Corporate Strategy, Financing Demand and Earnings Management—Based on the Perspective of the Enterprise Life Cycle

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Abstract. Based on the perspective of enterprise life cycle, this paper studies the impact and mechanism of corporate strategy on earnings management, and explores whether financing demand plays a role in it. According to the relevant theoretical construction model, the empirical test was conducted on China's a-share non-financial listed companies in Shanghai and Shenzhen from 2009 to 2017. The study found that corporate strategy has a significant impact on earnings management in any stage of the life cycle, and financing demand plays an intermediary role in the relationship between corporate strategy and earnings management in growth and maturity.

Introduction

In recent years, most scholars have studied the purpose, motivation and economic consequences of earnings management, and few scholars discuss earnings management and its mechanism from the perspective of enterprise strategy. Moreover, in different stages of the enterprise life cycle, the strategic objectives and operational characteristics of the enterprise will be different. These factors may affect the behavior of earnings management. Therefore, from the perspective of enterprise life cycle, this paper studies the impact and mechanism of corporate strategy on earnings management, which is not only helpful for investors to identify earnings management behaviors in different life cycle stages, but also can provide important basis for regulators to formulate effective regulatory policies and investors to make decisions.

Literature Review and Research Hypothesis

Corporate Strategy and Earnings Management in Different Life Cycles

In the growth period, although the enterprises have sufficient funds, in order to occupy a large market share and seeking rapid development, the enterprises need to maintain good profitability to obtain long-term stable financial support, which may lead to accrued earnings management\[1\]. In the mature period, the company can produce a large amount of cash flow, but the market competition is fierce. If the enterprise takes the offensive strategy, it will need a large amount of investment. In addition, in this period, enterprises have reached a certain scale, so enterprises may choose the relatively real earnings management. In the recession period, the company's financial risk and operational risk increase, the enterprise is not only difficult to raise funds, but also may face the risk of "hooding" or even delisting. At this stage, offensive strategies require more capital than defensive ones. Therefore, enterprises may conduct accrued earnings management out of financing motivation and licensing motivation. Corporate strategic differentiation is significantly correlated with earnings management[2]. Based on the above analysis, the following hypothesis is proposed:

H1a: There is a positive correlation between corporate strategy and accrued earnings management in the growth stage.

H1b: There is a positive correlation between corporate strategy and real earnings management in the mature stage.
H1c: There is a positive correlation between corporate strategy and accrued earnings management in the recession stage.

**Corporate Strategy and Financing Demand in Different Life Cycles**

The company's strategic choice directly determines the allocation structure of resources, and financing, as an important financial decision, is bound to be affected by the company's strategy. In order to continuously develop new products and seek new markets, companies with an offensive strategy usually need more investment in research and advertising, so the financing demand is higher than those companies with a defensive strategy. Because offensive companies have more cash outflows, their cash adequacy ratio is lower[3]. Therefore, no matter what stage of the company's life cycle, if the enterprise adopts the offensive strategy to maintain the leading position and obtain the competitive advantage, its financing demand will increase. Even in the mature stage, enterprises with more cash flow may not be able to meet the needs of enterprise investment and development. Based on the above analysis, the following hypothesis is proposed:

H2: No matter what stage of the company's life cycle, the financing needs of offensive companies are higher.

**Corporate Strategy, Financing Needs and Earnings Management in Different Life Cycles**

In the growth period, enterprises have survived and their profitability have been strengthened. If the enterprise pay attention to investment in product innovation and technology upgrade, their financing needs may be increased, which in turn strengthen the motivation of earnings management. In the mature period, the operating cash flow of the enterprise grows steadily, and the enterprise has the ability and motivation to create diversified products and engage in more investment activities that are expected to be profitable, which leads the enterprise to conduct earnings management to obtain external financial support. In the recession period, if enterprises adopt offensive strategy to improve improvement, then it will be more difficult for enterprises to finance. In order to reduce the financing cost of enterprises, the management is more likely to carry out earnings management[4]. Based on the above analysis, the following hypothesis is proposed:

H3: At different stages of life cycle, financing demand plays an intermediary role in corporate strategy and earnings management.

**Research Design**

**Sample Selection**

In the paper, the data of Shanghai and Shenzhen A-share listed companies from 2009 to 2017 were selected for research, and the data were selected according to the following criteria: (1) excluding listed companies in the financial industry; (2) excluding ST enterprises; (3) eliminating the data missing samples; (4) the relevant data of the past five years should be used to measure the company's strategic indicators, and the annual sample of the industry in which a variable is missing should be deleted; (5) delete the sample of the annual-industry less than 15 in the measurement of earnings management indicators. All the data in this paper comes from CSMAR database, and Stata15 is used for data processing.

**Division of Life Cycle**

Based on the cash flow grouping method by Dickinson, this paper divides all samples into three groups: growth stage, maturity stage and recession stage, and studies the relationship between corporate strategy, financing demand and earnings management.

**Measurement of Variables**

**Accrued Earnings Management.** In this paper, the modified Jones model is used to estimate the controllability by year and industry.
**Real Earnings Management.** Based on the practice of Roy Chowdhury, this paper measures the real earnings management (REM) of an enterprise from the three dimensions of sales control, production control and discretionary cost control.

**Corporate Strategy.** Based on the practice of Bentley and Higgins et al, this paper measures the strategy of an enterprise from the eight dimensions: ratio of net intangible assets to operating income, ratio of the number of employees to the operating income, the ratio of the sum of management expenses and sales expenses to the operating income, employee number volatility, growth rate of operating revenue, gross margin, asset turnover rate, proportion of fixed assets in total assets.

**Financing Needs.** The difference between the growth of enterprises and the achievable endogenous growth is regarded as the financing demand, and the financing demand is the higher, the value will be higher. The calculation formula is formula(1):

\[
FD = \frac{A_{i,t} - A_{i,t-1}}{A_{i,t-1}} - \frac{ROE_{i,t}}{1 - ROE_{i,t}}.
\]  

(1)

**Controllable Variables.** ROA(return on total assets), MB(the ratio of the market value of equity to the book value of net assets), Shratio(the largest shareholder ratio), Boardsize(the natural logarithm of the number of directors of a company), Big4(a dummy variable that takes the value of 1 if the firm is being audited by one of the international Big4 auditors, and 0 otherwise).

**Model**

\[
DA_{i,t} = \alpha_0 + \alpha_1 \text{Strategy}_{i,t} + \alpha_2 \text{REM}_{i,t} + \alpha_3 \text{ROA}_{i,t} + \alpha_4 \text{MB}_{i,t} + \alpha_5 \text{Shratio}_{i,t} + \alpha_6 \text{Boardsize}_{i,t} + \alpha_7 \text{Big4}_{i,t} + \sum \text{Year} + \sum \text{Industry} + \varepsilon.
\]  

(2)

\[
\text{REM}_{i,t} = \beta_0 + \beta_1 \text{Strategy}_{i,t} + \beta_2 \text{DA}_{i,t} + \beta_3 \text{ROA}_{i,t} + \beta_4 \text{MB}_{i,t} + \beta_5 \text{Shratio}_{i,t} + \beta_6 \text{Boardsize}_{i,t} + \beta_7 \text{Big4}_{i,t} + \sum \text{Year} + \sum \text{Industry} + \varepsilon.
\]  

(3)

\[
\text{FD}_{i,t} = \delta_0 + \delta_1 \text{Strategy}_{i,t} + \delta_2 \text{ROA}_{i,t} + \delta_3 \text{MB}_{i,t} + \delta_4 \text{Shratio}_{i,t} + \delta_5 \text{Boardsize}_{i,t} + \delta_6 \text{Big4}_{i,t} + \sum \text{Year} + \sum \text{Industry} + \varepsilon.
\]  

(4)

\[
\text{DA}_{i,t} = \gamma_0 + \gamma_1 \text{Strategy}_{i,t} + \gamma_2 \text{FD}_{i,t} + \gamma_3 \text{REM}_{i,t} + \gamma_4 \text{ROA}_{i,t} + \gamma_5 \text{MB}_{i,t} + \gamma_6 \text{Shratio}_{i,t} + \gamma_7 \text{Boardsize}_{i,t} + \gamma_8 \text{Big4}_{i,t} + \sum \text{Year} + \sum \text{Industry} + \varepsilon.
\]  

(5)

\[
\text{REM}_{i,t} = \lambda_0 + \lambda_1 \text{Strategy}_{i,t} + \lambda_2 \text{FD}_{i,t} + \lambda_3 \text{DA}_{i,t} + \lambda_4 \text{ROA}_{i,t} + \lambda_5 \text{MB}_{i,t} + \lambda_6 \text{Shratio}_{i,t} + \lambda_7 \text{Boardsize}_{i,t} + \lambda_8 \text{Big4}_{i,t} + \sum \text{Year} + \sum \text{Industry} + \varepsilon.
\]  

(6)

**Empirical Results and Analysis**

**Correlation Analysis**

The correlation test was conducted on the variables. In the growth stage, Strategy is significantly positively correlated with DA and negatively correlated with REM, but not significantly. In the mature stage, Strategy is significantly positively correlated with both DA and REM, and the coefficient of Strategy and REM(0.2088) is greater than the coefficient of Strategy and DA(0.1199). This is consistent with hypothesis 1. In the growth and maturity stages, Strategy are significantly positively correlated with FD, while the correlation between Strategy and FD is not significant, which verifies part of hypothesis 2. In the growth and recession stages, FD was positively correlated with DA and REM. In the mature stage, FD is significantly positively correlated with DA, but not significantly with REM, which is consistent with the expectation of hypothesis 3.
Regression Result Analysis

**Corporate Strategy and Earnings Management in Different Life Cycles.** From the regression results, it can be seen that in the growth stage, Strategy has a significant positive correlation with DA and a significant negative correlation with REM. In the mature stage, Strategy is significantly positively correlated with both DA and REM, and the coefficient of Strategy and REM (0.0041) is greater than the coefficient of Strategy and DA (0.0015). In the decline phase, Strategy is positively correlated with DA at the significance level of 1%, and negatively correlated with REM at the significance level of 10%. Hypothesis 1 is verified.

| Table 1. Regression Results of Corporate Strategy and Earnings Management. |
|-------------------------------|---------------------------------|-------------|---------------------------------|-------------|
| variable     | model(2)         | model(3)         | model(2)         | model(3)         |
| DA           | 0.2331***        | (7.38)           | 0.1273***        | (3.75)           |
| REM          | 0.1657***        | (7.38)           | 0.0944***        | (3.75)           |
| Strategy     | 0.0024***        | (-3.76)          | 0.0015***        | (5.22)           |
| Connstant    | 0.2819***        | (4.93)           | 0.1212***        | (2.16)           |
| R²           | 0.1518           | 0.1772           | 0.2123           | 0.3530           |
| Adjusted-R   | 0.1411           | 0.1669           | 0.2007           | 0.3435           |
| Prob>F       | 0.0000           | 0.0000           | 0.0000           | 0.0000           |

**Corporate Strategy and Financing Needs in Different Life Cycles.** It can be seen that Strategy and FD has significantly positively correlated in the growth and maturity stages. However, in the recession stages, the correlation between Strategy and FD is not significant. Hypothesis 2 is partially verified.

| Table 2. Regression Results of Corporate Strategy and Financing Demand. |
|--------------------------------|---------------------------------|-------------|---------------------------------|-------------|
| variable     | model(4)         | model(4)         | model(4)         | model(4)         |
| DA           | 0.0093***        | (4.17)           | 0.0029***        | (2.80)           |
| REM          | 0.4505**         | (2.24)           | -0.0401          | (-0.46)          |
| Strategy     | 0.0677           | 0.0567           | 0.0323           | 0.0000           |
| Connstant    | 0.0000           | 0.0000           | 0.0000           | 0.0000           |

**Corporate Strategy, Financing Needs and Earnings Management.** It can be seen from the results that in the growth and decline stages, strategy is significantly positively correlated with DA and negatively correlated with REM. FD was positively correlated with DA and negatively correlated with REM. In the mature stage, Strategy is significantly positively correlated with DA and REM. FD was significantly positively correlated with DA and REM. It shows that no matter what stage of the company's life cycle, financing demand plays an intermediary role in corporate strategy and earnings management.
Table 3. Results of Corporate Strategy, Financing Demand and Earnings Management.

<table>
<thead>
<tr>
<th>variable</th>
<th>Growth</th>
<th>Mature</th>
<th>recession</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>model(5)</td>
<td>model(6)</td>
<td>model(5)</td>
</tr>
<tr>
<td>DA</td>
<td>0.0129***</td>
<td>(6.66)</td>
<td>0.1162***</td>
</tr>
<tr>
<td>REM</td>
<td>0.1486***</td>
<td>(6.66)</td>
<td>0.0840***</td>
</tr>
<tr>
<td>FD</td>
<td>0.0465***</td>
<td>(-3.46)</td>
<td>0.1110***</td>
</tr>
<tr>
<td>Strategy</td>
<td>0.0020***</td>
<td>(-4.10)</td>
<td>0.0012*</td>
</tr>
<tr>
<td>Constant</td>
<td>0.2643***</td>
<td>(1.67)</td>
<td>0.4180***</td>
</tr>
</tbody>
</table>

**Mediating Effect.** Based on Wen Zhonglin's mediating effect test method, DA and REM were used to establish a, b and c coefficients in different ways of earnings management. The coefficients c1, c2, c3 and c5 are significant, which can be considered as mediating effect, the testing of mediating effect can be stopped when c6 is not significant. Look, a1, b1, c1; a2, b2, c2; a3, b3, c3; a4, b4, c4 are all significant, indicating the existence of partial mediating effect. a5 is not significant, but b5 was significant, and Sobel test showed that a5b5 was not significant, so there was no mediating effect. The results show that financing demand mediates corporate strategy and earnings management in the growth and maturity stages. Hypothesis 4 is partially verified.

Table 4. Mediating Effect Test Coefficient Table.

<table>
<thead>
<tr>
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<th>Growth</th>
<th>Mature</th>
<th>recession</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DA</td>
<td>REM</td>
<td>DA</td>
</tr>
<tr>
<td>c1</td>
<td>0.0024***</td>
<td>(3.81)</td>
<td>c2</td>
</tr>
<tr>
<td>a1</td>
<td>0.0093***</td>
<td>(4.17)</td>
<td>a2</td>
</tr>
<tr>
<td>b1</td>
<td>0.0465***</td>
<td>(6.06)</td>
<td>b2</td>
</tr>
<tr>
<td>c'1</td>
<td>0.0020***</td>
<td>(3.09)</td>
<td>c'2</td>
</tr>
</tbody>
</table>

**Conclusion and Enlightenment**

**Conclusion**

Based on the perspective of life cycle, this paper studies the influence and mechanism of corporate strategy on earnings management and draws the following conclusions:

1. The more aggressive the strategy, the higher the degree of accrual earnings management in the growth and recession period. In the mature period, the more aggressive the strategy, the greater the extent of real earnings management than accrued earnings management.
2. The more aggressive the strategy, the higher the financing demand of the company in the growth and maturity period. Strategy has no impact on financing needs in the growth and recession period.
3. Financing demand plays an intermediary role in the relationship between corporate strategy and earnings management in the growth and maturity periods. It doesn't play a mediating role during a recession.

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Enlightenment

Contribution to the conclusion of this paper:

(1) For investors, they should pay attention to all aspects of the company, especially its non-financial assets. The company takes the strategic in the growth or maturity period, its financing demand will increase. There will be earnings management behavior, so investors should be according to the basic information of the company and financial information to determine the company's life cycle and taken by the company strategy, from the perspective of comprehensive to evaluate the invested entity, do wish to slow investment.

(2) For the regulatory authorities, they should pay high attention to the earnings management of offensive companies in the growth and maturity stages, and take corresponding measures to limit the occurrence of this behavior.

(3) For the audit institutions, they should strengthen the audit of the financial statements of enterprises in the growth and maturity stages.

References


