The Impact of Mergers and Acquisitions Payment Methods on the Performance of Cultural Enterprises Acquisition

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ABSTRACT
This study will focus on the current development of the cultural industry, utilizing the sample of A-share cultural corporate mergers and acquisitions to delve deep into the relationship between the payment methods and performance of cultural M&A. This study will review relevant domestic and international literature, and select A-share listed company cultural industry M&A cases from 2001 to 2019 that meet the screening criteria from the Bloomberg database as samples, focusing on the relationship between payment methods and M&A performance in the cultural industry M&A process, aiming to provide decision-making recommendations for the payment stage of corporate M&A. In terms of quantified performance, this study will focus on long-term performance, thus the performance assessment time interval is set as the three years before and after the M&A. And based on the relevant financial indicators available during this period, a multi-factor model will be constructed and tested using sample data. Through this study, we can discover that during the M&A process, stock payment is more favorable for the long-term performance improvement of acquiring companies compared to cash payment.

KEYWORDS
Mergers and Acquisitions in the Cultural Industry; Payment Methods; M&A Performance

1. INTRODUCTION
1.1. Research Background
From 2009 to 2014, China successively promulgated important documents such as the "Revitalization Plan for the Cultural Industry," the "Implementation Plan for Deepening Cultural System Reform," and the "Implementation Opinions on Vigorously Supporting the Development of Small and Micro Cultural Enterprises," thus establishing a solid policy foundation for reforming the cultural system and developing the cultural industry. In 2017, the Ministry of Culture issued the "Cultural Industry Development Plan for the 13th Five-Year Plan Period," calling on all units and departments to accurately grasp the new situation of cultural industry development, thereby promoting the cultural industry to become a pillar industry of the national economy and advancing the comprehensive establishment of a moderately prosperous society. In 2018, the State Council's institutional reform plan was approved. In this institutional adjustment, the Ministry of Culture was merged with the Ministry of Tourism to establish the National Radio and Television Administration and the China Media Group. In 2019, six departments, including the Ministry of Science and Technology, jointly issued the "Guiding Opinions on Promoting In-depth Integration of Culture and Technology," aiming to bridge the "last mile" of integration between culture and technology. In addition, the "Cultural Industry Promotion Law" has taken substantial steps forward, seeking public opinions from the whole society.
Encouraged by government policies, capital expansion and integration within the cultural industry have been facilitated. In 2017, there was a surge in cultural enterprise mergers and acquisitions, with a total of 54 cases and a record-breaking amount of 633.922 billion RMB. However, in 2018-2019, amid a continuing market downturn, the scale of cultural industry mergers and acquisitions exhibited a declining trend, with a respective decrease of 46.94% and 42.83% compared to the previous year. Despite a 19.16% decrease in the number of financing cases in the culture and media industry by venture capital and private equity investment in 2018, the investment scale increased twofold from the previous year, reaching a peak in the past five years. In 2019, the entertainment sector attracted favor from the capital market, particularly in online music and IP incubation activities such as animation and film and television dramas, accounting for 49.2% of the total merger and acquisition scale. Against this backdrop, the cultural enterprise sector remains vibrant, underscoring the continued relevance of studying the performance of cultural enterprise mergers and acquisitions. The choice of payment methods directly affects the application of operating funds, market performance, and investor sentiment of enterprises. Therefore, this study selects payment methods and merger performance as the research subjects, extracts cultural enterprise merger cases occurring in the A-share markets of Shanghai and Shenzhen from 2001 to 2019 as samples, and conducts research.

1.2. Significance of Topic

This study focuses on payment methods and M&A performance, which are valuable for the country, cultural enterprises, and the field of finance itself. For enterprises, as M&A activities involve many variable factors, companies initiating M&A activities need a clear understanding of several important factors that affect M&A performance. Among these, the key aspect of M&A payment methods involves a company's operating funds, impacting the company's investment, debt repayment, and risk management capabilities, thus bringing different market feedback to the company. Therefore, for acquiring parties, determining which payment method yields the best M&A performance is an urgent issue in need of further research.

2. LITERATURE REVIEW

In the realm of mergers and acquisitions, Louis (2002) pointed out that the method of payment will affect the outcome of mergers and acquisitions. If cash is used for payment, the fluctuation of excess returns is small; if stocks are used, the long-term excess returns of the company are negative. Heron and Lie (2002), through a study on merger activities in the United States from 1985 to 1997, indicated that the choice of payment method does not significantly affect the merger performance. Faccio (2006) extracted some merger cases in the European market as samples, stating that the choice of payment method does not affect the final outcome in terms of short-term performance. Ge, Jiegen (2015) pointed out that in paid acquisitions, the performance of cash payment and the combination of cash and asset payments is more stable. The performance of asset payment method shows an upward trend followed by a decline, while the performance of the combination of cash and debt shows an upward trend followed by a downward trend. Zhang Yi and Qiao Yuanbo (2015) selected mergers and acquisitions events in the Shanghai and Shenzhen markets from 2003 to 2008 as samples to examine the performance of acquiring companies from three years before the merger to five years after. It was indicated that in the long term, mergers and acquisitions of listed companies in China are inefficient, failing to achieve resource integration and value creation for both parties. Chen Xichan (2017) studied merger cases of listed companies and pointed out that using stock swaps as a payment method leads to a decline in performance. Wei Wei (2018) selected some merger cases from 2012 to 2014 as samples and observed merger performance in the (t-4, t+4) interval, finding that in the long term, stock payments are more conducive to increasing shareholder value.

Regarding performance measurement methods, scholars both domestically and internationally employ various approaches. These include methods such as Short-Term Excess Returns (CAR),
Economic Value Added (EVA), Data Envelopment Analysis (DEA), and financial indicator systems centered around Return on Equity (ROE). Scholars have preferences for different research methods, leading to varied conclusions, each method having its own advantages and disadvantages.

For instance, TetenebAum (1999) pointed out that merger and acquisition activities are complex system engineering processes. Using stock price changes alone as a measure of merger outcomes can result in errors, contributing to a failure rate as high as 60%-80%. Nevertheless, many studies in the industry utilize the Short-Term Excess Returns (CAR, Cumulative Abnormal Return) method to analyze performance. Researchers such as Lin Shan (2016), Liu Jicai (2016), and Li Ruiqi (2019) have all employed the CAR method, examining the closing prices of acquiring companies' stocks over a period to study short-term performance. Their findings suggest that cash payments significantly enhance the performance of acquiring companies compared to stock payments and mixed payments.

Apart from the CAR method, many scholars in the industry have adopted the Economic Value Added (EVA) method to study performance. EVA, which stands for Economic Value Added, is the difference between capital income and capital cost. The earliest adopters of the EVA method were Joel Stern and G.Bennett Steward (1982), who used economic value added management as a financial management technique. Therefore, the EVA method has been repeatedly applied to measure the performance of corporate mergers and acquisitions. Ronald (2012) has compared NPV (Net Present Value) with the EVA method, and due to the limitations of the NPV indicator itself (such as the difficulty in determining cash flows and discount rates, the inability to dynamically reflect the investment rate of return of the projects under study, etc.), the EVA method has broader prospects and superiority. The EVA method provides a certain guiding significance for corporate investment decisions compared to the NPV method. Zhao Zhigang (2009) pointed out through the study of merger and acquisition cases in the manufacturing sector of listed companies in China that from the perspective of corporate business objectives and following the principle of maximizing shareholder wealth, using the EVA method can more scientifically and reasonably reflect the performance brought about by corporate mergers and acquisitions compared to the CAR method.


By summarizing the above literature, the academic community's research on merger and acquisition performance mainly focuses on three aspects: the motives behind mergers and acquisitions, the choice of payment methods in mergers and acquisitions, and the methods used to study merger and acquisition performance. This study places emphasis on the latter two aspects, thus not delving extensively into the motivations behind mergers and acquisitions.
Regarding the choice of payment methods, some scholars have discussed the relationship between payment methods and merger and acquisition performance; however, a consensus has not yet been reached. Due to differences in industry characteristics, as well as vast discrepancies in statistical criteria, sample selection, and research methods, the academic community does not provide a definitive answer on which payment method is conducive to improving corporate performance. Additionally, some scholars have included various other factors as control variables in empirical studies, such as government policies, corporate cash flow conditions, and economic cycles, to draw conclusions on "how companies should choose payment methods." Therefore, academic research on "payment method selection" significantly surpasses research on the rationality of existing merger and acquisition cases.

Long-term performance, often uses the method of ROE (Return on Equity), where ROE acts as the core indicator of DuPont analysis, reflecting the profit situation for shareholders' contributions. However, relying solely on ROE as the key metric for measuring long-term performance has various limitations. Different company sizes prevent absolute earnings from being a universal reflection of performance. Comparing companies horizontally using ROE is also challenging. Some companies with high debt may still achieve high net asset returns despite low profits. On the other hand, companies with low debt struggle to meet high ROE requirements. Increasing ROE through methods like debt repurchasing does not necessarily improve capital efficiency and economic benefits notably. Therefore, in this study, a more comprehensive indicator analysis approach will be adopted to cover operational, debt, development, and profitability capabilities to thoroughly evaluate corporate performance.

3. RESEARCH METHODS

3.1. Methodology

This study will adopt literature research method and financial index analysis method with principal component analysis.

Empirical research method focusing on financial analysis. As mentioned earlier, using CAR to measure short-term performance may overlook long-term performance issues. The long-term performance of acquiring companies should be the primary concern for managers. However, analyzing long-term performance using ROE may not be comprehensive and conducive to comparison due to the unstable nature of ROE. For instance, to boost ROE, the management may resort to heavy short-term borrowing measures. Therefore, this paper introduces 9 financial performance evaluation indicators to comprehensively analyze the situation of acquiring companies. The selected financial indicators cover various aspects of performance evaluation. Mainly, ROE, ROA, EPS, Profit Margin, Liability to Asset, Current Ratio, Quick Ratio, Asset Grow, and Asset Turnover indices encompass indicators reflecting various aspects of a company's condition, with each indicator’s name and type listed in the table below.

<table>
<thead>
<tr>
<th>Financial Indicator Names</th>
<th>Financial Indicator Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>Profitability</td>
</tr>
<tr>
<td>ROE</td>
<td></td>
</tr>
<tr>
<td>EPS</td>
<td>Long-Term Solvency</td>
</tr>
<tr>
<td>Prof Margin</td>
<td></td>
</tr>
<tr>
<td>Liability to Asset</td>
<td>Short-Term Solvency</td>
</tr>
<tr>
<td>Current Ratio</td>
<td></td>
</tr>
<tr>
<td>Quick Ratio</td>
<td></td>
</tr>
<tr>
<td>Asset Grow</td>
<td>Capacity for Growth</td>
</tr>
<tr>
<td>Asset Turnover</td>
<td>Operating Capacity</td>
</tr>
</tbody>
</table>

Table 1. The types and names of financial indicators selected in this article.
4. SAMPLE DESIGN AND CORRELATION TESTS

4.1. Theoretical Analysis and Research Hypothesis

Hypothesis 1: In the cultural enterprise M&A activities, different payment methods will have varying effects on the performance of the acquiring company. This study examines M&A cases of different company types, then conducts simple EXCEL and SPSS analysis on the obtained samples. It was found that the differences in the M&A payment methods chosen by the acquirer companies before and after the M&A over a period of three years would have varying effects on their overall performance.

Hypothesis 2: Equity payment, compared to cash payment, will have a significantly positive impact on the performance of the acquiring company. Through the study of relevant literature in academia over the past 40 years and A-share cultural enterprise M&A cases, it was observed that target companies are generally promising and competitive enterprises. M&A activities significantly enhance the overall competitiveness of these enterprises.

While there is no definitive conclusion in academia on which payment method would be most beneficial for improving the performance of cultural enterprise acquirers, most literature has mentioned that stock payment can help the acquiring company preserve cash flow well, alleviate potential pressures from high financial leverage, and be more advantageous for the long-term development of the company. Additionally, when the acquiring company adopts stock payment, the management of the target company may join the post-merger management team, enhancing their sense of ownership and improving work efficiency significantly. The increased work efficiency and ample cash flow will allow the effects of resource integration to be realized, ensuring that the company does not miss out on development opportunities.

4.2. Sample Selection

This article's sample was taken from the Bloomberg database. The sample selection time interval was set from 2001 to 2019, with a performance research interval of (t-3, t+3). The sample data only retained three types of payment methods: cash, stocks, and mixed. The specific screening criteria were as follows: For the availability of the data itself, all samples selected in this article came from listed companies; When setting filtering conditions in Bloomberg, sectors like media and entertainment were chosen; Only successfully implemented merger and acquisition cases were selected, and failed events were excluded; This article does not study the performance of the acquiring party or the target company, and financial indicators only selected data related to the acquiring company; ST companies or delisted companies were excluded, as well as companies with incomplete data. When selecting financial data, the time span was (t-3, t+3), so the time interval of financial data was from 1998 to 2019, based on the values disclosed in the annual financial statements of the company.

4.3. Selection Range of Financial Indicators for Sample Firms

This study examines the profitability of the research subject using four indicators: Return on Equity (ROE), Return on Assets (ROA), Earnings Per Share (EPS), and Profit Margin. The analysis of the specific indicators' significance and advantages and disadvantages is as follows.

4.4. Variable design

As mentioned earlier, the research methodology of this study involves examining the long-term performance of companies using financial indicators. Therefore, the aforementioned 9 financial
indicators will be depicted as independent variables, while performance will be the dependent variable. The specifics of variable design and calculation formulas are shown in the table below.

**Table 2. List of Variable Selection and Calculation Formulas**

<table>
<thead>
<tr>
<th>Type of indicator</th>
<th>Basic Indicators/Implicit Variable</th>
<th>Calculation Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>ROE/X1</td>
<td>Net profit/Net Assets</td>
</tr>
<tr>
<td></td>
<td>ROA/X2</td>
<td>Net profit After Tax/Total Assets</td>
</tr>
<tr>
<td></td>
<td>EPS/X3</td>
<td>Profit After Tax/Total Equity</td>
</tr>
<tr>
<td></td>
<td>Prof Margin/X4</td>
<td>Gross Profit/Operating Income</td>
</tr>
<tr>
<td>Short-Term Solvency</td>
<td>Current Ratio/X5</td>
<td>(Money Funds+Marketable Securities)/Current Liabilities</td>
</tr>
<tr>
<td></td>
<td>Quick Ratio/X6</td>
<td>(Current Assets - Inventories)/Current Liabilities</td>
</tr>
<tr>
<td>Long-Term Solvency</td>
<td>Debt to Asset/X7</td>
<td>Total Liabilities/Total Assets</td>
</tr>
<tr>
<td>Capacity of Growth</td>
<td>Asset Grow/X8</td>
<td>Growth in Total Assets for The Year/Total Assets at Beginning of The Year</td>
</tr>
<tr>
<td>Operating Capacity</td>
<td>Asset Turnover/X9</td>
<td>Total Sales Revenue/Average Total Assets</td>
</tr>
</tbody>
</table>

**4.5. Analysis**

Factor Analysis Method refers to a multivariate statistical analysis method that starts from the interdependence within the correlation matrix of research indicators, and summarizes variables with overlapping information and intricate relationships into several unrelated composite factors. The basic approach involves grouping a large number of variables based on their correlations, ensuring high correlations within the same group and clear non-correlations between different groups.

When applying factor analysis method, the following steps are mainly involved:

1. Normalize the data samples;
2. Calculate the sample's correlation matrix R;
3. Obtain the eigenvalues and eigenvectors of the correlation matrix R;
4. Determine the number of major factors based on the variance contribution rate required by the system;
5. Calculate the factor loading matrix A;
6. Establish the factor model;
7. Analyze the system data based on the above results.

The relevance testing methods used in this article are the Kaiser-Meyer-Olkin (KMO) test and Bartlett’s Test of Sphericity. Before conducting factor analysis, the variables selected in Section 4.3 undergo KMO and Bartlett tests to determine their correlation and suitability for factor analysis in this study. Generally, when the KMO value obtained from the sample using SPSS software is KMO > 0.5 and the Bartlett test's P-value is less than 0.05 (displayed as sig < 0.05 in SPSS), the sample is considered suitable for factor analysis. The results of the above 9 major indices after SPSS testing are shown in the table below:
Table 3. KMO and Bartlett Spherical Test Results

<table>
<thead>
<tr>
<th>KMO Quantity of Sample Suitability</th>
<th>Bartlett Spherical Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approximate Cardinality</td>
</tr>
<tr>
<td>.755</td>
<td>529.669</td>
</tr>
</tbody>
</table>

Based on the results of the KMO test and Bartlett's sphericity test, the KMO sampling adequacy index is 0.755 (>0.5), and the Bartlett's test p-value is <0.05. Therefore, the sample data selected in this study meets the requirements for factor analysis.

In SPSS software, performing variance maximization rotation on the dimensionally reduced panel data can yield a factor loading matrix that meets the requirements. The initial eigenvalues of the loading matrix for each year, the sum of squared loadings after factor extraction, and the squared sum of loadings after dimension reduction rotation are shown in the table below. In the matrix, there are four factors in each year with initial eigenvalues greater than 1, indicating that these four factors are the main factors required for the empirical process. The table indicates that the variance contribution rates (cumulative values) of these four main factors in each year are: 74.008%, 81.642%, 86.217%, 91.768%, 91.582%, 84.577%, 87.880%.

4.6. Score Modeling

After reducing the factors and rotating them according to the maximum variance method in SPSS, a component matrix of the rotated factors can be obtained as shown in the table below. The 4 significant factors obtained in section 4.4.2 are named as K1, K2, K3, and K4. The relationship of these 4 significant factors with the 9 indicators mentioned earlier can be determined based on the score matrix.

K1=0.918X1+0.915X2+0.555X3+0.332X4-0.010X5-0.037X6+0.068X7+0.073X8+0.205X9  (1)

K2=0.179X1+0.298X2-0.071X3+0.489X4-0.869X5+0.670X6+0.465X7-0.072X8-0.025X9  (2)

K3=0.098X1+0.051X2-0.030X3-0.335X4-0.076X5+0.105X6+0.744X7+0.838X8+0.001X9  (3)

K4=0.095X1-0.011X2-0.682X3-0.081X4-0.040X5+0.006X6-0.025X7+0.022X8+0.914X9  (4)

Table 4. Factor Score Coefficient Table

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAR00001</td>
<td>.918</td>
<td>-1.79</td>
<td>.098</td>
<td>.095</td>
</tr>
<tr>
<td>VAR00002</td>
<td>.915</td>
<td>.298</td>
<td>.051</td>
<td>-0.11</td>
</tr>
<tr>
<td>VAR00008</td>
<td>.073</td>
<td>-0.072</td>
<td>.838</td>
<td>.022</td>
</tr>
<tr>
<td>VAR00003</td>
<td>.555</td>
<td>-0.071</td>
<td>-.030</td>
<td>-.682</td>
</tr>
<tr>
<td>VAR00009</td>
<td>.205</td>
<td>-0.025</td>
<td>.001</td>
<td>.914</td>
</tr>
<tr>
<td>VAR00004</td>
<td>.332</td>
<td>.489</td>
<td>-.335</td>
<td>-.081</td>
</tr>
<tr>
<td>VAR00005</td>
<td>-.010</td>
<td>-.869</td>
<td>-.076</td>
<td>-.040</td>
</tr>
<tr>
<td>VAR00006</td>
<td>-.037</td>
<td>.670</td>
<td>.105</td>
<td>.006</td>
</tr>
<tr>
<td>VAR00007</td>
<td>.068</td>
<td>.465</td>
<td>.744</td>
<td>-.025</td>
</tr>
</tbody>
</table>

The data from the table above shows that each factor orthogonalized by the maximum variance method has a significant loading on describing a specific capability of the company. Factor 1 has a
high loading on profitability, thus indicating strong explanatory power for the company's profitability. Similarly, Factors 2, 3, and 4 have significant loadings on describing the company's solvency, growth capability, and operating capability respectively. In conclusion, these four main factors can describe the comprehensive performance of the company in terms of profitability, solvency, growth, and operational capabilities.

Similarly, using the factor-weighted method to construct the performance before and after the merger and acquisition events, it is calculated that in the year of the merger, the contribution rates of each rotated variance are 30.28%, 20.79%, 17.82%, and 22.87% respectively. Consequently, the variance contribution rates of the factors for each year are as shown in the table below:

<table>
<thead>
<tr>
<th>Year (t-i)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-3</td>
<td>0.3102</td>
<td>0.1768</td>
<td>0.0087</td>
<td>0.2443</td>
</tr>
<tr>
<td>t-2</td>
<td>0.2198</td>
<td>0.0085</td>
<td>0.3231</td>
<td>0.2650</td>
</tr>
<tr>
<td>t-1</td>
<td>0.3017</td>
<td>0.2562</td>
<td>0.1168</td>
<td>0.1874</td>
</tr>
<tr>
<td>t</td>
<td>0.3028</td>
<td>0.2079</td>
<td>0.1782</td>
<td>0.2287</td>
</tr>
<tr>
<td>t+1</td>
<td>0.3642</td>
<td>0.4522</td>
<td>0.0023</td>
<td>0.0971</td>
</tr>
<tr>
<td>t+2</td>
<td>0.2176</td>
<td>0.4562</td>
<td>0.0562</td>
<td>0.1157</td>
</tr>
<tr>
<td>t+3</td>
<td>0.2371</td>
<td>0.3241</td>
<td>0.1567</td>
<td>0.1609</td>
</tr>
</tbody>
</table>

Using the values in the table above, a set of multifactor equations can be formulated to describe the overall performance of each year.

\[
V^{(t-3)} = (0.3102K_1 + 0.1768K_2 + 0.0087K_3 + 0.2443K_4)/74.008% \quad (5)
\]

\[
V^{(t-2)} = (0.2198K_1 + 0.0085K_2 + 0.3231K_3 + 0.2650K_4)/81.642% \quad (6)
\]

\[
V^{(t-1)} = (0.3017K_1 + 0.2562K_2 + 0.1168K_3 + 0.1874K_4)/86.217% \quad (7)
\]

\[
V^{(t)} = (0.3028K_1 + 0.2079K_2 + 0.1782K_3 + 0.2287K_4)/91.768% \quad (8)
\]

\[
V^{(t+1)} = (0.3642K_1 + 0.4522K_2 + 0.0023K_3 + 0.0971K_4)/91.582% \quad (9)
\]

\[
V^{(t+2)} = (0.2176K_1 + 0.4562K_2 + 0.0562K_3 + 0.1157K_4)/84.577% \quad (10)
\]

\[
V^{(t+3)} = (0.2371K_1 + 0.3241K_2 + 0.1567K_3 + 0.1609K_4)/87.880% \quad (11)
\]

### 5. REGRESSION ANALYSIS

#### 5.1. Constructing Regression Models

\[ V_{\text{effecti}} = a + \partial \text{PayType}_i + \sum_{j=1}^{n} \theta_j \text{Control}_ij + e \quad (12) \]

Among them, \( V_{\text{effecti}} \) represents overall performance, obtained from 4.4.3, where \( a \) is the intercept term, \( \partial \) is the parameter to be estimated for the variable, \( \text{PayType}_i \) represents the ith payment method, \( \text{Control}_ij \) represents the jth variable of the ith group observation, \( \theta_j \) represents the variable coefficient, and \( e \) represents the random error term.
5.2. Variable Selection

In the above econometric model, the dependent variable and its corresponding data codes are shown in the table below:

5.2.1. Dependent Variable.

<table>
<thead>
<tr>
<th>Table 6. Annual Factor Variance Contribution Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite index name</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>Profitability</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Capability of Solvency</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Growth Capability</td>
</tr>
<tr>
<td>Operating Capability</td>
</tr>
</tbody>
</table>

5.2.2. Overview of Explanatory Variables.

The core explanatory variable of this regression process is the payment method, represented in the regression equation as PayType. The sample selected for this study includes only three payment methods: cash payment, stock payment, and mixed payment (a combination of cash and stocks). Other payment methods were not selected due to a small sample size and lack of explanatory power. Cash, stocks, and mixed payments are respectively represented as PayType1, PayType2, and PayType3.

Free cash flow: Considering how much a company's free cash flow will affect the overall performance before and after the merger, the free cash flow of the company in the year before the acquisition is represented by FCF, where a company's free cash flow = (net profit + interest expenses + non-cash expenses) - working capital increments - capital expenditures.

Payment methods: The sample selected in this article only includes three payment methods: cash payment, equity payment, and a hybrid payment method (a mix of cash and stock). When a company selects a payment method, the corresponding PayType value is 1, while other PayType values are 0.

Tobin's Q value: Considering that Tobin's Q value to some extent reflects a company's profitability. If in the year before the merger, a company has a relatively high Tobin's Q value, then after the merger, the company is also more likely to achieve better performance.

5.2.3. Pearson Correlation Test.

Here we conduct Pearson correlation test on the variables mentioned above. Then, in SPSS software, we perform bivariate analysis on the mentioned variables to obtain the results as shown in the table below:

<table>
<thead>
<tr>
<th>Table 7. Variable Correlation Test Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Pearson Correlation Case Number</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>95</td>
</tr>
<tr>
<td>Tobin Q Pearson Correlation Case Number</td>
</tr>
<tr>
<td>.781**</td>
</tr>
<tr>
<td>95</td>
</tr>
<tr>
<td>Payment Pearson Correlation Case Number</td>
</tr>
<tr>
<td>.356**</td>
</tr>
<tr>
<td>95</td>
</tr>
</tbody>
</table>
5.3. Analysis of Empirical Results

5.3.1. Analysis of Model Regression Results.

From a significance perspective, the regression results of the model are given in Table 5.2. The following conclusions can be drawn: In the regression process of this linear model, the effects of stocks and mixed payment methods on overall performance are strongly significant; in contrast, the effect of cash payment on overall performance is not significant at a confidence level of 0.01. In terms of overall performance, the results of mixed payment methods are better than those of equity payment, and the results of equity payment are better than those of cash payment. Different payment methods do have an impact on a company's overall performance; in any case, the Tobin Q value will significantly and positively impact performance.

The significance is explained as follows: Companies significantly increase their financial leverage when adopting cash payment methods, which in the long run is unfavorable for improving overall performance. By examining cash payment samples, we find that for companies with relatively lagging performance before a merger and acquisition, cash payments do not have a significant boosting effect. For companies using equity payment methods, equity can help share risks, increase shareholder value in the long run, and not compromise strong investment opportunities. For mixed payment methods (combination of stocks and cash), they integrate the advantages and disadvantages of the two previous payment methods, most conducive to improving profitability and increasing shareholder value.

Table 8. Regression Results of the Model

<table>
<thead>
<tr>
<th>Payment</th>
<th>Overall Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V0-V-1</td>
</tr>
<tr>
<td>Cash</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>Positive Ratio</td>
</tr>
<tr>
<td>Stock</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>Positive Ratio</td>
</tr>
<tr>
<td>Hybrid</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>Positive Ratio</td>
</tr>
</tbody>
</table>

5.3.2. Performance Delta Analysis.

Table 9. Performance Delta Analysis Table

<table>
<thead>
<tr>
<th>Payment</th>
<th>V0-V-1</th>
<th>V1-V-1</th>
<th>V2-V-1</th>
<th>V1-V0</th>
<th>V2-V1</th>
<th>V3-V2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>Mean</td>
<td>1.37</td>
<td>4.78</td>
<td>-8.55</td>
<td>3.41</td>
<td>-13.33</td>
</tr>
<tr>
<td></td>
<td>Positive Ratio</td>
<td>0.6</td>
<td>0.5</td>
<td>0.3</td>
<td>0.4</td>
<td>0.15</td>
</tr>
<tr>
<td>Stock</td>
<td>Mean</td>
<td>4.89</td>
<td>-25.64</td>
<td>-3.72</td>
<td>-30.53</td>
<td>21.92</td>
</tr>
<tr>
<td></td>
<td>Positive Ratio</td>
<td>0.57</td>
<td>0.5</td>
<td>0.3</td>
<td>0.35</td>
<td>0.4</td>
</tr>
<tr>
<td>Hybrid</td>
<td>Mean</td>
<td>15.72</td>
<td>-17.53</td>
<td>-7.69</td>
<td>-33.25</td>
<td>9.84</td>
</tr>
<tr>
<td></td>
<td>Positive Ratio</td>
<td>0.55</td>
<td>0.29</td>
<td>0.32</td>
<td>0.28</td>
<td>0.4</td>
</tr>
</tbody>
</table>
6. CONCLUSION, LIMITATIONS, AND OUTLOOK

6.1. Research Conclusion.

This study adopts a perspective from the acquirer and focuses on 102 cultural enterprises’ M&A transactions from 2001 to 2019 as samples. It uses financial indicators to research the M&A performance of listed cultural industry enterprises, constructs a comprehensive score model through factor analysis, evaluates the overall M&A performance based on regression model results, changes in mean composite scores, and positive value ratios, and investigates the impact of different payment methods on M&A performance of cultural enterprises. The research findings indicate that the impact of different payment methods on the M&A performance of cultural enterprises varies. The three payment methods all contribute to the performance of cultural enterprises in the year of M&A, with mixed payment outperforming equity payment, and equity payment outperforming cash payment. However, starting from the first year after the M&A, there are divergences in the performance of the three payment methods. Under the cash payment method, there is an improvement in performance in the first year after the M&A, but a substantial decline from the second year onwards. Under the equity payment method, there is a certain decline in performance in the first year after the M&A, but a significant improvement in corporate performance from the second year onwards. The performance variation under the mixed payment method is more pronounced, and in the long term, it is most conducive to the enhancement of enterprise value. Furthermore, the positive value ratio of M&A performance under the equity payment method is higher than the other two payment methods. In summary, the long-term performance of cultural enterprises is better when adopting the equity or mixed payment methods.

6.2. Limitations and Outlook.

The limitations of this study can be summarized as follows: When selecting samples, only the presence of related parties was considered, without differentiation of selected companies based on their nature; the nature of state-owned enterprises may affect the overall performance of some enterprises. In selecting indicators, due to limitations in data sources, the number of indicators chosen to describe various capabilities of enterprises was uneven. For example, 4 indicators were chosen to describe the profit capabilities of enterprises, 3 indicators for debt repayment capabilities, and only 1 indicator for development and operational capabilities. The uneven selection of indicators may bias the principal component factor analysis towards the profit capabilities of enterprises. In regression analysis, the developmental cycles of enterprises were not analyzed. Due to differences in their developmental cycles, enterprises may choose different payment methods based on their needs, and the enterprise cycle may influence the overall performance of mergers and acquisitions. Given the limitations of this study, future research should focus on the following aspects: This study only focused on cash payments, stock payments, and mixed payments for research. With an increasing diversity in payment methods for cultural enterprises, other payment methods should be included in the research; Future research should refine the types of samples and study the impact of factors such as large shareholder shareholding and industry nature on the M&A performance of cultural enterprises.

REFERENCES


