Asymmetric Information and Payout Policy: Dividend or Share Repurchase

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Abstract

This paper studies the nature of the relationship between the share repurchase and dividend payout in the presence of asymmetric information. The study focuses on the French context over the period from 2003 to 2008. The results show that: when there is an asymmetry, the choice of managers is oriented towards stock repurchase and the reduction of dividends. It appears that the share repurchasing has a strong power signal compared to dividends. This explains the positive relationship between the asymmetry of information and the choice of repurchase and negative one related to the distribution of dividends. In the presence of asymmetry, both ways seem to be more complementary than substitutable hence the negative relationship.

Key Words: Stocks repurchase, dividend, asymmetry, complementary, substitutable.

Introduction

Share repurchases may appear as substitutes for dividends. Thus, the two mechanisms allow funding shareholders. Nevertheless, repurchases have advantages compared with dividend payments, hence their high flexibility. However, the most frequent forms of dividends are characterized by great stability over time. The effect of substitution between repurchase and dividend is consequently relativized by several studies (Albouy and Morris, 2006; Dereeper and Romon, 2006). The latter show that the two distribution mechanisms do not replace each other and that businesses realizing their programs are those that pay dividends. Different hypotheses can justify the choice of one or another distribution means. We are interested in this paper in the signal theory.

The Signal Theory

The signal theory implies the presence of asymmetric information between the various market participants. Modigliani and Miller (1961) were the first to put forward the idea that markets could estimate an event, not for itself but for the message it carries. Their intuition was formalized in the 70s and developed a few years later by several other authors (Ross, 1977; Miller and Rock, 1985; Ofer and Thakor, 1987).

Gaining the shareholders' loyalty lies in demonstrating an optimal management of the company. This demonstration just suggests that leaders send signals to shareholders to reassure them about the company management. The signal theory conceptualizes the effect of managerial decisions on the shareholders' information. There are signals which enable reducing the asymmetric information between shareholders

and managers, thus decreasing the problems linked to it. Indeed, observing the decisions taken by the leaders, the investors may interpret these signals, enabling them to better assess the value of the firm. The signal theory, originally applied to the dividend, was then extended to other financial decisions, such as share repurchases. Certainly, as the distribution of dividends is an example of a signal that encourages investors to take part in the company capital, share repurchases are also signals sent to the market.

A share repurchase has a relative effect of value creation. So, such an operation is placed in the tradition of market requirements. Therefore, announcing a repurchase is, first of all, perceived by the market as evidence that the leaders are good from the point of view of creating a shareholding value. Moreover, the decision of paying the investors back rather than investing in an unprofitable project is another positive signal of share repurchasing. This signal takes the form of a premium paid by investors to businesses redistributing the unused capital. Finally, and frequently, a repurchase can be launched to indicate to the market that the company is undervalued by the managers.

Depending on the management, if the company is undervalued, they should opt for a share repurchase. Such an announcement is consequently considered as sending an ample indication to a less informed market. If markets react efficiently, prices should adjust instantaneously. The new equilibrium price should reflect the "true" value of the new information.

The company announcement of repurchasing its own shares, like the distribution of dividends, is often interpreted as a way for the managers to disseminate a piece of insider information. According to Tsetsekos et al. (1988), undervaluation is the primary motivation cited by the companies having conducted a share repurchase.

The signal theory is very enlightening in this point. It emphasizes the asymmetric information existing between the managers and investors, which leads these latter to an undervaluation of the strategy and the creation of the company value. Repurchasing shares takes then the form of a powerful tool of financial communication. Furthermore, it is interesting to note that the signals are sometimes required and expected by the market. Therefore, the repurchase program has met the expectations of investors as an explanation for the business value perceived by the managers. In short, the share repurchase is a positive signal sent to the market by the managers as they believe that the best current investment is the time to repurchase their own shares. So, the repurchase must be analyzed as a positive indication of the confidence the managers have in their business. Finally, this signal will be all the more positive since the managing shareholders have to subscribe and the operation that will be carried out in a plan of redistribution to the salaried employees; this demonstrates that the managers and employees have confidence in the future of the business and that there is really an informational asymmetry with the market.

The listed companies can reduce the level of information asymmetry for sending signal markets, for example in the form of advertisements. The shareholders interpret the signals sent by the firms while observing the decisions taken by managers, allowing them a better estimate of the value of the company. It is also clear that managers, by virtue of their positions, still hold significant private data related to the value of the company (Isagawa, 2002). These insider information can sometimes indicate that the value of the company is higher than its stock market price: A manager may hold such a piece of information which indicates that the long-term profits will be higher than the market forecasts, or that the Future Cash Flows will be less volatile and therefore the systematic security risk will decrease (How and Jarrell, 1991; Grullon and Michaelly, 2004; Lie, 2005).

Taking the case of announcing a share repurchase program, this operation permits sending a signal to the market on the undervaluation of the company shares. However, the content of this signal is ambiguous. It can make the "outsiders" understand that the concerned firm does not have, for its internally generated resources, any other investment opportunity (or growth opportunity) that may create value for the

shareholders; in this case, the sent signal will be perceived in a negative way. The signal will be credible only in the presence of asymmetric information between the managers and the market.

Many studies have tried to compare the power of signaling repurchases and dividends. Thus, Brenan and Thakor (1990) show that the uninformed shareholders prefer the distributions as dividends because the share repurchases lead to a wealth transfer to the informed shareholders. The share repurchase will then be chosen if the shareholding is essentially composed of informed shareholders. (De Jong et al. , 2003)

The signal sent by a share repurchase is clear. The leaders of the company, who have more information than the market about the current state and its prospects, conduct repurchases since they think, in light of the information that the market does not have, that the action is undervalued. These data are perceived as credible as we do not understand why the managers might conduct share repurchases that limit their operational margin (by reducing funds or increasing debts) if the company situation deteriorates in the future. Accordingly, McNally (1999) showed that the non-participation of the managers in the operation constitutes a proof for the credibility of the sent signal, and only the really undervalued companies will engage in such a program.

The lack of credibility of the undervaluation signal transmitted by the announcement of the repurchase program is also caused by the flexibility offered in these operations. In fact, once the repurchase program is announced, the company may draw back or distribute its real repurchases over a long period. In addition, it can repurchase a percentage of the capital less than the quoted one. Also, the sanction of managers in case of non executing the program is almost nonexistent. In accordance with the predictions of the "market timing" theory, some studies (Brockman and Chung, 2001. Cook et al, 2004) show that the managers realize real repurchases when the company security is undervalued. The managers know better than anyone the future cash flows of the company. This informational advantage allows them to anticipate this undervaluation and take advantage of that to repurchase securities at a low price. Nevertheless, the timing of real repurchases may also be explained by the "price support" theory (Ginglinger and Hamon, 2007). According to this theory, the real repurchase is not necessarily due to the existence of an information asymmetry and does not necessarily occur when the securities are undervalued. Rather, it is intended to support the security price when it is falling.

Zhang (2005), McNally, Smith and Barnes (2006), Ginglinger and Hamon (2007), and Keswani, Yang and Young (2007) developed the hypothesis of quotation support according to which the companies have a contrasting behavior through massive repurchases when the price trend is downwards. Share repurchases will then be used to support, in time, the price of shares in case of a negative shock.

Empirically, these reviews were validated by Brockman and Chung (2001), Cook et al. (2004), and Chung et al. (2007) who confirm the predictions of the of "market timing" theory which stipulates that the real repurchase is due to utilizing an information asymmetry between the investors and managers and that they carry out repurchases at a time when the firm is undervalued.

Ginglinger and Hamon (2007) highlighted an unfavorable price trend before the real repurchase, but they did not find a significant increase in prices after these operations. Thus, they concluded in favor of the "price support" theory: The real repurchase is not necessarily due to the existence of an information asymmetry between the managers and investors, who do not necessarily intervene when the securities are undervalued. It is instead set aside for supporting the security price when it is falling.

According to the signal theory, the presence of a strong information asymmetry between the managers and shareholders leads to a policy of generous distribution. In this context, the flexibility of repurchase programs is also highlighted on the choice between dividends and share repurchases. This allows us to state the following hypotheses:

H2a: The level of information asymmetry positively influences the share repurchase.

H2b: The level of information asymmetry negatively influences the dividend distribution.

Study Of The Relationship Between Repurchase And Dividend

Collection and measurement of data

The sample consists of all companies belonging to the SBF 120 index, with the exception of financial firms that are subject to specific rules as regards repurchase and those for which we have not been able to collect certain variables. The study period spreads out from early 2003 to late 2008. We have chosen this period insofar as the share repurchases are experiencing a rapid expansion in the French market during these years. The retained final sample consists of 77 companies.

The accounting data are extracted from the financial statements (balance sheet and income statements) and activity reports published on the websites of the concerned companies.

Table 1 : Definition and measurement of variables

Variables	Definition	Measurement
DISTRIBUTION	Form of profit distribution	Variable equal to 1 if dividend only, 2 if repurchase only, 3 for both forms, and 0 if there are no distributions.
ASY INF	Information asymmetry	Measured by the displayed average price range (which is the average of the daily difference between the lowest ask price *ask* and the highest bid price *bid*).
SIZE	Company size	The natural logarithm of total assets.
DEBT	Indebtedness	The link between the total debts and total assets
ROA	Performance	Net profit / total assets.

Distribution

This variable describes the form of profit distribution, which may have four scenarios. The dependent variable DISTRIBUTION takes four values: 1 if the company pays only dividends; 2 if it distributes solely repurchases; 3 if it both pays dividends and repurchases shares; and 0 in the absence of distributions over the period 2003-2008.
As for independent variables, they vary according to the studied hypothesis.

Information asymmetry

Several studies have found that the real repurchase may result from operating an information asymmetry between managers and shareholders (Brockman and Chung, 2001, Cook et al, 2004). These studies show that the managers carry out repurchases when the value of the company is undervalued. The authors interpret these results by the fact that the managers are better informed about the profit prospect of the company. This informational advantage enables the managers to anticipate this undervaluation and take advantage of repurchasing shares at low prices. The range is used to estimate the information asymmetry. The price range is the difference between the best price suggested for purchase and the best price offered for sale.

There are generally two types of ranges, namely the real range and the displayed range. The displayed range is defined as the difference between the lowest ask price and the highest bid price at a given time (Barraud and Gillet, 2011).

The frequency of our data is daily and we have for each daily quotation better limits of the close order book. Let Bjt and Ajt be the bid and ask prices, respectively, on the day t for the security i, then the relative displayed range, noted as S_{it}^Q , is given by:

$$S_{jt}^Q = \frac{A_{jt} - B_{jt}}{(A_{jt} + B_{jt})/2} \qquad (1)$$

It is possible, for each year of quotation, to calculate an average displayed range for each security by averaging the daily displayed ranges on all the security quotation days. We have then an average relative displayed range for each quotation year.

The control variables

Regarding the control variables:

The performance of firms is directly related to the policy of profit distribution whatever its shape is. The firm performance is measured by the return on assets (ROA), namely the net profit / total assets.

The size of the company: The introduction of the size will be better considered as a simple control variable without anticipation of a particular sign. The size is measured by the logarithm of total assets.

Debt: Liang, Pukthuanthong, Thiengtham, Turtle, and Walker (2012) studied the relationship between repurchasing shares and capital structure on a sample of 1,949 American firms between 1995 and 2007. They show that the firms are more likely to repurchase shares when they have a financial flexibility like being characterized by an excessive Free Cash Flow and low indebtedness. Certainly, a debt is considered a control mechanism that reduces the manager / shareholders conflict like dividends and share repurchases. Indebtedness is measured by the ratio between the total debts and total assets.

Methodology

To address our hypotheses, we have used multinomial logistic regressions. Admittedly, the multinomial logistic model consists in generalizing the classical logistic model for the variables, having more than two terms, to account for.

The principle of this model is as follows: We want to understand or predict the effect of one or more variables on a qualitative multiple-response variable. This variable must be a disordered categorical variable. All the calculations get relatively used to a reference term that the user will select. Thus, we can understand the impact of choosing a term according to the explanatory variables in relation to a fixed term. The model to be studied is the following:

$DISTRIBUTION = \delta_0 + \delta_1 ASY\ INF + \delta_2 SIZE + \delta_3 DEBT + \delta_4 ROA + u_{it}$ (2)

Analysis and discussion of results

The table 2 presents the results of the multinomial logistic regression carried out from the dependent variable. DISTRIBUTION: four terms representing the different sub-samples (dividend only, repurchase only, dividend and repurchase, and no distribution). ASY INF: Measured by the price range shown is the difference between the requested lowest ask price and the highest bid price offered at a given time. SIZE: The size is measured by the Log of total assets. DEBT: measured by the ratio between total debt and total assets. ROA: measured by net profit / total assets ratio. Each column gives the coefficient of the regression (probability in brackets) for each explanatory variable in comparison with the group indicated by the group

companies that have not been practicing any distribution. ***, **, * indicate that the coefficients are statistically significant at the thresholds of 1%, 5 %, and 10% respectively.

Table 2 : Multinomial logistic regressions

	Dividend (no repurchase)	Repurchase (no dividend)	Dividend and repurchase
ASY INF	-140.0153** (0.041)	136.8573* (0.053)	-136.554** (0.025)
SIZE	0.2400782** (0.034)	-0.2853051* (0.069)	0.1262487 (0.220)
DEBT	-3.66358*** (0.000)	-2.652478** (0.026)	-4.281755*** (0.000)
ROA	18.36711*** (0.000)	-1.442982 (0.720)	26.36596*** (0.000)
Pseudo R2	12.17%		
Wald (chi2)	136.34 (0.000)		

Our model shows that there exists a negative and significant relationship between the information asymmetry and both the exclusive dividend distribution and the repurchase and dividend payment at thresholds of 5%. However, this relationship is positive and significant with repurchasing shares. At this level, this result can be interpreted by the fact that the informational power of repurchases is greater than that of dividends.

There is a distribution in the form of dividends when the companies show a low asymmetry level; therefore, the dividend is a means of signal, but not strong enough. In fact, thanks to dividend payments, the managers who are better informed than anyone else of the future prospects of their businesses can share their future expectations with the investors. Two converging conclusions emerge from this. On the one hand, the investors will correct their expectations and significantly revalue the securities of the companies as soon as they announce their dividend; on the other hand, the level of future profits is a determinant of the amount of dividends. Indeed, the increase in dividends is a signal of a firm's growth and good financial soundness.

Accordingly, Albouy (2007) shows that in the long run changes in the price of shares are not disconnected from that of dividends; i.e., the dividend gives information about the future of the company and is an important variable to monitor for the investors concerned about the long-term valuation of their capital.

Another explanation is associated with the negative relationship between the information asymmetry and dividend. The dividend is a signal sent by the managers about their confidence in the future and therefore the dividends report more stable incomes than repurchases. Thus, the managers wanting to maximize their own interests do not indicate that the future cash will be plentiful so they can take advantage of the cash available; consequently, the managers wanting to be established should diminish their dividend distribution.

Dividends are one of the essential financial variables that reduce information asymmetry in the financial markets, especially as the signal is costly and penalties are imposed in case of a false signal. Yet, this signal is not strong in comparison with the repurchase. Actually, the companies that have a strong asymmetry rather resort to share repurchases. There exists a positive and significant relationship between the information asymmetry and the repurchase of shares.

At this level, this result can be interpreted by the fact that the informational power of repurchases is greater than that of dividends. Thus, the managers willing to report the undervaluation of firms use the repurchase rather than the dividend. In fact, announcing a repurchase program conveys good news for the investors concerning any possible undervaluation of the company's shares. Moreover, since the undervaluation hypothesis assumes that the managers have bigger information about the real value of the firm and that they successfully announce repurchase plans when the firms are truly undervalued; we expect whether the firm insiders will have a higher shareholding proportion if they are able to negotiate the company shares (Skjeltorp and Overgaard, 2004).

Several studies have noted that the real repurchase may result from operating an information asymmetry between the managers and shareholders (Brockman and Chung, 2001, Cook et al, 2004). So, the managers realize repurchases when the company value is undervalued. The authors interpret these results by the fact that the managers are better informed about the profit prospects of the company.

The positive and significant relationship between the information asymmetry and the policy of share repurchasing can also be explained by the "price support" theory; i.e., the repurchase is carried out to support the security price once it is down. Of course, when the price is considered too low or suffers a negative shock, the company may conduct share repurchases to redirect the price at a level that the company believes closer to its intrinsic value. In the context of price support, share repurchases can be perceived by the shareholders as a mechanism to cover their capital. (Brunel, 2011)

Thus, the reasons for which the company managers conduct share repurchases encounter opposing two theories mainly. According to the "market timing" theory, the managers will conduct repurchasing shares when the company security is undervalued. They benefit from an informational advantage allowing them to detect this undervaluation and grasp the opportunity of repurchasing shares at low prices. Alternatively, the "price support" theory states that the share repurchase is intended to support the security value when it is falling. Basicall, it is about another theory: the security is not necessarily undervalued and the share repurchase is not due to the operation of an information asymmetry (Vernimmen, 2008).

Another conclusion can arise from what precedes: it is the effects of share repurchases on the liquidity of the concerned securities. Two contradictory effects are generally expected. On the one hand, the effect of even repurchasing shares results in adding orders to the book, hence decreasing the bid- ask spread (difference between the best bid and best ask). On the other hand, the information asymmetry (in case of market timing), like the heterogeneous behavior (in case of support price), is a classic factor in increasing spread and reducing liquidity. In the French case, it is a reduction in liquidity that runs share repurchases.

Our results confirm those of Dereeper and Romon (2006) and Mellouli (2009) which show that the French market of share regulation is the most frequently stated reason to justify the resort to share repurchases.

The existence of a negative relationship between the information asymmetry and dividend distribution and a positive relationship with the share repurchase may be explained by the fact that the informational power of the dividend distribution is lower than that of repurchases. This confirms the results of descriptive statistics in which we have found that: 1) the companies with a high information asymmetry resort to repurchases, and 2) those with a low asymmetry use dividends.

Another observation is remarkable: it is the significant relationship between information asymmetry and simultaneous distribution as share and dividend. This result shows that the firms using repurchases will not stop their profit distribution and that the companies conducting repurchases and distributing dividends are similar to those that pay only dividends. This result further confirms the complementary rather than substitutable nature of repurchases and dividends.

Accordingly, we can assert that the level of information asymmetry guides the choice of the appropriate distribution form. In fact, for a high asymmetry, the French firms use repurchases with a great informational power. However, when the company has a low level of asymmetry, it will have the choice between the exclusive dividend distribution or the simultaneous repurchase and dividend payment. So our hypothesis is validated in these two sections.

Finally, our model includes the company characteristics as control variables. The results show that for the payment in the form of dividends only, we notice a positive and significant relationship at a minimum threshold of 5 % with the size of the company; therefore, the larger companies are those that pay dividends. Indeed, as for Roseff (1982), these firms are generally mature and consequently have an easier access to the financial market, which reduces the degree of their dependencies to their internal funds.

On the other hand, we have observed the negative and positive relationships at the threshold of 1 % respectively with debt and performance. Indebtedness is a control mechanism substitutable for dividend policy (Jensen, 1986; Collins et al, 2003). Agrawal and Jayaraman (1994) explained the negative relationship between debt and distribution of dividends. They tested the existence of a substitution between dividends and debt. As these two variables are mechanisms of controlling the agency costs related to the Free Cash Flow, companies using less indebtedness should, all things being equal, pay more dividends.

The debt can also have an impact on the dividends through restrictive clauses as for the distribution imposed in the loan contracts. It happens sometimes that the company management looks forward to a restrictive clause on the distribution of dividends imposed by the lenders, because it does not have to justify to shareholders setting profit reserves. It should simply recall the contract clause.

Furthermore, in terms of firms repurchasing their own shares, a negative and significant relationship has been detected for both the company size and the indebtedness level. Finally, the company performance measurement is not statistically linked to the decision to repurchase shares.

So it appears that the small firms are those that repurchase shares. In fact, the repurchase is a flexible way that does not represent a permanent commitment of the company. Nevertheless, the debt is also a means substitutable for repurchasing as it allows decreasing the agency conflicts between managers and shareholders.

Finally, the companies, carrying two distribution methods, are large, powerful and the least indebted.

Conclusion

In the presence of a high information asymmetry, there is a resort to repurchasing at a high signal power compared to dividends. While the repurchase indicates available but non-recurring Cash, the dividends signal the permanent character of the Free Cash Flow, hence the management choice of the repurchases that do not represent a commitment from their part. The relationship between information asymmetry and distribution of repurchases and dividends is still significant at the threshold of 5%, which is a further evidence of the complementary nature of these two payment modes.

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