

2014

BioTechnology

An Indian Journal

FULL PAPER

BTAIJ, 10(21), 2014 [13614-13618]

Corporate social responsibility risk premia

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ABSTRACT

In this thesis, on the basis of the application of capital pricing model, put forward the expected return model of corporate social responsibility investment. Through the construction of the model to calculate risk premia of corporate social responsibility performance, in order to promote investors to investment in corporate social responsibility.

KEYWORDS

Corporate social responsibility; Risk premia; Beta coefficient.



CORPORATE SOCIAL RESPONSIBILITY, THE CONCEPT OF RISK PREMIA (CRSRP) IS PUT FORWARD

The concept

Risk premia corporate social responsibility (CRS Risk premium), is the enterprise in fulfilling corporate social responsibility, in the face of the risks and rewards of different influence factors on the enterprise is analyzed, in order to understand its degree of Risk investment in social responsibility, and the impact of these different factors may bring the Risk, because of the existence of Risk and asked for extra income.

Corporate social responsibility risk premia is expected rate of return of corporate social responsibility investment minus the difference between the risk-free investment yields. This number generally greater than 1 can produce positive, encouraging investors or business operators in favour of corporate social responsibility related to investment, such as improve staff quality, improve product quality and service, to improve relations with suppliers, government, public, improve environmental protection investment, etc.

Corporate social responsibility risk premia may be later (ex post) or the implemented risk premia, this can be achieved by the historical examples and related data of has been observed by market yields and the risk-free rate (can consider to bank lending rates instead of) the difference between; Also may be in advance (ex ante) or the expected risk premia. Advance or expected risk premium to forward-looking premia, could have corporate social responsibility is used to forecast the future premia. This premia stimulating the enthusiasm of investors in corporate social responsibility, to provide corporate social responsibility to fulfill the enthusiasm. Because corporate social responsibility risk premia measure on corporate social responsibility investments by investors hoped for extra income. Such benefits may have a positive impact, such as suggested that investors, for enterprise if seriously fulfill the social responsibility will bring extra income, fulfill the cost becomes effective investment. This suggests that may cause the enterprise (or even the government) in a more positive promotion, performance of the corporate social responsibility.

Also, as a result of corporate social responsibility investment is uncertain; Its earnings will be many possible. Therefore, the risk premia, applied to the calculation of the corporate social responsibility investment earnings expectations, avoid relevant risks.

The risk-free rate, usually based on the annual interest rate of long-term government bonds. Developed markets such as in the United States, has a perfect stock market as a reference, it is easy to obtain. Situation in China, from the stock market is still rare out of an appropriate conclusion, so you can consider to bank lending interest rates for the risk-free rate.

As there are multiple factors, corporate social responsibility, corporate social responsibility investment become a kind of a combination of factors, can be applied to Harry Markowitz, James Tobin, and William Sharpe and others about the effect of modern portfolio theory and capital pricing model. So here the capital pricing model as the research basis.

Five main influence factors of corporate social responsibility

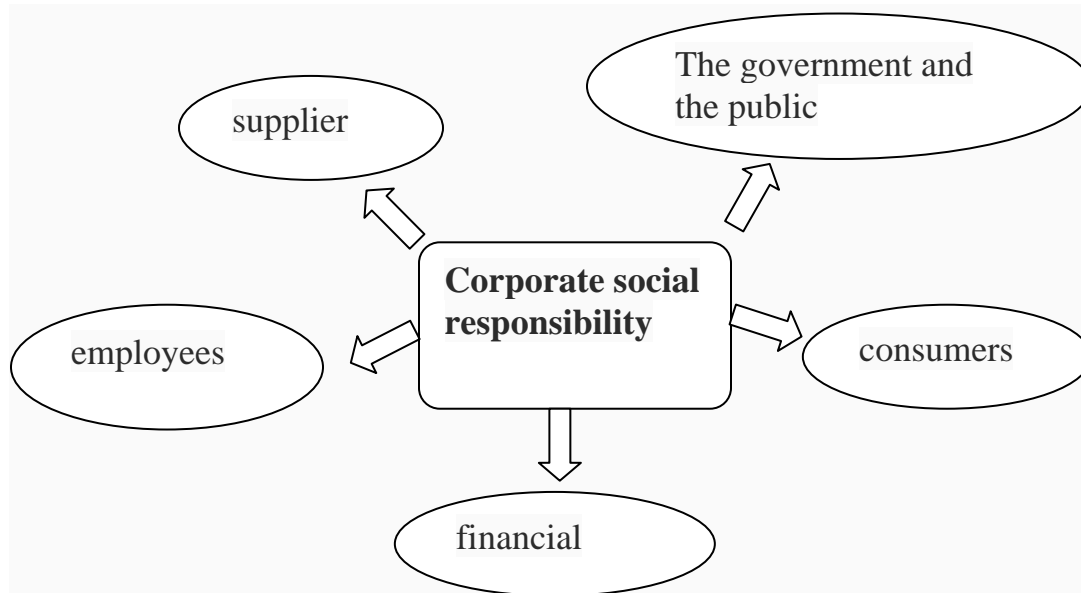


Figure 1 : Most relevant five influence factors of corporate social responsibility

In information highly developed today, people disruptive changes have taken place in the understanding of the enterprise, the enterprise has redefined, think the enterprise as is on the basis of free agreement of independent entity, at the same time also need to have it with legal person status "moral personality", therefore enterprise in addition to bear the economic responsibility such as profits, but also some aspects of the social responsibility.

Enterprises as an important participant of social economic activities, contact the stakeholders is a natural, enterprise itself has extensive social influence, also determines the enterprise must to its stakeholders to take on social responsibility, and this is the requirement of enterprise progress and social progress.

Therefore, the enterprise should bear the economic responsibility is the first, the economic responsibility is the foundation of corporate social responsibility. Here on behalf of the corporate social responsibility by financial indicators. At the same time, companies also have to employees, customers, suppliers, government and the public responsibility.

These five factors, was chosen as corporate social responsibility can be attributed to the five basic aspects. And the five factors influencing truly have high correlation with enterprise. Existing research thinks, for example, although consumers reluctant to good corporate performance of products for the society to pay higher prices, but will resist irresponsible enterprise products or to lower the price, (Carrigan & Attalla, 2001; Creyer and Ross, 1997; Meijer & Schuyt, 2005). When consumers will be the leading level in the corporate social responsibility and corporate social responsibility behind the level of enterprise compared, consumers are willing to pay higher price to buy corporate social responsibility is the industry leading level in the products of the enterprise is more likely.

MODEL OF CORPORATE SOCIAL RESPONSIBILITY RISK PREMIA AND ITS INFLUENCE FACTORS

Assumptions of the model

(1)The investors want to corporate social responsibility is able to provide wealth increment, the fulfillment of corporate social responsibility is a kind of effective boost wealth investment, corporate social responsibility form the function of wealth, so corporate social responsibility is the function of profit rate.

(2)The probability distribution of corporate social responsibility investment yields for normal distribution.

(3) Corporate social responsibility investment risk can make a standard deviation or variance.

(4)The main factors influencing on corporate social responsibility investment as two expected return and risk.

(5)The risk of identifying risk premia can help.

Under the influence of single factor, the basic model for:

If the influence factors for affecting the same expected return, then you can by means of variance and covariance risk.

The computation formula is as follows:

$$C_m^2 = \sum_{i=1}^5 [m_i - R(m_i)]^2 \times p_i$$

$$C_m = \sqrt{C_m^2}$$

Type: variance; Covariance; Expected return; The case I may yield; The probability of occurs in the I. I is the number of possible results.

For expected revenue system project, the larger the standard deviation, the greater the discrete degree of income distribution, the greater the risk. Therefore, corporate social responsibility investment yields the same circumstances, will tend to be at low risk of project.

The corporate social responsibility investment expectation formula is:

$$CR = R_c + \beta_c \times (C_m - R_c)$$

↓

Type: CR for investors expected by the enterprise in a certain time domain necessary yields in the performance of the corporate social responsibility; R_c for the risk-free interest rate, usually the government bonds interest rate; β_c for corporate social responsibility investment beta coefficient; C_m necessary yields for corporate social responsibility; $(C_m - R_c)$ - corporate social responsibility risk premia. $\beta_c \times (C_m - R_c)$ for corporate social responsibility risk premia.

Beta coefficient of corporate social responsibility investment

Here will affect the yield of some factors on the sensitivity to beta, with the risk of single item assets yields and the combination of average risk yield comparison, reflect single risk factors contains the size, that is:

$$\beta_a = \frac{Cov(Ca, Cm)}{C_m^2}$$

Type: Cov (Ca, Cm) factors affecting a particular benefits and influence factors of a combined income of covariance; Is the enterprise social responsibility yield variance
Reason: if

$$\beta_a = \frac{Cov(Ca, Cm)}{C_m^2} = \frac{C_m^2}{C_m^2} = 1$$

Suggests that factors influencing the portfolio beta is 1.

And influencing factors of combination of beta coefficient is formed by the combination of the risk of a single factor comprehensive, when the beta coefficient calculation, have put forward the five factors above every single factor proportion in the whole combination of the weighted average of the results:

$$\beta_5 = \sum_{i=1}^5 n_i \beta_i$$

Five factors: in type is the combination of beta coefficient; As the weights of the factors I; For a single factor I beta coefficient.

Explained in beta = 1, a single risk factors of income level and influencing factors of combination of average risk level is compared with the change, the risk situation and influencing factors of portfolio risk is consistent;

When the beta > 1, the influence factor of a single risk income level higher than the average risk factors combination of income level, a single risk is greater than the influence factors of influencing factors of portfolio risk;

When the beta < 1, that an individual risk factors of income less than the average level of risk of influencing factors of combination, a single factors affecting risk degree is less than the factors affecting the risk of portfolio.

Under the five factors of composite enterprise society responsibility expected return model

Any necessary yield of risky assets is equal to the risk-free rate plus risk premia, market risk premia depend on degree of risk aversion of investors.

Because the main influence factors of corporate social responsibility has five, so composite expected rate of return of corporate social responsibility formula is:

$$\begin{aligned} CR &= R_c + \beta_c \times (Cm1 - R_c) + \beta_c \times (Cm2 - R_c) + \\ &\beta_c \times (Cm3 - R_c) + \beta_c \times (Cm4 - R_c) + \beta_c \times (Cm5 - R_c) \\ &= R_c + \sum \beta_c [Cm(i) - R_c] \end{aligned}$$

Type: CR for composite formula for expected return corporate social responsibility; The sensitivity of the Cm1 for financial impact factors on the yield, Cm2 the sensitivity of the influencing factors for consumers, Cm3 the sensitivity of the influence factors on the yield Cm4 for employees for suppliers to the sensitivity of the influence factors on the yield... Cm5 for the sensitivity of the influence factors on the yield of the government and the public. Cm (i) for the ith the yields of the sensitivity of the factors of influence; (Cm1-Rc),(Cm2-Rc),...(Cm (i)- Rc) For the various factors of risk premia.

Through formula can know, corresponding to each influence factor, there is a risk premia. Compound of corporate social responsibility formula for expected return is affected by the five factors of the influence of risk premia.

CONCLUSION

In 1924, The American scholar Oliver Sheldon in his book "The Philosophy of Management" is put forward The concept of "corporate social responsibility", today has been nearly ninety years. With the development of the society, whether

investors or the government or the public, on the understanding of corporate social responsibility has a significant progress. Enterprises fulfill their social responsibility of a large number of dew in the enterprise of the "corporate social responsibility report" issued on their own, is its embodiment.

But, no matter how many international big companies in the disclosure of corporate social responsibility has showed how much obvious "enthusiasm", there is a real problem is unavoidable: after all, the fulfillment of corporate social responsibility is a kind of investment, the investment lead investors to investment returns and risk of performance of the corporate social responsibility have understandable fears. Because no matter the purpose of the enterprise management and target how huge "leap forward" in theory, enterprise is economic organization, the inner driving force is the pursuit of profit. Will risk premia considered in the expectation of corporate social responsibility analysis, analysis of corporate social responsibility to investors investment risk and reward (especially "the risk of additional earnings") to provide effective help.

In the above model, through to the corporate social responsibility investment risk premia computation, can determine investors (such as shareholders, potential investors, enterprise net assets owner, the government and the public) in the aspect of corporate social responsibility investment may obtain the risk/reward, this calculation in promoting enterprises to promote the disclosure of corporate social responsibility and corporate social responsibility accounting will have a great role in promoting.

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