits to shareholders (positive relation) than closely held institutions.

In addition, we selected two macroeconomic variables that could contribute for the dividend policy analysis. The value of the annual average Long-Term Interest Rate[6] (**INTEREST**) is inversely related with the economic activity. A lower interest rate reduces the cost of the money in the market, with a consequent increase for the credit demand. This could motivate managers to limit profit distribution to the minimum to face the increasing demand for financial services. Therefore, a direct relation between the variables is anticipated.

Finally, the annual average Consumer Price Index[7] (**CPI**) measures the average price of goods and services purchased in a given economy. The increase in CPI reflects an economic inflation and therefore the amount paid as dividends tends to increase to compensate investors for the inflation (a positive relation between the variables).

The variable year is going to be treated as the fixed effect of by the panel data set. Also, we are not going to define a variable for size, because with the panel data each company will identified and will be compared only to itself in previous and subsequent years.

Table 1 summarizes the dependent and independent variables that will be used in our research.

---

[6] The long-term interest rate used here refers to the TJLP (*Taxa de Juros de Longo Prazo*), defined quarterly by the Brazilian Monetary Council (*Conselho Mentário Nacional*).
[7] For the CPI we have chosen to use the IGP-M (*Índice Geral de Preços do Mercado*), as divulged monthly by the Center of Price Studies at Fundação Getúlio Vargas/FGV.

Table 1 - Variables defined for the regression model

Theoretical Aspect	Variable Description	Var. Type	Expected Relation
Dividend Policy	Dividends paid during the year (DIVIDEND)	Metrical	Dependent Variable
Profitability	Annual net profit (PROFIT)	Metrical	Positive
Risk	Amount of callable liabilities (DEBT)	Metrical	Negative
Financial slack	Amount of cash and cash equivalents (SLACK)	Metrical	Positive
Investment policy	Long-term year end assets (FIXED)	Metrical	Negative
Tax effects	Income taxes due during the year (TAXES)	Metrical	Positive
Banking regulation	Basle index (BASLE)	Metrical	Positive
Stability of dividends	Dividends paid in the previous year (PAST_PO)	Metrical	Positive
Control variable	Individual institution x financial conglomerate (INST_TYPE)	Dummy	Positive
Control variable	Commercial x non-commercial bank (GROUP_INST)	Dummy	Positive/Negative
Control variable	Govern. owned, private owned, foreign owned (CONTROL)	Dummy	Positive
Control variable	Closely held company x public company (CAPITAL)	Dummy	Positive
Economic effects	Annual average long-term interest rate (INTEREST)	Metrical	Positive
Economic effects	Annual average consumer price index (CPI)	Metrical	Positive

Source: Elaborated by the authors

The regression model that will be used could be defined with the following equation:

$$DIVIDEND = \alpha + \beta_1 PROFIT + \beta_2 DEBT + \beta_3 SLACK + \beta_4 FIXED + \beta_5 TAXES + \beta_6 BASLE$$
$$+ \beta_7 PAST\_DIV + \beta_8 INST\_TYPE + \beta_9 GROUP\_INST + \beta_{10} CONTROL + \beta_{11} CAPITAL$$
$$+ \beta_{12} INTEREST + \beta_{13} CPI + \varepsilon \tag{1}$$

In the second part of the paper, we are going to compare the pattern found for the banking sector with a study made for the Brazilian industrial market in recent years (Heineberg and Procianoy, 2003). The results for banking and non-banking dividends in Brazil will be compared.

The authors made use of panel data regressions to identify the main drivers of the profit distribution by 196 Brazilian industrial companies between 1994 and 2000. The most representatives industries comprised in the sample were energy and textile (17 companies each), metallurgy and petrochemical (16 companies each), food (12 companies) and siderurgy (11 companies). Banks were not included.

The dependent variable used was the amount of profit distributed yearly to shareholders by the company. The independent variables were related to profitability, economic inflation, risk, industry, company size and investment opportunities. The variables used are summarized in Table 2.

TABLE 2 - Variables used by Heineberg and Procianoy (2003)

Theoretical Aspect	Variable Description	Variable Type	Expected Relation
Dividend Policy	Dividends paid during the year (PROVANO)	Metrical	Dependent Variable
Profitability	Net profit/loss (LL)	Metrical	Positive
	Profit or Loss (DUMLL)	Dummy	Profit- pos./Loss- neg
Dividend Policy Stability	Dividend paid during last year (PROVANT)	Metrical	Positive
Economic Inflation	Consumer Price Index (IGPM)	Metrical	Negative
Risk	Debt / Equity (DIPL)	Metrical	Negative
Investment/Growth	Market Value / Book Value (MKT)	Metrical	Negative
Company Size	Gross Revenue (REBR)	Metrical	Positive
Industry	Company Industry (SETOR)	Dummy	-

Source: Adapted from Heineberg and Procianoy (2003).

The regression equation used by the authors was the following:

$$PROVANO = \beta_0 LL + \beta_1 DUMLL + \beta_2 PROVANT + \beta_3 MKT + \beta_4 DIPL + \beta_5 IGPM +$$
$$\beta_6 REBR + \beta_7 SETOR + \varepsilon \tag{2}$$

4. SAMPLE DESCRIPTION

Our sample was composed by financial institutions (commercial banks, multiple banks, saving banks, development banks and investment banks) subjected to the Brazilian Central Bank (BACEN) control during 2001 and 2006. All financial institutions with operations in the Brazilian market must submit their financial statements quarterly to BACEN. This information is stored in a database, available to the market at BACEN's website (www.bcb.gov.br/?IFT).

The sample contained 181 financial institutions and the sample period included 6 years (from 2001 to 2006). We focused our study in the companies' end-of-year financial statements (fourth quarter). Table 3 details the number of financial institutions with information in each sample year. For the analysis we segregated the institutions in two groups, accordingly to BACEN's group classification. Group 1 contains commercial banks and multiple banks with the commercial portfolio and Group 2 contains saving banks, development banks, investment banks and multiple banks without the commercial portfolio.

Table 3 - Number of institutions with financial information in each sample year

Year	Number of Institutions	Commercial Banks	%	Non-commercial Banks	%
2001	**166**	124	75%	42	25%
2002	**159**	117	74%	42	26%
2003	**150**	112	75%	38	25%
2004	**143**	109	76%	34	24%
2005	**139**	106	76%	33	24%
2006	**135**	105	78%	30	22%
Mean	*148.7*	*112.2*	*76%*	*36.5*	*24%*
Variance	*144.27*	*52.57*	*0.02*	*24.70*	*0.02*

SOURCE: Elaborated by the authors based on information from the Brazilian Central Bank.

We can see that the number of institutions in the Brazilian market in 2006 have been sharply reduced from the 2001 figures. In consequence of this decrease, the number of institutions operating in each group presented a great variance (52.57 for commercial and 24.7 for non-commercial banks). The ratio between the number of institutions that have operated in each group and the total of institutions in the market, however, showed little alteration during the period covered by the sample (variance of 0.02 for both groups).

This decrease in the number of financial institutions is a consequence of a consolidation movement in the Brazilian financial market that had initiated with the legal permission for the banks to work as a conglomerate in 1988. The new permission allowed them to operate diverse portfolios (commercial, investment, development, leasing, insurance, etc) under the same corporation. As a result, the financial conglomerates had become hegemonic, drying out a great number of small size institutions.

Our sample contains 982 end-of-year financial statements that belong to 181 financial institutions. Table 4 details the profit distribution frequency to shareholders during the sample period. Column (a) presents the number of end-of-year financial statements in each year and column (b) displays the number of statements with profit distribution. The column (b/a) demonstrates the ratio of statements with profit distribution to total statements. The columns (b.1) and (b.2) segregates the profit distributions within dividend payments and Equity Interest payments, respectively. The last two columns show the annual average profit distribution made through each mechanism in millions of Brazilian Reais (R$).

Table 4 - Frequency of profit distribution by mechanism during the sample period

Year	Number of statements (a)	Profit distribution (b)	% (b/a)	Dividends (b.1)	% (b.1/a)	Equity interest (b.2)	% (b.2/a)	Average dividend distr. (R$ millions)	Average Equity Interest distr. (R$ millions)
2001	166	96	58%	42	25%	72	43%	40.15	46.00
2002	159	95	60%	45	28%	74	47%	41.95	61.06
2003	150	98	65%	43	29%	78	52%	78.37	83.75
2004	143	86	60%	40	28%	71	50%	83.79	78.79
2005	139	89	64%	47	34%	73	53%	123.93	130.96
2006	135	83	61%	41	30%	69	51%	129.98	181.32
Sum	*892*	*547*	*61%*	*258*	*29%*	*437*	*49%*		

SOURCE: Elaborated by the authors based on information from the Brazilian Central Bank.

From 892 financial statements, we found that 547 financial statements presented profit distributions to shareholders (61% of the total). From that, we have 258 payments of dividends (in 29% of the statements) and 437 payments of Equity Interest (in 49% of the statements). The aggregated number of dividend and Equity Interest payments may be larger than the number of profit distributions showed in column (b) because the financial institutions could have made use of both profit distribution mechanisms during the same year.

We can also detect in Table 4 that the average amount distributed to shareholders had shown a large increase since 2001, both in terms of dividend or Equity Interest payments. Moreover, except for 2004, the average Equity Interest payments had been always greater than the average dividend payments in each year.

Table 5, below, illustrates the profit distribution regarding commercial banks and non-commercial banks. For clarification purposes, we had added up both dividend and Equity Interest payments made for the same institution in each year and from here in this article we are referring to them simply as profit distributions.

Table 5 - Annual profit distribution by commercial and non-commercial banks

Year	Number of statements	Profit distributions	Commercial Banks Number of statements	Profit distribution	Average (R$ million)	Non-commercial banks Number of statements	Profit distribution	Average (R$ million)
2001	166	96	**124**	79	47.65	**42**	17	38.37
2002	159	95	**117**	80	65.34	**42**	15	38.23
2003	150	98	**112**	82	88.87	**38**	16	57.50
2004	143	86	**109**	70	90.06	**34**	16	29.47
2005	139	89	**106**	69	141.78	**33**	20	93.61
2006	135	83	**105**	67	176.89	**30**	16	199.92
Sum	*892*	*547*	*673*	*447*		*219*	*100*	
%	*100%*	*61%*	*75%*	*82%*		*25%*	*18%*	

SOURCE: Elaborated by the authors based on information from the Brazilian Central Bank.

Commercial banks represent the greater part of the sample (75%) and they were responsible for 82% of the statements with profit distributions. On the other hand, non-commercial banks represent 25% of the sample and were responsible for only 18% of the statements with profit distributions. In addition, the average amount distributed is greater for commercial banks, although we can see a strong increase in the average amount distributed by non-commercial banks in 2006.

We are presenting, in Table 6, the profit distribution regarding individual institutions and financial conglomerates.

Table 6 - Annual profit distribution by individual institutions and financial conglomerates

Year	Number of statements	Profit distributions	Individual institutions			Financial conglomerates		
			Number of statements	Profit distribution	Average (R$ million)	Number of statements	Profit distribution	Average (R$ million)
2001	166	96	83	44	17.00	83	52	70.54
2002	159	95	78	40	26.54	81	55	86.16
2003	150	98	77	41	57.72	73	57	102.47
2004	143	86	73	40	37.84	70	46	114.40
2005	139	89	74	42	92.47	65	47	165.35
2006	135	83	72	41	121.90	63	42	239.33
Sum	*892*	*547*	*457*	*248*		*435*	*299*	
%	*100%*	*61%*	*51%*	*45%*		*49%*	*55%*	

SOURCE: Elaborated by the authors based on information from the Brazilian Central Bank.

Financial conglomerates were responsible for 55% of the statements with profit distribution, although they represent only 49% of the statement in the sample. In R$ millions they distributed an amount much higher than individual institutions in every year. We are considering, in Table 7, the differences between private and public companies regarding profit distributions.

Table 7 - Annual profit distribution by private and public companies

Year	Number of statements	Profit distributions	Private companies			Public companies		
			Number of statements	Profit distribution	Average (R$ million)	Number of statements	Profit distribution	Average (R$ million)
2001	166	96	96	50	18.87	70	46	75.50
2002	159	95	94	50	22.83	65	45	103.53
2003	150	98	85	48	46.75	65	50	119.27
2004	143	86	80	45	29.21	63	41	133.21
2005	139	89	80	47	75.02	59	42	193.55
2006	135	83	79	42	113.30	56	41	251.01
Sum	*892*	*547*	*514*	*282*		*378*	*265*	
%	*100%*	*61%*	*58%*	*52%*		*42%*	*48%*	

SOURCE: Elaborated by the authors based on information from the Brazilian Central Bank.

Public companies represent 42% of the sample and were responsible for 48% of the financial statements with profit distribution. Moreover, the average amount distributed by public companies was more than twice the average paid by private companies in each year. These findings are in accordance with the agency cost and the signaling hypothesis, where companies with a greater separation of ownership and management (public companies) tend to pay more dividends.

As a final point, in Table 8, we are going to look at the profit distribution in the view of the institution's equity controlling group.

Table 8 - Annual profit distribution by equity controlling group

Year	Federal Government			State Government			Private National			Priv. Foreign Control			Priv. Foreign Partic.		
	State-ments	Distri-bution	Ave-rage	State-ments	Distri-bution	Ave-rage	State-ments	Distri-bution	Ave-rage	State-ments	Distri-bution	Ave-rage	State-ments	Distri-bution	Ave-rage
2001	10	3	259.19	10	6	26.75	80	56	40.27	57	28	28.23	9	3	144.13
2002	9	4	305.36	8	4	57.39	75	51	48.21	61	33	46.11	6	3	123.11
2003	9	7	347.95	8	5	72.34	74	57	61.90	55	27	52.56	4	2	231.59
2004	8	7	280.54	8	6	45.75	69	53	61.83	55	18	37.39	3	2	293.83
2005	8	7	659.27	8	6	90.83	73	58	68.93	48	16	105.86	2	2	401.76
2006	7	6	1132.6	8	6	71.57	70	49	94.58	49	21	109.51	1	1	890.49
Sum	*51*	*34*		*50*	*33*		*441*	*324*		*325*	*143*		*25*	*13*	
%	*6%*	*6%*		*6%*	*6%*		*49%*	*59%*		*36%*	*26%*		*3%*	*2%*	

SOURCE: Elaborated by the authors based on information from the Brazilian Central Bank.

The higher amount of profit distribution by federal owned banks surprised us, despite of their little representativeness in the sample. Private national controlled banks were responsible for more than a half of the statements with profit distribution, but the average amount paid is quite low. Private banks with foreign control paid more in average than state owned and private national banks did. Private banks with foreign participation also presented a high average profit distribution.

5. RESULTS

Accordingly to statistics literature, the absence of correlation within the independent variables is a requirement for the conclusions of a linear regression model to be generalized to the whole population (Hair *et al.*, 1998; Rencher, 2002). The correlations between the independent variables used in this research were calculated and are presented below in Table 9.

Table 9 - Correlation between the independent variables

Correlation	PROFIT	DEBT	SLACK	FIXED	TAXES	BASLE	PAST DIV	INST TYPE	GROUP INST	CON-TROL	CAPI-TAL	INTE-REST	CPI
PROFIT	1.000												
DEBT	.885**	1.000											
SLACK	.609**	.726**	1.000										
FIXED	.812**	.796**	.420**	1.000									
TAXES	.610**	.686**	.654**	.551**	1.000								
BASLE	-.016	-.019	-.013	-.015	-.015	1.000							
PAST_DIV	.924**	.856**	.551**	.824**	.536**	-.017	1.000						
INST_TYPE	.118**	.127**	.178**	.087*	.111**	-.059	.131**	1.000					
GROUP_INST	-.048	-.070*	-.106**	.017	-.061	-.027	-.067*	-.161**	1.000				
CONTROL	-.232**	-.278**	-.165**	-.188**	-.229**	-.014	-.190**	.173**	.062	1.000			
CAPITAL	.173**	.180**	.208**	.124**	.180**	-.050	.189**	.368**	-.293**	-.066*	1.000		
INTEREST	-.075*	-.050	-.010	-.036	.007	-.046	-.085*	.016	-.003	.006	-.002	1.000	
CPI	-.072*	-.046	.004	-.025	-.053	-.053	-.067*	.038	.007	.033	-.008	.214**	1.000

**. Correlation is significant at the 0.01 level (1-tailed).   *. Correlation is significant at the 0.05 level (1-tailed).

SOURCE: Elaborated by the authors based on information from the Brazilian Central Bank.

We found some strong correlations between the independent variables. The strongest correlations were between the variable PROFIT and others such as DEBT (0.885), FIXED (0.812) and PAST_DIV (0.924), between the variable DEBT and others like FIXED (0.796) and PAST_DIV (0.856) and between the variable FIXED and the variable PAST_DIV (0.824).

To solve this correlation problem, we choose to use an adaptative regression method known as step-wise, which eliminates the correlate variables during the model adjustment process. Using this regression method, each variable is being added to the model in view of its estimation power over the dependent variable. Every time a variable enters to the model, all the others are reexamined. Those that lose their estimation power in function of the new variable entered are being excluded of the analysis and so on, until we have a set with non correlate and significant variables.

As discussed during the methodology, for the first part of this paper we built a comprehensive regression model that contains all the variables identified during the literature review. We will use for that variable selection the step-wise method. For the second part of the paper, we developed another regression model based in the same variables used for a non-banking sample of companies by Heineberg and Procianoy (2003). The results of banking dividends and non-banking would be then compared. Both regression models were processed as a panel data set using the econometrical software Eviews in its version 5. The results of the first regression model are shown in Table 10.

Table 10 - Results of the comprehensive step-wise regression model

Independent Variables:	Dependent variable: DIVIDEND
Net Income (PROFIT)	.795 (32.075)***
Long-Term Assets (FIXED)	.044 (2.666)***
Cash and equivalents (SLACK)	-.110 -(8.476)***
Liabilities (DEBT)	.119 (5.149)***
Last Year Dividend (PAST_DIV)	.110 (4.762)***
N	687
Adjusted R Square	.953
Std. Error of the Estimate	55988.135
Durbin-Watson	2.175
ANOVA F	2801.961***

OBS. The numbers shown in the second column are the standardized Betas and, inside the parenthesis, the t-statistics. *** Means that the variable is significant at the 0.01 level.

SOURCE: Elaborated by the authors based on information from the Brazilian Central Bank.

We can see from Table 10 that, from thirteen independent variables identified during the literature review, the step-wise regression method kept only five variables in the model. Moreover, those five variables together can explain 95.3% (adjusted R squared) of the dependent variable, the annual amount of dividend plus Equity Interest paid by financial institutions during 2001 and 2006.

The variable related to the company profitability (PROFIT) presented the greater standardized Beta coefficient and t-statistics. This variable also showed a positive coefficient, or a direct relation with the dependent variable, as anticipated by the theory discussed in the literature review (the expected signal for all variables was presented early in Table 1).

The amount of long-term assets (FIXED), a proxy used for the company investment policy, despite showing statistic relevance, presented the lower Beta coefficient and an opposite signal than expected. This could be an indication that this variable is not a good proxy for the investment policy in banks[8].

Cash and its equivalents (SLACK) and the amount of liabilities (DEBT) also showed the opposite signal than was expected. The amount of last year dividends paid (PAST_DIV), however, presented statistic relevance and the positive signal, as expected.

We can infer the regression model robustness by its Durbin-Watson coefficient (D-W), presented in the bottom part of Table 10. As a rule of thumb, if the D-W shows a coefficient substantially lesser than 2, there is evidence of positive serial correlation among the independent variables and then the model cannot be consider stable (Gujarati, 2004). This was not the case here, with a D-W of 2.175.

The last test, ANOVA F statistics, confirms whether the groups formed by independent variables have the same pattern of dispersion. If the groups seem different, then it can be concluded that the independent variables do have an effect on the dependent variable (HAIR, 1998). To the model be considered robust at a 0.05 confidence level, the model has to show an F statistic over 4. Our comprehensive model presented an F statistics of 2801, significant at the 0.01 confidence level.

For the last part of the paper, we chose a set of variables based on Heineberg and Procianoy (2003)'s study to allow the comparison between banking and non-banking profit distribution

---

[8] Other authors used the ratio between market value and book value of the company (Tobin's Q) as a proxy for the investment policy and growth opportunities. We couldn't use this proxy because of data scarceness related to market values of private companies (52% of our sample).

pattern. The authors used the panel data technique and a linear regression model containing all the variables (not a step-wise regression model). We then used the same settings for our banking model. Table 11 compares both regression results.

Table 11 - Comparison between banking and non-banking samples

Independent Variables:	BANKING DIVIDEND MODEL	HEINEBERG AND PROCIANOY'S MODEL
Net Profit/Loss (LL)	.970**** (57.126)	.544**** (17.106)
Dummy for profit (DUMLL)	.024**** (2.637)	.006 (.300)
Last year dividend (PROVANT)	.004 (.403)	.366**** (14.346)
Investment/Growth (MKT)	-.005 -(.554)	.041** (1.957)
Indebtness (DIPL)	.006 (.681)	-.007 -(.348)
Consumer Price Index (IGPM)	-.018*** -(2.027)	-.041*** (2.053)
Company size (REBR)	.002 (.099)	.025 (.882)
Industry (SETOR)	.001 (.061)	.034** (1.703)
N	687	951
R Square	.943	.752
ANOVA F	1451.731****	246.098***

OBS. The numbers shown in the second column are the standardized Betas and, inside the parenthesis, the t-statistics.
**** Means that the variable is significant at the 0.01 level.
*** Means that the variable is significant at the 0.05 level.
** Means that the variable is significant at the 0.10 level.

SOURCE: The banking model was elaborated by the authors based on information from the Brazilian Central Bank and the non-banking model was elaborated by Heineberg and Procianoy (2003).

By Table 11 analysis, we can state that, in a broad view, the regression results of both models were very similar. The profitability variable (LL) showed the same signal and both were statistic relevant at the 0.01 confidence level. The dummy profitability variable (DUMLL) also presented the same signal in both models.

Last year dividends (PROVANT) did not show statistic relevance for the banking sample, as it presented for the non-banking sample. This variable, however, demonstrated relevance for the comprehensive step-wise regression model we presented in Table 10.

The proxies for investment and growth opportunities (MKT) used in both models were not built in the same way (see footnote number 7). This could be the reason of the divergence between the results. The proxy for risk, liabilities over equity (DIPL), presented coefficients with opposite signs. The coefficients values, however, were near zero in both models (0.006 and -0.007, respectively, for banks and non-banks).

The consumer price index (IGPM) was statistically relevant for both models, with a negative relation to the dependent variable. Company size (REBR) wasn't relevant for neither model. The positive relation, nevertheless, was presented by both models.

The industry dummy variable (SETOR) for the banking sample was constructed differently than in the non-banking sample. While for the last model it refers to the industry the company operates, for the banking sector it demonstrates the commercial and non-commercial sector. In consequence, we cannot compare the results for this variable.

From the bottom of Table 11, we can detect a high explanation power for both models. For the banking model, the independent variables explained 94.3% of the profit distribution. For the

non-banking model, the independent variables explained 75.2%. Both models presented a high and significant F ANOVA test result. Therefore, both models can be considered robust.

6. FINAL CONSIDERATIONS

This research has provided a better understanding of profit distribution by the Brazilian banking sector through the sample description and the regression models. We detected that the institutions that have distributed the larger average amount of profits to shareholders were commercial banks (Table 5), financial conglomerates (Table 6), public companies (Table 7), federal government controlled and private owned with foreign participation banks (Table 8).

These findings are supported directly by the asymmetric information and the agency cost theories, were firms with the higher separation between ownership and management should distribute their profits to shareholders to minimize the information asymmetry.

Through the linear regression models and the statistical tests, the main objectives that had motivated this study could be attained. The first regression model (Table 10) showed that the profitability is the main driver for banking dividend policy in Brazil. This evidence is the same found by Lintner (1956), based in the North American manufacture industry.

From the second regression model (Table 11), we could infer that financial dividend policy is not different from non-financial dividend policy in the Brazilian market.

The evidence found here, however, should be tested more deeply. As a recommendation, we suggest the analysis of variance between groups to compare the variables for the banking and the non-banking sample. We couldn't make this kind of test because we did not have access to the raw data for the non-banking sample.

We also suggest that the same kind of study be made for other financial and non-financial markets, both in emerging and developed countries.

The main contribution of this paper was to deliver information about dividend policy in order to supply a gap in the literature – the question whether banks are different from non-banks.

Future researches can use the knowledge acquired in this study to better plan the composition of their samples, regarding the differences found between the diverse groups of institutions in operation in the Brazilian banking sector.

By limitations of this research, we can state that the sample size, although large enough to allow the use of econometric regression models, is relatively small when we consider the need of sample segregations by dummy control variables.

This problem made impracticable that the segregations used during the sample description were repeated during the regression models. As the sample comprises the totality of banking institutions that had operated in the Brazilian market during the sample period, we suggest that future researches increase the number of years under study.

REFERENCES

ALLEN, Franklin; MICHAELLY, Roni. **Payout Policy**. April 2002. Available at SSRN: http://ssrn.com/abstract=309589, accessed in 03/25/2007.

ALLI, K. L.; KHAN, A. Q.; RAMIREZ, G. G. Determinants of Corporate Dividend Policy: A Factorial Analysis. **The Financial Review**, 1993.

BALTAGI, Badi H. **Econometric Analysis of Panel Data**. Second Edition. New York: John Wiley & Sons, 2001.

BANCO CENTRAL DO BRASIL. **Informações Financeiras Trimestrais**. Database, available under request in 07/10/2007.

BAKER, H. K.; VEIT, E. T.; POWELL, G. E. Factors Influencing Dividend Decisions of Nasdaq Firms. **The Financial Review**, 2001.

BESSLER, Wolfgang; NOHEL, Tom. **Asymmetric Information, Dividend Reductions, and Contagion Effects in Bank Stock Returns**. 1999. Available at SSRN: http://ssrn.com/abstract=236034, accessed in 01/19/2008.

BODLA, B. S.; PAL, Karam; SURA, Javis S. Jr. **Examining Application of Lintner's Dividend Model in Indian Banking Industry**. 2007. Available at SSRN: http://ssrn.com/abstract=1053001, accessed in 01/25/2008.

BRENNAN, M.; THAKOR, A. Shareholder Preferences and Dividend Policy. **The Journal of Finance**, v. 45, p. 993-1018, September 1990.

CASEY, K. M.; DICKENS, R. N. The Effects of Tax and Regulatory Changes on Commercial Bank Dividend Policy. **The Quarterly Review of Economics and Finance**, 2000.

CLOYD, C. Brian; ROBINSON, John R.; WEAVER, Connie D. **Does Ownership Structure Affect Corporations' Responses to Lower Dividend Tax Rates**? An Analysis of Public and Private Banks. 2005. Available at SSRN: http://ssrn.com/abstract=729865, accessed in 01/19/2008.

DONALDSON, G. **Corporate Debt Capacity**: A Study of Corporate Debt Policy and the Determination of Corporate Debt Capacity. Boston: Harvard Graduate School of Business Administration, 1961.

FENN, George W.; LIANG, Nellie. Corporate Payout Policy and Managerial Stock Incentives, **Journal of Financial Economics**, 60, p. 45-72, 2001.

GORDON, M. J. Optimal Investment and Financing Policy. **The Journal of Finance**, v. 18, n. 2, p. 264-272, 1963.

GRULLON, G.; MICHAELY, R. Dividends, Share Repurchases and the Substitution Hypothesis. **The Journal of Finance**, v. 62, n. 4, 2002.

GRULLON, G.; MICHAELY, R.; SWAMINATHAN, B. Are Dividend Changes a Sign of Firm Maturity?. **The Journal of Business**, v. 75, n. 3, 2002.

GUJARATI, D. N. **Basic Econometrics**. Fourth Edition. New York: McGraw–Hill: 2004.

HAIR, J. F. Jr.; ANDERSON, R. E.; TATHAN, R. L.; BLACK, W. C. **Multivariate Data Analysis**. Fifth Edition. Upper Saddle River: Prentice Hall, 1998.

HEINEBERG, R.; PROCIANOY, Jairo L. **Aspectos Determinantes do Pagamento de Proventos em Dinheiro das Empresas com Ações Negociadas na Bovespa**. In: Encontro Anual da ANPAD. ENANPAD 2003. Atibaia, SP: ANPAD, 2003.

JENSEN, Michael C.; MECKLING, William H. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. **Journal of Financial Economics**, v. 3, n. 4, p. 305-360, 1976.

KATO, Kazuo; KUNIMURA, Michio; YOSHIDA, Yasushi. **Dividend Behavior and Pure Accrual Management of Japanese Banks**. Osaka University Economics Working Paper No. 2003-1. December 2002. Available at http://ssrn.com/abstract=365960, accessed in 01/19/2008.

LAUENSTEIN, M. C. A New Look at Dividend Strategy. **Journal of Business Strategies**, 1987.

LINTNER, J.; Distribution of Incomes of Corporations among Dividends, Retained Earnings, and Taxes. **The American Economic Review**, 1956.

LITZENBERGER, Robert H.; RAMASWAMY, Krishna. The Effect of Personal Taxes and Dividends on Capital Asset Prices: Theory and Empirical Evidence. **Journal of Financial Economics**. North-Holland, v. 7, p. 163-195, June 1979.

MOREIRA, L. F.; PROCIANOY, Jairo L. **Open Market Stock Repurchases at BOVESPA**. August 2001. Available at SSRN: http://ssrn.com/abstract=274257, accessed in 03/05/2009.

MILLER M. H.; MODIGLIANI F. Dividend Policy, Growth and the Valuation of Shares. **The Journal of Business**, v. 34, n. 4, p. 411-433, October 1961.

MILLER M. H.; ROCK, K. Dividend Policy under Asymmetric Information. **The Journal of Finance**, v. 40, n. 4, p. 1031-1051, September 1985.

NNADI, Matthias A.; AKPOMI, Margaret E. **The Effect of Taxes on Dividend Policy of Banks in Nigeria**. Available at SSRN: http://ssrn.com/abstract=873828, accessed in 01/19/2008.

PROCIANOY, Jairo L. "A Política de Dividendos e o Preço das Ações", in: **Gestão de Investimentos e Fundos**, p. 139-164, editado por Gyorgy Varga e Ricardo Leal, Editora FCE, 2006.

PROCIANOY, Jairo L.; POLI, Beatriz T. C. A Política de Dividendos como Geradora de Economia Fiscal e do Desenvolvimento do Mercado de Capitais: Uma Proposta Criativa. **Revista Brasileira de Administração**, n. 4, p. 6-15, 1993.

PROCIANOY, J. L.; VERDI, Rodrigo S. O Efeito Clientela no Mercado Brasileiro: Será que os investidores são irracionais?. **Revista Brasileira de Finanças**, v. 1, n. 2, p. 217-242, 2003.

RAGHAVAN, Kamala R. **Share Repurchases as Signals in Banking**: Do they work? August 01, 2005. Available at SSRN:http://ssrn.com/abstract=772404, accessed in 01/19/2008.

RENCHER, A. C. **Methods of Multivariate Analysis**. Second Edition. New York: Wiley-Interscience, 2002.

ROZEFF, M. S. Growth, Beta and Agency Costs as Determinants of Dividend Payout Ratios. **Journal of Financial Research**, 1982.

SILVA, Julio C.; LIMA, M.; BRITO, Ricardo D. Sobre o Crescimento da Remuneração Direta aos Acionistas: economia de impostos ou mudanças nas características das firmas. In: **5º Encontro Brasileiro de Finanças**. Anais...: SBFIN: São Paulo, 2005.

TULLY, Shawn. Why Bank Stocks are Cash Machines. **Fortune**, v. 153, n. 10, p. 182-185, New York: May 29, 2006.