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The Impact of Financing Decision on the Shareholder Value Creation

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Abstract

The purpose of this paper is to explore an optimal capital structure to maximize the shareholder wealth, also we try to determine the most significant determinants for shareholder value creation. Using a sample of French firms introduced on the stock exchange and belonging to SBF 250 index over a period from 1999 to 2005. We use in the paper a panel data. It provides the researcher a large number of data points, increasing the degrees of freedom and reducing the colinearity among explanatory variables, hence improving the efficiency of econometric estimates. Our result shows that the estimation of both empirical models explaining the shareholder value, we notice that the self-financing explains positively and significantly the shareholder value creation for both measure (EVA and MVA). The equity issue supply's to explain negatively and significantly the shareholder value for both measure. The financial debt contributes to explain positively and significantly the EVA. But it's negatively related to MVA. The impact of financial factors on shareholder value depends to measure taken and the financial structure added to the model. Several authors have investigated how shareholder value creation can be increased, Rappaport (1987) has defined the value drivers as financial factors. The relationship between capital structure and firm value has been the subject of considerable debate. Indeed, the Pecking Order Theory and the Static Trade-off Theory found contradictory predictions in term of the impact of the financial structure on the shareholder value creation.

Keywords: capital structure, Pecking Order Theory, the Static Trade-off Theory, shareholder value creation, Economic Value Added and Market Value Added.

Introduction

There is now a large literature that supports the Shareholder Value approach, even-though there is still considerable debate and controversy. For Fermandez (2001), a company creates value for the shareholders when the shareholder return exceeds the share cost (the required return to equity). In other words, a company creates value in one year when it outperforms expectations. Several authors have investigated how shareholder value creation can be increased, Rappaport (1987) and Black et al. (1998). Rappaport (1987) has defined the value drivers as growth rate, income tax rate, operating profit margin, fixed capital investment, cost of capital, working capital investment and value growth duration. Srivastava et al. (1998) suggest that the

firm value is driven by growing the cash flows, accelerating the cash flows, reducing the volatility and vulnerability of cash flows and enhancing the residual value of cash flows. Stewart (1991) has identified six shareholder value drivers: net operating profits after taxes, the tax benefit of debt associated with the target capital structure, the amount of new capital invested for growth, the after-tax rate of return of the new capital investments, the cost of capital for business risk and the future period of time over which the company is expected to generate a return exceeding the cost of capital from its new investments.

Modigliani and Miller (1958) show that in a world without taxes, agency costs, or information asymmetry the firm value is independent of capital structure. More recently, capital structure theories have focused on the tax advantages of debt (starting with Modigliani and Miller, 1963), the use of debt as an anti-takeover device, agency cost of debt (Jensen et al., 1976 and Myers, 1977), the advantage of debt in restricting managerial discretion (Jensen, 1986), the effect of debt on investors' information about the firm and on their ability to oversee management (Harris et Raviv., 1991) and the choice of debt level as a signal of firm quality (Ross, 1977 and Leland et Pyle., 1977).

The relationship between capital structure and firm value has been the subject of considerable debate, both theoretically and in empirical research. The capital structure referred to enterprise includes mixture of debt and equity financing. Whether or not an optimal capital structure exists is one of the most important and complex issues in cooperate finance. The financing decision is one of the main financial decisions of the company, which can have an impact on its performance. Firms are led to use a combination between the internal and external financial resources to finance their investments.

Most of the empirical studies that have analyzed the determinants of firms' value creation have adopted a common investigation method. An Ordinary -Least Square (OLS) regression model is usually employed to test the relationship between indicators (or determinants) of value creation and a measure expressing the Shareholder Value created (EVA or MV/BV) with cross-section firm data (Rappaport, 1986, Caby et al, 1996, Ben Naceur, et al, 1998).

In this study, we try to determine the most significant determinants for shareholder value creation of firms and the impact of capital structure on shareholder value creation, on 88 French companies introduced on the stock exchange and belonging to SBF 250 over the period from 1999 to 2005 using the panel data. The first section one summarizes the theoretical argument concerning the relation between capital structure and shareholder value creation and prior empirical work carried out. The second section describes the hypotheses. The third section describes the data and definition of variables. The fourth section presents Analysis and discussion of Results. The last section offers the conclusions.

Literature Review

The relationship between capital structure and firm value has been the subject of considerable debate, both theoretically and in empirical research. Throughout the literature, debate has centered on whether there is an optimal capital structure for an individual firm or whether the proportion of debt usage is irrelevant to the individual firm's value. Modigliani and Miller (1958) showed that if two firma are in the same risk class and in an economy with a perfect capital market having no transaction costs, taxes, and bankruptcy costs, then their relative market value are independent of their capital structure, this result has spawned a large theoretical literature that extend, criticizes and modifies their original results. In 1963, adding the effect of tax-deductible interest payments, firm value and capital structure are positively related.

Other researchers have added imperfections, such as bankruptcy costs (Altman, 1984), agency costs (Jensen and Meckling, 1976), and gains from leverage-induced tax shields (DeAngelo and Masulis, 1980), to the analysis and have maintained that an optimal capital structure may exist. Indeed, the Static Trade-off Theory supports that the optimal debt level is reached when the marginal economy of debts tax is counterbalanced by the corresponding increase of the potential the bankruptcy costs and the agency costs. This model predicts that firms maintain a target debt-equity ratio that maximizes firm value, consequently the shareholder value creation. Bankruptcy costs can arise only if the company gets into debt. In practice, more the company makes appeal to the debt, more its fixed costs are important and bigger the probability of bankruptcy. The value of the company, which has more debt, is reduced, and consequently, there is destruction of the shareholder value.

Miller (1977) added the personal taxes to the analysis and demonstrated that optimal debt usage occurs on a macro-level, but it does not exist at the firm level. Interest deductibility at the firm level is offset at the investor level.

Robichek and Myers (1966) suggest that bankruptcy costs may offset the tax benefits of increasing leverage. The cost of going bankrupt has two components as well. The direct cost of bankruptcy refers to the deadweight cost of going bankrupt, which includes the legal and liquidation costs associated with the act of bankruptcy. The indirect cost refers to the lost sales and higher costs associated with the perception that a firm is in trouble. Myers (1977) and Opler and Titman (1994) find that the cost of bankruptcy might discourage firms to acquire debt.

Jensen and Meckling (1976) suggest that a particular capital structure can result from using debt as a monitoring and controlling device for managers. Agency Theory suggests that the choice of capital structure may help mitigate these agency costs. Under the agency costs hypothesis, high leverage or a low equity/asset ratio reduces the agency costs of outside equity and increases firm value by constraining or encouraging managers to act more in the interests of shareholders. Greater financial leverage may affect managers and reduce agency costs through the threat of liquidation, which causes personal losses to managers of salaries, reputation, perquisites. Higher leverage can mitigate conflicts between shareholders and managers concerning the choice of investment (Myers 1977), the amount of risk to undertake (Williams 1987), the conditions under which the firm is liquidated (Harris and Raviv 1990), and dividend policy (Stulz 1990). Further developing the "free cash flow" argument, Jensen (1986) points out that slow-growth firm will have large amounts of excess cash that managers may decide to use for personal perquisites and other non-positive net present value projects. If the firm issues debt, then the manager will own an increasing percentage of the firm's stock. Furthermore, excess cash will be reduced, and the debt covenant and bondholders will act as monitoring and controlling agents over the manager's behavior.

The theory of Pecking Order rejects the existence of an optimal debt ratio. It bases on the hypothesis that the capital structure depends on the net requirement for external finance. This theory is driven by asymmetric information between the managers, who are the best informed about the perspectives of the firm and the shareholders. Myers and Majluf (1984) develop the Pecking Order theory, initially, emphasis by Donaldson (1961). This theory advocates a hierarchical order that considers financial benefits of the resources which will be used should be followed. So they argued that the information asymmetry that exists between a firm’s managers and the market necessitates a pecking order when choosing among the available sources of funds. According to this theory, internally generated funds are the firm’s first choice followed by debt as a second choice and the use of equity as a last resort. Consequently, due to asymmetric

information problem, in selecting external financing, firms consider external resource use as a cheaper way compared to stock issuing.

Hypotheses

The financing decision is one of the main financial decisions of the company, which can have an impact on its performance. Firms are led to use a combination between the internal and external financial resources to finance their investments. Consequently, to determine the optimal financial structure, this can minimize the cost of the capital and, consequently can maximize the shareholder value creation. Therefore, the objective of this paper is to study the impact of capital structure on shareholder value creation.

2-1- Self-financing and shareholder value creation

The self-financing presents the following advantages: it strengthens the existing financial structure; it does not pull financial costs, but that does not mean that it is free; it facilitates the expansion of the company and it protects the financial autonomy of the company.

Myers and Majluf (1984) give a preference to the self-financing by report to the debt and this last one by report to the equity issue. The privilege contracted to the self-financing returns to the fact that its usage is without any restrictive condition and, especially for the company manager without any obligation of information issue about the company financial situation. In addition it allows escaping from the asymmetric information, by avoiding the appeal to the external financing. Consequently, the self-financing allows avoiding to the firm to be underestimated by the contributors of external resources. According to Charreaux (2007), the introduction of the information asymmetry in the financial theory, allows to propose models possessing a better explanatory power of the companies financing policy. The self-financing According to the signal theory, the degree of self-financing of a project should be interpreted, as a favorable signal.

Within the framework of the agency theory, the self-financing plays a positive role on the shareholder value creation. It can offer the advantage for the companies to avoid agency costs engendered by the appeal to external financing. Indeed according to Charreaux (2002), the self-financing can play a positive role, by claiming that its latitude allows the manager to develop better and to value their human capital.

By taking these theories, we can assume the following hypothesis:

H_{11}: According to the agency theory, signal and hierarchical financing, the self-financing allows creating more value for the shareholder.

On the other hand, the free cash flow theory, introduced by Jenson (1986), gives a negative vision of the self-financing. He argues that the excess of cash flow is lost and it decreases the value of the firm because the managers have personal incentives to increase the base of the firm assets, rather than to distribute the cash flows to the shareholders. According to Charreaux (2002), the leaders who would have plentiful possibilities of self-financing would be incited to waste them. Mostly the self-financing is seen in a suspect way, associated with an implanting of the managers in the negative consequences for the shareholders. And both the payment of dividends and the debt servicing are favorably collected to avoid the possibilities of wasting associated with the self-financing.

Then we can verify empirically the following hypothesis:

H_{12}: By taking free cash flow theory, the self-financing allows destroying the shareholder value.

2-2- Equity issue and shareholder value creation

Myers and Majluf (1984), proposed a financing hierarchy in which the capital increase is considered at the last rank. So equity issue pull a reduction of the share value of the ancient shareholders, and consequently to destroy their value, by ownership dilution.

Within the framework of the signal theory, and the existence of asymmetric information, the firm made resorts to a financing by equity issue in the case of the unfavorable natural state. By anticipation the new investors interpret this financing as a negative signal what involves a depreciation of the stockholders' equity value of the company, and consequently a destruction of the value for the current shareholders. The capital increase in period of under-evaluation is not in compliance with the interest of the ancient shareholders by the effect of ownership dilution, which it provokes.

By taking these theories, we can assume the following hypothesis:

H_2: According to the signal theory and the POT, the equity issue allows destroying the shareholder value.

2-3- Debt and shareholder value creation

Modigliani and Miller (1963), by taking, the incidence of the fiscal deductibility, the debt always has a positive effect on the value of the company about is its level. The optimal structure of the company is obtained with a level of maximum debts.

According to the agency theory, the debts are a means to discipline the managers by the financial market, which is to reduce the agency costs of stockholders' equity and to increase the company value. Besides, the debt constitutes a mechanism of resolution of the conflicts, as far as it incites the leaders to be successful to avoid the risks of bankruptcy and the loss of their employment.

For the signal theory, the debt represents a positive signal as for the future flows of the company. The leader signs a new loan only if he is sure of his capacities to honor his commitments. Ross (1977) argues that the level of debt is a signal spread by the leader to give an idea onto the situation of the company. It constitutes an incentive system forcing the manager to emit a credible signal. According to this model, the level of debts allows to distinguish the firms' investments quality. Only the firms with good qualities can use the level of debts to spread a good signal to the investors.

Basing on these theories we can advance this hypothesis:

H_{31}: According to the agency and signal theory, more firm resort to debt more it creates shareholder value.

However, Myers and Majluf (1984), within the framework of POT, concludes the rate of target debts is not important. The Pecking Order theory basis financing does not lean on an optimization of the debt ratio, this ratio is the result accumulates of a preferential order of sources of funding in time. In addition, Myers (1984), illustrate that the introduction of the incidence of the bankruptcy cost ends in the determination of an optimal debts. In that case, the increase of the debt pulls the augmentation of bankruptcy cost which has a negative impact on the shareholder value creation.

Then, we can advance this hypothesis:

H_{32}: According to the Pecking Order Theory and the Static Trade-off Theory, the resort of firms to debt destroys the shareholder value.

2-4- Growth and shareholder value creation

The growth is considered as one as control lever of shareholder value creation. The growth of the sales constitutes a priority objective for the managers. A weak internal growth, even negative, can be compensated with external growth. Conversely a decline of sales can hide in reality an increase of the organic growth. Ramezani, Soenen and Jung (2002) explore the relationship between growth (earnings or sales) and profitability and between profitability and shareholder value. They use Jensen's alpha as a measure of shareholder value and find that beyond a point, growth adversely affects profitability and destroys shareholder value. Recently, Pandey (2005) tested the effect of growth on shareholder value (measured as the market to book (M/B) ratio). They find that growth is negatively related to the shareholder value creation.

In theory, the leaders owe maximize the shareholder value creation. If we consider that their income is generally a function of the size of the company, the leaders will be tried to maximize the sales amount to strengthen their prestige. Then, we can advance this hypothesis:

H_4: The shareholder value creation is positively influenced by the growth rate.

2-5- Profitability and shareholder value creation

According to Rappaport (1986), profitability can be considered as a very important value driver. An improvement of profitability can originate from achieving relevant economies of scale, searching for cost-reducing linkages with suppliers and channels, eliminating overhead that does not add value to the product and eliminate costs that do not contribute to buyer needs. Ben Nacauer and Goaieded (1999) investigated the determinants of value creation among listed Tunisian companies. Their results indicate that firm values are positively and significantly correlated with profitability. Recently, Pandey (2005) tested the effect of profitability on shareholder value (measured as the market to book (M/B) ratio). They find a strong positive relationship between profitability and the shareholder value creation. Then, we can advance this hypothesis:

H_5: The shareholder value creation is positively influenced by the profitability.

2-6- Investment opportunities and shareholder value creation

Modigliani and Miller (1961), advances(moves) that the real meaning of the increase in the company value is the existence of investment opportunities, which profitability rates are more raised than the market profitability rates of assets presenting the same characteristics of risk. Indeed, the important element in the market theory, in balance, is the value of the economic asset. We can assume the following hypothesis:

H_6: The shareholder value creation is positively influenced by the investment opportunities.

2-7- Size and shareholder value creation

The managers try to increase the size of the company using the growth operations (intern and / or extern) for the advantages that it gets. Indeed the increase of the size engenders a management within the more and more complex company of where the manager can increase his discretionary power on certain expenses, in particular on his payment and the fringe benefits. A reduced size can be translated by a more important control of the shareholders to the managers. So, we can assume the following hypothesis:

H_7: The shareholder value creation is negatively influenced by the firm size.

Data and Methodology

3-1- Sample and data selection:

Our empirical investigation uses a sample of firms listed in the French Stock Exchange market and belonging to SBF 250 index, during the period 1999 – 2005. The sample was further reduced to 88 firms, as a result of missing data. The financial data are extracted from the firm's annual reports, which are published and available in their sites or in the site of the Authority French Financial Market. The sample excludes the firms which the annual report is not available. We use a panel data to check our hypothesis. It provides the researcher a large number of data points, increasing the degrees of freedom and reducing the colinearity among explanatory variables, hence improving the efficiency of econometric estimates.

3-2- Variable measurement:

Dependant variable: our dependant variable is shareholder value creation. The literature employs a number of different measures of firm performance stock market returns and their volatility (Saunders, Strock, and Travlos 1990), Tobin's q, which mixes market values with accounting values (Morck, Shleifer, and Vishny 1988, Zhou 2001). We will take, in this paper, the Economic Value Added (EVA) and the Market Value Added (MVA).

EVA intends to measure the value added by the firm or the value generated by a firm for a given period of time. EVA recognizes that this creation of value has to be measured after the firm has returned the amount invested and the return due to the actors, creditors and shareholders, that contributed to the amount invested.

$$EVA = NOPAT – (WACC * CI)$$

Where:

EVA: Economic Value Added

NOPAT: Net Operating Profit after Taxes

WACC: Weighted Average Cost of Capital

CI: Invested capitals.

The MVA is an external measure of performance by the market. The MVA represents the sum updated in the cost of the capital of EVA anticipated for every year. It shines on the capital gain susceptible to be realized by the shareholders during the sale of the company after deduction of the amounts which they invested. A high MVA indicates the company has created substantial wealth for the shareholders. MVA is equivalent to the present value of all future expected EVAs. Negative MVA means that the value of the actions and investments of management is less than the value of the capital contributed to the company by the capital markets. This means that wealth or value has been destroyed.

The MVA can be defined as the difference between the market value of invested capitals MV (stockholders' equities and financial debts), and the book value of this same capital BV.

$$MVA = MV - BV$$

Independent variables: are self-financing, equity issue, debt, growth rate, profitability, investment opportunities and size. Table 1 summarizes the definition and measurement of independent variables.

3-3- Models Specification

In this study we test the impact of financial factors and capital structure on the shareholder value creation. In all the models we will take the financial factors and we will try to test the influence of each financing decision only.

In the first time we take the Economic Value Added, as measure for shareholder value creation. In the Second time we take the Market Value Added, as measure for shareholder value creation.

For the first model, to test the impact of self-financing on Economic Value Added we propose the following model:

$$EVA_{it} = \alpha_0 + \alpha_1 Gr_{it} + \alpha_2 Prof_{it} + \alpha_3 I_{it} + \alpha_4 size_{it} + \alpha_5 SF_{it} + \varepsilon_{it} \quad \textbf{(1.1)}$$

To test the impact of self-financing on Market Value Added we propose the following model:

$$MVA_{it} = \delta_0 + \delta_1 Gr_{it} + \delta_2 Prof_{it} + \delta_3 I_{it} + \delta_4 size_{it} + \delta_5 SF_{it} + \varepsilon_{it} \quad \textbf{(1-2)}$$

For the second model, to test the impact of equity issue on Economic Value Added we propose the following model:

$$EVA_{it} = \beta_0 + \beta_1 Gr_{it} + \beta_2 Prof_{it} + \beta_3 I_{it} + \beta_4 size_{it} + \beta_5 Eq_{it} + \varepsilon_{it} \quad \textbf{(2.1)}$$

To test the impact of equity issue on Market Value Added we propose the following model:

$$MVA_{it} = \theta_0 + \theta_1 Gr_{it} + \theta_2 Prof_{it} + \theta_3 I_{it} + \theta_4 size_{it} + \theta_5 Eq_{it} + \varepsilon_{it} \quad \textbf{(2-2)}$$

For the third model, to test the impact of Financial Debt on Economic Value Added we propose the following model:

$$EVA_{it} = \gamma_0 + \gamma_1 Gr_{it} + \gamma_2 Prof_{it} + \gamma_3 I_{it} + \gamma_4 size_{it} + \gamma_5 FD_{it} + \varepsilon_{it} \quad \textbf{(3.1)}$$

To test the impact of Financial Debt on Market Value Added we propose the following model:

$$MVA_{it} = \lambda_0 + \lambda_1 Gr_{it} + \lambda_2 Prof_{it} + \lambda_3 I_{it} + \lambda_4 size_{it} + \lambda_5 FD_{it} + \varepsilon_{it} \quad \textbf{(3-2)}$$

When,

ε_{it}**:** The residual term;

$\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4 \; and \; \alpha_5$: The coefficients regression of the model (1.1);

$\delta_0, \delta_1, \delta_2, \delta_3, \delta_4 \; and \; \delta_5$: The coefficients regression of the model (1.2);

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4 and \; \beta_5$: The coefficients regression of the model (2.1);

$\theta_0, \theta_1, \theta_2, \theta_3, \theta_4 \; and \; \theta_5$: The coefficients regression of the model (2.2);

$\gamma_0, \gamma_1, \gamma_2, \gamma_3, \gamma_4 and \; \gamma_5$: The coefficients regression of the model (3.1).

$\lambda_0, \lambda_1, \lambda_2, \lambda_3, \lambda_4 and \; \lambda_5$: The coefficients regression of the model (3.2).

4. Analysis and discussion of Results

Correlation matrix (1)

	SF	size	Gr	I	Prof
SF	1.000000				
Size	0.084330	1.000000			
Gr	-0.015121	0.160650	1.000000		
I	-0.018867	0.056762	0.020081	1.000000	
Prof	-0.017193	0.164123	0.606401	0.173385	1.000000

The correlation matrix shows that there are no critical relations of correlation which we have to hold in account. Consequently the problem of multicolinearity doesn't exist between the self-financing, the size measured by the logarithm of the market capitalization, the growth, the investment opportunities and the profitability.

Correlation matrix (2)

	Eq	size	Gr	I	Prof
Eq	1.000000				
Size	0.051705	1.000000			
Gr	0.879551	0.160650	1.000000		
I	-0.017363	0.055751	-0.053783	1.000000	
Prof	-0.007795	0.118042	0.068013	-0.033455	1.000000

The correlation matrix demonstrates that there is a relation of critical correlation between the equity issue and the growth which we have to hold in account. Other explanatory variables do not raise the problem of critical correlation.

Correlation matrix (3)

	FD	size	Gr	I	Prof
FD	1.000000				
Size	0.160650	1.000000			
Gr	0.116739	0.876563	1.000000		
I	0.056762	0.020081	0.199642	1.000000	
Prof	0.164123	0.606401	0.821544	0.173385	1.000000

The matrix correlation illustrate that it exists a critical correlation between the financial debts and the profitability which we must take care. Other explanatory variables do not raise the problem of critical correlation.

The regression results are presented in this table:

models / coefficients	Model 1		Model 2		Model 3	
	EVA	*MVA*	*EVA*	*MVA*	*EVA*	*MVA*
constant	-142.4310 (0.0000)***	20.98286 (0.0000)***	-116.3886 (0.0000)***	-93.04395 (0.0698)*	-129.5319 (0.0000)***	184.8139 (0.0657)*
SF	0.424408 (0.0000)***	3.557028 (0.0000)***	-	-	-	-
Eq	-	-	-2.060041 (0.0445)**	-37.81345 (0.0000)***	-	-
FD	-	-	-	-	0.310561 (0.0100)***	-1.881294 (0.0000)***
Gr	0.405987 (0.0000)***	-0.209082 (0.0126)**	0.427737 (0.0000)***	-0.428827 (0.0001)***	0.407528 (0.0000)***	-0.165067 (0.1040)*
Prof	2.681040 (0.0788)*	-1.575377 (0.0003)***	4.738349 (0.0103)**	11.48456 (0.0000)***	2.945322 (0.0556)*	19.96758 (0.0000)***
I	-0.086148 (0.0001)***	-0.531480 (0.0000)***	-0.025816 (0.1028)	1.194205 (0.0000)***	-0.050453 (0.0064)***	1.343109 (0.0000)***
size	16.12864 (0.0000)***	1.006646 (0.0000)***	12.92456 (0.0000)***	10.72148 (0.0580)*	14.19602 (0.0000)***	-19.55988 (0.0721)*
Adjusted R^2	0.229326	0.968159	0.214391	0.790445	0.214291	0.824238
DW	2.39	1.69	2.39	1.31	2.36	1.38
F_1	15.51 (0.0000)***	19.73 (0.0000)***	13.62 (0.0000)***	16.81 (0.0000)***	35.55 (0.0000)***	21.86 (0.0000)***
F_2	1.46 (0.0069)*	4.30 (0.0000)***	1.37 (0.0194)**	11.55 (0.0000)***	1.32 (0.0345)	14.52 (0.0000)***
Hausman	116.22 (0.0000)***	332.99 (0.0000)***	83.21 (0.0000)***	973.81 (0.0000)***	37.67 (0.0000)***	1256.543193 (0.0000)***

*** Significant result in 1 %, ** Significant result in 5% and * Significant result in 10%.

We start with the model analyzing the relation between EVA and the Self-financing. The Fischer statistic F_1 is equal to 15.51 with a probability (p = 0.0000), we can conclude that the model is heterogeneous. Afterward to verify if it is about a total heterogeneousness either that there is an individual effect, we calculate the second Fischer statistics F_2, which is equal to 1.46 with a probability (p = 0.0069), therefore it is a model with individual effect. Finally to specify if it's a model with fixed or random effect, we estimate the Hausman statistic, which has a value of 116.2 with a probability of (p = 0.0000), consequently it is a model with fixed effect. The global quality of the empirical model is measured with adjusted R2, its equal to 23 %. This coefficient shows that the self-financing, the growth, the profitability, the investment opportunities, and the size explain 23 % the shareholder value creation measured by the EVA.

The self-financing contributes to explain positively and significantly at1 % level (p = 0.0000) the EVA. It has a value which is equal to 42 %, this means that when the self-financing increases by a one unit, EVA increases by 42 %. This significant result illustrates a positive relation between the self-financing and EVA and confirms the Pecking Order, agency and signal theories. Consequently, we must take the hypothesis H_{11}. This stipulates that according to the agency theory, signal and hierarchical financing, the self-financing allows creating more value for the shareholder. Indeed interesting to eliminate the asymmetric information and to preserve

the ownership, companies resort firstly and foremost to the internal financing by means of the self-financing. The growth contributes to explain positively and significantly at 1 % level the EVA. Its value is equal to 40 %, this means that when the rate growth increase by a unit, EVA increases by 40 %. This significant result confirms the fourth hypothesis. The profitability has a positive and significant impact at10 % level on the economic value added. The coefficient of this variable is equal to 2.68 that mean when the profitability increases by 1 point, EVA increases by 268 %. Consequently, the fifth hypothesis of this study is confirmed. The opportunities investment explain negatively and significantly EVA, it has a value of (-0.08). As a result the sixth hypothesis is invalidated. The size has a positive and significant impact on EVA. Then, the seventh hypothesis is invalidated.

Examining the relation between EVA and the Equity issue, we notice that global quality of the empirical model measured by adjusted R^2 equal to 21%. The equity issue supply's to explain negatively and significantly at 5 % the EVA. It has a value which is equal to -2.06, this means that when the equity issue increases by a one unit, EVA decreases by 206%. These significant results prove the signal and Pecking Order theories. According to Myers and Majluf (1984) the new shareholders interpret a capital increase as an unfavorable signal what engenders the reduction of the firm value. However, the ancient shareholders prefer the investment because it increases their wealth, the chosen the following hierarchy: self-financing, not risky debt, risky debt and equity issue. This hierarchy allows limiting the risks of under-investment situations and the equity issue at a low price, limiting the payment of dividends and reducing the capital costs by limiting the debt (Myers on 1984). This result leads to confirm the second hypothesis. The growth rate, the profitability and size have a positive and significant impact on the economic value added.

Observing the relation between EVA and the financial debt, we perceive that global quality of the empirical model measured by adjusted R^2 equal to 21%. The financial debt contributes to explain positively and significantly the EVA. It has a value which is equal to 31 %, this means that when the debt increases by a unit, EVA increases by 31 %. This significant result confirms the agency and signal theories. Consequently, to take for the third hypothesis, the hypothesis H_{31}, it stipulates that more the debt is higher for firms more the shareholder value, is created. Indeed, a higher debt can represent a reliable signal issued by the managers demonstrating the good health of the company. According to Jensen and Meckling (1976) a company with high debt is confronted with an important risk of bankruptcy. In that case the leaders are threatened to lose their job and the privileges which are attached to it. It would be then a sufficient reason to incite them to have a rigorous management, aiming towards the maximization of the firm value. The debt is a means of resolution of the agencies conflicts between the managers and the shareholders. The growth rate, the profitability and size have a positive and significant impact on the economic value added. However, the investment opportunities have a negative and significant impact.

Concerning, the model witch analyze the relation between MVA and the Self-financing. The global quality of the empirical model is measured with adjusted R2, its equal to 23 %. This coefficient shows that the self-financing, the growth, the profitability, the investment opportunities, and the size explain 96 % the shareholder value creation measured by the MVA. The self-financing contributes to explain positively and significantly the MVA. It has a value which is equal to 3.55; this means that when the self-financing increases by a one unit, MVA increases by 355 %. This significant result illustrates a positive relation between the self-financing and MVA and confirms the Pecking Order, agency and signal theories. Consequently, we must take the hypothesis H_{11}. The growth contributes to explain negatively and significantly

at 1 % level the EVA. Its value is equal to -0.2; this means that when the rate growth increase by a unit, MVA decreases by 20 %. Then the fourth hypothesis is invalidated. The profitability has a negative and significant impact on the market value added. The coefficient of this variable is equal to -1.57 that mean when the profitability increases by 1 point, MVA decreases by 157%. Consequently, the fifth hypothesis of this study is invalidated. The opportunities investment explain negatively and significantly MVA, it has a value of (-0.53). As a result the sixth hypothesis is invalidated. The size has a positive and significant impact on MVA. Then, the seventh hypothesis is invalidated.

Analyzing the relation between MVA and the Equity issue, we observe that global quality of the empirical model measured by adjusted R^2 equal to 79%. The equity issue explain negatively and significantly the EVA. It has a value which is equal to -37.8, this means that when the equity issue increases by one unit, MVA decreases by 378%. These significant results prove the signal and Pecking Order theories, like the result of EVA. The growth rate ha s a negative and significant impact on the market value added. However, the profitability, the investment opportunities and size have a positive and significant impact.

Finally, we study the relation between MVA and the financial debt; we observe that global quality of the empirical model measured by adjusted R^2 equal to 82%. The financial debt contributes to explain negatively and significantly the MVA. It has a value which is equal to -1.88, this means that when the debt increases by a unit, MVA decreases by 188 %. This significant result confirms the Pecking Order and Static Trade-off theories. Consequently, to take for the third hypothesis, the hypothesis H_{32}, it stipulates that more the debt is higher for firms more the shareholder value, is destroyed. This result can be explained by firstly, according to STT, the optimal level of debts is affected when the tax marginal economy attributable to the debts is counterbalanced by the corresponding increase of the potential costs of agency and the costs of bankruptcies. Secondly, the clarification of POT is the existence of asymmetric information. The growth rate and size have a negative and significant impact on the market value added. However, the profitability and the investment opportunities have a positive and significant impact.

Conclusion

Modigliani and Miller (1963) were the first, who recognized the important role of the debt in the company financing because of the fiscal deductibility. Both theories which are sensible to explain better the behavior of financing firms, the Pecking Order Theory and the Static Trade-off Theory, found contradictory predictions in term of the impact of the capital structure on the shareholder value creation. Indeed, according to the static Trade-off theory, it exist an optimal capital structure on the maximum of debt. The positive debts leverage impact on the firm value o is compensated with the bankruptcies costs which result from an excessive increase of the financial debt. Nevertheless, for the Pecking Order Theory, because the existence of asymmetric information the firm adopts a hierarchy for their decisions financing beginning with self-financing, after that the debt and finally the capital increase.

As a conclusion for all the tests made for the French firms over the studied period, we notice that the impact of financial structure on shareholder value creation depends on the measure taken (EVA or MVA). By testing the impact of the capital structure on the shareholder value creation measured with the EVA, we found that the French firms favor the pecking order theory. They prefer to finance their investment project, firstly by self-financing, secondly by debt and finally by equity issue. However the results found for the market value added illustrate that

only the self-financing has a positive influence on the MVA but the debt and the equity issue destroyed the shareholder value measured by MVA.

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Appendix

Table 1: Definition and measurement of variables

Variable	Definition	Measurement
Dependant variable :		
EVA	***Economic Value Added***	Net Operating Profit after Taxes minus Weighted Average Cost of Capital multiplied by Invested Capitals.
MVA	***Market Value Added***	The difference between the market value of invested capitals MVand the book value of this same capital BV.
Independent variables :		
SF	***Self-Financing***	The cash flow decreased by dividends, the whole divided by invested capitals
Eq	***equity issue***	The variations of the sum of share capital and share premium, the whole divided by total assets
FD	***Financial debt***	The report between the financial debts and the total assets
Gr	***Growth rate***	The annual growth rate of the Sales
Prof	***profitability***	The report between the net result and the stockholders' equities
I	***Investment opportunities***	The sum between the variation of fixed assets and depreciation and amortization charges and transfers to provisions, Scaled by total assets.
size	***size***	The value is directly extracted from financial statement. The logarithm of the stock market capitalization.

Correlation matrix (1)

	SF	size	Gr	I	Prof
SF	1.000000				
Size	0.084330	1.000000			
Gr	-0.015121	0.160650	1.000000		
I	-0.018867	0.056762	0.020081	1.000000	
Prof	-0.017193	0.164123	0.606401	0.173385	1.000000

Correlation matrix (2)

	Eq	size	Gr	I	Prof
Eq	1.000000				
Size	0.051705	1.000000			

Gr	0.879551	0.160650	1.000000		
I	-0.017363	0.055751	-0.053783	1.000000	
Prof	-0.007795	0.118042	0.068013	-0.033455	1.000000

Correlation matrix (3)

	FD	size	Gr	I	Prof
FD	1.000000				
Size	0.160650	1.000000			
Gr	0.116739	0.876563	1.000000		
I	0.056762	0.020081	0.199642	1.000000	
Prof	0.164123	0.606401	0.821544	0.173385	1.000000

Table 2: The impact of self-financing on EVA:

Dependent variable : EVA

Fixed effect :

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-142.4310	24.28417	-5.865176	0.0000
size?	16.12864	2.693689	5.987565	0.0000
Prof?	2.681040	1.522508	1.760936	0.0788
I?	-0.086148	0.021405	-4.024702	0.0001
Gr?	0.405987	0.047924	8.471462	0.0000
SF?	0.424408	0.102892	4.124778	0.0000

R-squared	0.344614	Mean dependent var	-0.727471
Adjusted R-squared	0.229326	S.D. dependent var	24.37176
S.E. of regression	1.088910	Akaike info criterion	9.102520
Sum squared resid	21.39549	Schwarz criterion	9.770316
Log likelihood	239412.2	F-statistic	2.989158
Durbin-Watson stat	-2710.576	Prob(F-statistic)	24.37176

Random effect

C	-33.12057	8.324911	-3.978489	0.0001
size?	3.494178	0.914795	3.819629	0.0001
Prof?	3.623818	1.316355	2.752917	0.0061
I?	-0.007901	0.004184	-1.888437	0.0594
Gr?	0.429706	0.046889	9.164280	0.0000

R-squared	0.185198	Mean dependent var	-0.727471
Adjusted R-squared	0.178520	S.D. dependent var	24.37176
S.E. of regression	22.08948	Sum squared resid	297646.5
F-statistic	27.72970	Durbin-Watson stat	2.116770
Prob(F-statistic)	0.000000		

SF?	0.294051	0.082023	3.584994	0.0004

Table 3: The impact of Equity issue on EVA:

Dependent variable : EVA

Fixed effect :

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-116.3886	23.79653	-4.890991	0.0000
size?	12.92456	2.619878	4.933267	0.0000
Prof?	4.738349	1.839790	2.575484	0.0103
I?	-0.025816	0.015797	-1.634160	0.1028
Gr?	0.427737	0.049557	8.631203	0.0000
Eq?	-2.060041	1.022523	-2.014664	0.0445

R-squared	0.331913	Mean dependent var	-0.727471
Adjusted R-squared	0.331913	S.D. dependent var	24.37176
S.E. of regression	0.214391	Akaike info criterion	9.121714
Sum squared resid	21.60182	Schwarz criterion	9.789510
Log likelihood	244051.9	F-statistic	2.824258
Durbin-Watson stat	-2716.488	Prob(F-statistic)	0.000000

Random effect

C	-32.63288	8.395931	-3.886750	0.0001
size?	3.432887	0.922791	3.720114	0.0002
Prof?	5.434158	1.573714	3.453079	0.0006
I?	0.006109	0.001519	4.020925	0.0001
Gr?	0.466045	0.049219	9.468711	0.0000
Eq?	-2.497940	0.907322	-2.753092	0.0061

R-squared	0.184036	Mean dependent var	-0.727471
Adjusted R-squared	0.177348	S.D. dependent var	24.37176
S.E. of regression	22.10523	Sum squared resid	298071.2
F-statistic	27.51636	Durbin-Watson stat	2.107470
Prob(F-statistic)	0.000000		

Table 4: The impact of Financial Debt on EVA:

Dependent variable : EVA

Fixed effect :

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-129.5319	24.18840	-5.355123	0.0000
size?	14.19602	2.651513	5.353931	0.0000
Prof?	2.945322	1.535192	1.918537	0.0556
I?	-0.050453	0.018435	-2.736860	0.0064
Gr?	0.407528	0.048387	8.422271	0.0000
FD?	0.310561	0.120156	2.584640	0.0100

R-squared	0.331828	Mean dependent var	-0.727471
Adjusted R-squared	0.214291	S.D. dependent var	24.37176
S.E. of regression	21.60319	Akaike info criterion	9.121841
Sum squared resid	244082.9	Schwarz criterion	9.789637
Log likelihood	-2716.527	F-statistic	2.823178
Durbin-Watson stat	2.367418	Prob(F-statistic)	0.000000

Random effect				
C	-27.06015	8.432638	-3.208978	0.0014
size?	2.780814	0.926944	2.999980	0.0028
Prof?	3.209974	1.330256	2.413051	0.0161
I?	-0.074430	0.009862	-7.547428	0.0000
Gr?	0.420647	0.047360	8.881942	0.0000
FD?	0.561403	0.067933	8.264055	0.0000
R-squared	0.256345	Mean dependent var		-0.727471
Adjusted R-squared	0.250249	S.D. dependent var		24.37176
S.E. of regression	21.10306	Sum squared resid		271656.9
F-statistic	42.05446	Durbin-Watson stat		2.258565
Prob(F-statistic)	0.000000			

Table 5: The impact of Self-financing on MVA:

Dependent variable : EVA				
Fixed effect :				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	20.98286	2.829925	7.414635	0.0000
size?	1.006646	0.015830	63.59264	0.0000
Prof?	-1.575377	0.434798	-3.623238	0.0003
I?	-0.531480	0.040413	-13.15120	0.0000
Gr?	-0.209082	0.083540	-2.502778	0.0126
SF?	3.557028	0.188478	18.87242	0.0000
R-squared	0.972922	Mean dependent var		20.57456
Adjusted R-squared	0.968159	S.D. dependent var		210.0875
S.E. of regression	37.48822	Akaike info criterion		10.22421
Sum squared resid	735006.7	Schwarz criterion		10.89201
Log likelihood	-3056.058	F-statistic		204.2566
Durbin-Watson stat	1.690896	Prob(F-statistic)		0.000000
Random effect				
C	-3.581800	1.531325	-2.339020	0.0197
size?	1.009732	0.011278	89.53229	0.0000
Prof?	-0.551471	0.356747	-1.545833	0.1227
I?	-0.177676	0.007759	-22.89856	0.0000
Gr?	-0.130701	0.081892	-1.596022	0.1110
SF?	3.094768	0.148514	20.83819	0.0000
R-squared	0.953550	Mean dependent var		20.57456
Adjusted R-squared	0.953169	S.D. dependent var		210.0875
S.E. of regression	45.46395	Sum squared resid		1260852.
F-statistic	2504.462	Durbin-Watson stat		1.665725
Prob(F-statistic)	0.000000			

Table 3: The impact of Equity issue on MVA:

Dependent variable : EVA

Fixed effect :

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-93.04395	51.20384	-1.817128	0.0698
size?	10.72148	5.643965	1.899637	0.0580
Prof?	11.48456	0.489577	23.45811	0.0000
I?	1.194205	0.084417	14.14647	0.0000
Gr?	-0.428827	0.108844	-3.939843	0.0001
Eq?	-37.81345	2.445977	-15.45945	0.0000

R-squared	0.821793	Mean dependent var	6.049226
Adjusted R-squared	0.790445	S.D. dependent var	102.8151
S.E. of regression	47.06583	Akaike info criterion	10.67925
Sum squared resid	1158546.	Schwarz criterion	11.34705
Log likelihood	-3196.210	F-statistic	26.21516
Durbin-Watson stat	1.314355	Prob(F-statistic)	0.000000

Random effect

C	-180.1651	18.29921	-9.845512	0.0000
size?	20.30185	2.008701	10.10696	0.0000
Prof?	11.30499	0.454555	24.87042	0.0000
I?	1.908185	0.080432	23.72425	0.0000
Gr?	-0.439311	0.108066	-4.065210	0.0001
Eq?	-43.34371	2.193247	-19.76235	0.0000

R-squared	0.479364	Mean dependent var	6.049226
Adjusted R-squared	0.475097	S.D. dependent var	102.8151
S.E. of regression	74.48977	Sum squared resid	3384723.
F-statistic	112.3290	Durbin-Watson stat	0.797723
Prob(F-statistic)	0.000000		6.049226

Table 4: The impact of Financial Debt on MVA:

Dependent variable : EVA

Fixed effect :

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	184.8139	100.2079	1.844304	0.0657
size?	-19.55988	10.85180	-1.802455	0.0721
Prof?	19.96758	0.725359	27.52784	0.0000
I?	1.343109	0.078088	17.19991	0.0000
Gr?	-0.165067	0.101367	-1.628422	0.1040
FD?	-1.881294	0.103833	-18.11845	0.0000

R-squared	0.850573	Mean dependent var	6.059549
Adjusted R-squared	0.824238	S.D. dependent var	102.8985
S.E. of regression	43.13921	Akaike info criterion	10.50523
Sum squared resid	971437.3	Schwarz criterion	11.17386
Log likelihood	-3137.357	F-statistic	32.29730

Durbin-Watson stat	1.380352	Prob(F-statistic)		0.000000
Random effect				
C	10.87004	16.12352	0.674173	0.5005
size?	-0.776248	1.736774	-0.446948	0.6551
Prof?	21.10970	0.652560	32.34906	0.0000
I?	2.129537	0.074224	28.69079	0.0000
Gr?	-0.092664	0.101096	-0.916593	0.3597
R-squared	0.489419	Mean dependent var		6.059549
Adjusted R-squared	0.485227	S.D. dependent var		102.8985
S.E. of regression	73.82727	Sum squared resid		3319334.
F-statistic	116.7519	Durbin-Watson stat		0.782715
Prob(F-statistic)	0.000000			
FD?	-1.994014	0.079447	-25.09880	0.0000