

The Impact of Couple's Joint Holdings on the Annual Report's tone: An Analysis Based on Text Information

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Abstract. Marriage relationship is an important factor affecting the economic decision-making and long-term development of enterprises, and the annual report's tone, as text information to record the current operation status and future performance of enterprises, is an important reflection of corporate behavior during husband and wife's shareholding. This paper uses listed family companies from 2011 to 2021 as an initial sample to study the impact of couple's joint holdings on the tone of annual reports. The study found that when the actual controlling husband and wife jointly held shares, the annual report's tone was more positive. Further research found that the effect of husband and wife joint shareholding on the tone of annual reports is affected by the proportion of fixed assets of enterprises and whether the chairman and CEO of the enterprise are concurrent. Combining the marital relationship in the family business with the annual report information of the enterprise is helpful to deeply explore the macro-overview of the current and future development of the enterprise under the marriage relationship, and provides a new perspective for understanding the decision-making and planning of the family business.

Keywords: Couple's Joint Holdings, Annual Report's Tone, Marriage Relationship.

1. Introduction

For a long time, economists believe that enterprises generally control people's marital relationships as an important part of the family structure, which has an important impact on the decision-making and future development of the enterprise. As the financial background of the general controller of the enterprise, the couple's joint holdings have a particularly prominent impact on the development of the enterprise. The existing research is more focused on the impact of the couple's joint holdings on financial data information, and lacks research on financial text information. To make up for the lack of this perspective, this paper introduces the financial text information on the annual report's tone, and studies the impact of the couple's joint holdings on the annual report's tone of enterprises. The annual report's tone is the text information that the enterprise manager conveys to investors the relevant information of the company's value, and it is also a written reflection of the company's behavior within a certain period. In recent years, an increasing number of scholars have taken the annual report's tone as an important reference for measuring corporate financial information. From this viewpoint, the impact of the phenomenon of the couple's joint holdings on the economic development of enterprises can be reflected through the annual report's tone. This article will base our research on this.

Recently, research in related fields has mainly focused on the following three aspects: First, the impact of couple's joint holdings on enterprise performance, the main research method is to analyze financial statement data, and the analysis of financial text information is less; Second, the relevant research on the tone of annual reports is more about its correlation with corporate performance, corporate senior management, and investors' risk appetite. Third, it studies the ratio of male and female shareholding at the top of the enterprise and the influence of the family structure of the senior management on the annual report's tone. It can be seen from the above that the relevant research angle does not directly correlate the couple's joint holdings with the annual report's tone, and the research

method also ignores the analysis of financial text information. In order to make up for the lack of previous literature, the innovation points of this paper are as follows: (1) Through empirical research to analyze the direct impact of joint ownership of listed companies by husband and wife on the tone of annual reports; (2) From the perspective of financial text information, to make up for the one-sided study of data information in previous literatures. (3) This study will provide important reference for investors to analyze the operating conditions of listed companies and estimate the future development prospects of enterprises.

In the follow-up analysis, this paper will conduct benchmark regression based on the relevant information of the listed companies, explore the positive and negative relationship between the couple's joint holdings and the annual report's tone and the correlation between the two, and further verify the reliability of the regression results through multi-dimensional fixed effect, substitution of explanatory variables, and PSM propensity score matching method to further verify the reliability of the regression results, group heterogeneity analysis, and based on the proportion of fixed assets and the combination of two values, respectively, explore the influence of couple's joint holdings on the annual report's tone, and further analyze the relationship between the two, to draw reasonable and reliable research conclusions.

2. Theoretical analysis and hypothesis

In China, family businesses are deeply affected by traditional family kinship, among which couple's joint holdings' enterprises more highlight this characteristic, out of the consideration of family inheritance, the enterprise of the couple's joint holdings more willing to inherit, so will want to make the business longer and bigger, and this requires a lot of financial support, there are studies that show that the level of audit fees is closely related to the annual report's tone of listed companies, the more positive the annual report's tone, the lower the audit fee charged by the auditor (Liang Rixin, etc., 2021) [1], and because private entrepreneurs will exert the effect of entrepreneurial self-discipline, reduce the unproductive expenditure of enterprises and improve the operational efficiency of capital (Yang Tongtong, 2022) [2]. Therefore, due to the consideration of reasonable expenditure of enterprise assets, couple's joint holdings' enterprises will be more inclined to make a positive annual report's tone. Simultaneously, couple-owned companies are more inclined to recruit female senior managers, which affects the enthusiasm of the annual report's tone. When wives participate in corporate equity control, it increases the number of female executives hired by the company (Xiao Jinli et al., 2018) [3], and female executives are more likely to use positive words to reflect the company's situation when compiling annual report information because they want to achieve good impression management effects and women's natural language expression advantages (Zhang Yingming et al., 2022)[4], so the annual report's tone of the couple's joint holdings' company is more positive.

However, in general, women are more conservative and cautious than men, men are more aggressive and have macho tendencies, and in couple's joint holdings' enterprises, husbands are relatively at the suggestion and supervision of their wives (Xiao Jinli et al., 2018) [3], discussing company affairs with the wife; therefore, due to the prudence of joint decision-making, the text information in the annual report reflecting the company's business status, strategic plan, and development direction may not use overly positive words, but use a more conservative tone.

Based on the above analysis, this paper puts forward the following hypothesis:

H1a: Couple's joint holdings are positively correlated with the annual report's tone.

H1b: Couple's joint holdings are negatively correlated with the annual report's tone.

3. Literature review

3.1. Research on couple's joint holdings

In China, the formation of family businesses can be traced back to the Ming and Qing dynasties, and research on family business-related topics began to emerge in the sixties of the last century (Dong

Chihao, 2021) [5], among which the research on the couple's joint holdings in family enterprises involves less fields. Zhang Xuezhong et al. (2022) [6] reflect the performance of social responsibility of couple's joint holdings' enterprises from five aspects: shareholder responsibility, employee responsibility, supplier, customer and consumer rights and interests responsibility, and environmental responsibility, Xu Yupeng et al. (2021) [7] combined with sociology to examine the impact of joint governance of husband and wife on the encroachment of corporate interests, and the study showed that the wife's participation in shareholding can inhibit the hollowing out behavior of enterprises and make the "supervision effect" within the enterprise more effectively, Xiao Jinli et al. (2018) [3] made by analyzing the wife's participation in the company's shareholding. The actual behavior confirmed that the risk-taking level of the couple's joint holdings company was significantly lower, and it was found that when the actual shareholders of the company were both husband and wife, it had an impact beyond the scope of the family, which provided new ideas for the decision-making mode and financial behavior of the family business, and in the study of Ma Yunbiao et al. (2018) [8], it shows that in addition to the female actual controller, other female directors and CEOs cannot influence the economic decision-making behavior of the actual controller. Therefore, to delve into the areas where female shareholders can play a role in companies, it is necessary to expand the discussion of couple's joint holdings.

3.2. Research on the annual report's tone

China has not yet shown a clear tone boundary for the overall writing language of annual report text information, and tone is one of the characteristics with important connotation and even substantial impact in the text information disclosure of listed companies, and moderately positive annual report's tone can significantly improve the financial performance of enterprises (Shen Juqin et al., 2022) [9], Positive tone can achieve the effect of impression management (Zhang Yingming et al., 2022[4], Zhou Bo et al., 2019[10]), Liu Ziyu et al. (2022) [11] is also proposed that by improving the credibility of information, the information advantage of managers can be weakened, and the moral hazard and direction choice of enterprises can be reduced, Song Simiao et al. (2022) [12]. The above studies also show that the invocation words of annual reports are susceptible to the influence of annual report invocation, and the existing literature confirms the impact of various influencing factors on the annual reports' tone at different levels, and at the institutional level, the regulatory system of stock exchange inquiry letters significantly inhibits management's tendency to use optimistic tones (Fan Hejun et al., 2022)[13], in the main body of annual report preparation, when the company's CEO is a woman, the text tone in the company's annual report will be relatively conservative (Zhang Yingming, 2022) [4], at the level of corporate earnings management activities, Huang Chao et al. (2019) [14] confirmed that the level of earnings management of the company is significantly positively correlated with tone, and the more positive the tone of management when carrying out upward earnings management, Liang Rixin et al. (2021) [1] studied that when the tone of the company's annual report text is more positive, the lower the audit fee charged by the auditor, which affects the annual report's tone from the aspect of audit fees, and Wang Sai (2022) [15] studied family businesses by splitting the real part and the impression management part of the annual report's tone, the relationship between intergenerational inheritance and intonation management of annual reports provides empirical evidence support for subsequent research in the field of text information disclosure.

Based on the existing research, it is found that the current impact on the couple's joint holdings mainly focuses on the overall economic decisions of the company, such as the investment range in fixed assets and equity investment (Dong Chihao, 2021)[5] and the appointment of senior management, such as the increase in the tendency of companies to hire female executives after the wife of the corporate controlling person holds the shares (Xiao Jinli et al.), 2018) [3] and other specific management behaviors of companies, ignoring potential influences such as annual report's tone, only a small number of literature discusses the management of annual report's tone by company executives, and annual report's tone is of great significance to the development of enterprises. For example, the ratio of the annual report's tone to the provision for goodwill impairment is a positive promotion

relationship, and the probability of goodwill impairment is also positively correlated (Liu Ziyu et al., 2022) [11], thereby affecting the overall value of the enterprise, creating the image of the enterprise, and inversely affecting the behavior of the enterprise. For example, the annual report's tone is positively correlated with corporate innovation (Zhao Yuliang, 2020) [16], but there is little research on the relationship between couple's joint holdings on the annual report's tone, so this article will take the perspective of couple's joint holdings based on 2011-2021. The initial sample of listed family businesses examines whether couple's joint holdings affect the company's annual report's tone.

4. Study design

4.1. Sample selection and data source

To study the impact of couple's joint holdings on the annual report's tone, this paper uses listed family businesses from 2011 to 2021 as the initial sample, following the definition of CSMAR, family businesses include three categories: a single natural person family business, a multiple natural person family business without kinship, and a multi-person family business with kinship. On the basis of this standard, this paper further processes the data according to the following process: (1) exclude companies with years PT, ST and *ST; (2) exclude companies in the financial industry; (3) exclude samples with missing data. After the above steps, 12843 company-year observations were obtained in this paper.

The actual controller and his spouse data come from the "Actual Controller Family Relationship Description" data in the CNRDS family business database, the annual report's tone data comes from the CNRDS database, and other data comes from the CSMAR database.

4.2. Variable description

4.2.1. Variable to be explained: the annual report's tone of the enterprise (TONE)

The tone of this article refers to the study of Zeng Qingsheng et al. (2018) [17], and Loughran and McDonald (2011) [18]. Based on the list of financial emotional English words provided, the English words in the LM dictionary are translated according to the Youdao Dictionary and Kingsoft Wordba, and only the Chinese words most relevant to the Chinese emotions expressed in the English vocabulary are retained in this data. The difference between the number of positive words and the number of negative words in the year to the proportion of the number of words in the annual report (TONE) is used to measure the annual report's tone, the larger the TONE value, indicates that the text of the annual report has a more positive tone.

4.2.2. Explanatory variables: family business couple's joint holdings (Co_share)

Use the joint ownership virtual variable to measure whether both the actual controller and his or her spouse hold shares in the listed family business. If the actual controller of the listed family business and his spouse jointly hold shares in the company, the assignment is 1, otherwise the assignment is 0.

4.2.3. Control variables

This article refers to Zhang Yingming (2022) [4], controlling the size (Size), return on net assets (ROE), and asset-liability ratio of listed companies (Lev), the proportion of accounts receivable (REC), growth rate of operating income (Growth), whether it is a loss (Loss), shareholding ratio of the largest shareholder (Top1), equity check and balance (Balance), Tobin Q value (TobinQ), institutional investor shareholding ratio (INST) and other variables. To eliminate the influence of extreme values, this paper shortens all continuous variables at 1% and 99% quantiles. The specific variable definitions are shown in Table. 1.

Table 1. Variable definitions

| variable | name | symbol | definition |
|----------------------|--|----------|---|
| dependent Variable | Tone of the year | TONE | (Number of positive words - number of negative words) / total number of words in the annual report |
| independent Variable | Couple's joint holdings | Co_share | When both husband and wife jointly hold shares of a listed company, the value is 1, otherwise the value is 0 |
| Control variables | Compay size | Size | The natural logarithm of the total annual assets |
| | Return on equity | ROE | Average balance of net profit/shareholders' equity |
| | Gearing ratio | Lev | Total year-end liabilities divided by total year-end assets |
| | Proportion of accounts receivable | REC | The ratio of net accounts receivable to total assets |
| | Growth rate of operating income | Growth | Current year's operating income/Previous year's operating income-1 |
| | Whether to lose money or not | Loss | The net profit of the year is less than 0 to take 1, otherwise take 0 |
| | The shareholding ratio of the largest shareholder | Top1 | Number of shares held by the largest shareholder/total number of shares |
| | Equity checks and balances | Balance | The sum of the shareholding ratios of the second to fifth major shareholders divided by the shareholding ratio of the largest shareholder |
| | Tobin Q value | TobinQ | (Market value outstanding + number of non-tradable shares × net assets per share + book value of liabilities) / total assets |
| | Percentages of shareholding by institutional investors | INST | The total number of shares held by institutional investors divided by the outstanding share capital |
| | Year | annual | Annual dummy variable |
| | Industry | industry | Industry dummy variables |

4.3. Model settings

In this paper, the following regression model is used for empirical testing:

$$TONE_{i,t} = \alpha_0 + \alpha_1 Co_share_{i,t} + \alpha_2 controls + \Sigma Year + \Sigma IND + \varepsilon_{i,t} \quad (1)$$

Where TONE is the explanatory variable, Co_share is the explanatory variable, Size, ROE, Lev, REC, Growth, Loss, Top1, Balance, TobinQ and INST are the control variables of the model. To control for potential macro-factors, the model also controls for two dummy variables, annual and industry, ε perturbation terms, as defined in Table 1.

5. Empirical analysis

5.1. Descriptive statistics

The descriptive statistics of the main variables are shown in Table 2. As can be seen from Table.2., the maximum value of TONE based on LM dictionary is 0.023, the minimum value is -0.019, the mean value is 0.002, and the standard deviation is 0.008, indicating that the annual report's tone of listed companies as a whole is more positive. The maximum value and minimum value of couple's joint holdings Co-share are 1, 0, 0.509 and 0.500 respectively, indicating that the sum of the relevant years in which each family enterprise is jointly held by husband-and-wife accounts for 50.9% of the total sample during 2011-2021.

Table 2. Descriptive statistics of main variables

| Variable | N | Mean | SD | Min | p50 | Max |
|----------|-------|-------|-------|--------|-------|-------|
| TONE | 12843 | 0.002 | 0.008 | -0.019 | 0.002 | 0.023 |
| Co share | 12843 | 0.509 | 0.5 | 0 | 1 | 1 |
| Size | 12843 | 21.88 | 1.109 | 19.52 | 21.73 | 26.43 |
| ROE | 12834 | 0.072 | 0.126 | -0.595 | 0.081 | 0.333 |
| Lev | 12843 | 0.378 | 0.195 | 0.054 | 0.364 | 0.86 |
| REC | 12811 | 0.134 | 0.099 | 0.001 | 0.118 | 0.453 |
| Growth | 12838 | 0.184 | 0.357 | -0.499 | 0.13 | 1.866 |
| Loss | 12843 | 0.096 | 0.295 | 0 | 0 | 1 |
| Balance | 12843 | 0.792 | 0.572 | 0.046 | 0.653 | 2.672 |
| Top1 | 12843 | 0.342 | 0.138 | 0.096 | 0.324 | 0.721 |
| TobinQ | 12605 | 2.071 | 1.214 | 0.921 | 1.669 | 7.852 |
| INST | 12843 | 0.301 | 0.235 | 0 | 0.266 | 0.843 |

5.2. Correlation analysis

Table 3. Correlation analysis

| | TONE | Co_share | Size | ROE | Lev | REC | Growth | Loss | Balance | Top1 | TobinQ | INST |
|----------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| TONE | | 0.054** * | - 0.171** * | 0.187** * | - 0.204** * | 0.097** * | 0.179** * | - 0.188** * | 0.039** * | 0.045** * | 0.107** * | - 0.083** * |
| Co_share | 0.060** * | | - 0.037** * | 0.082** * | - 0.063** * | 0.063** * | 0.033** * | - 0.048** * | 0.038** * | 0.046** * | -0.009 | - 0.024** * |
| Size | - 0.179** * | - 0.027** * | | 0.107** * | 0.501** * | - 0.143** * | 0.080** * | -0.009 | - 0.031** * | - 0.036** * | - 0.351** * | 0.389** * |
| ROE | 0.226** * | 0.068** * | 0.093** * | | - 0.106** * | - 0.044** * | 0.381** * | - 0.506** * | - 0.020** * | 0.214** * | 0.132** * | 0.085** * |
| Lev | - 0.230** * | - 0.065** * | 0.510** * | - 0.208** * | | 0.076** * | 0.051** * | 0.180** * | - 0.043** * | - 0.075** * | - 0.266** * | 0.211** * |
| REC | 0.080** * | 0.054** * | - 0.140** * | - 0.056** * | 0.097** * | | 0.069** * | 0.007 | 0.084** * | - 0.084** * | 0.062** * | - 0.142** * |
| Growth | 0.111** * | 0.019** * | 0.093** * | 0.306** * | 0.059** * | 0.028** * | | - 0.251** * | 0.047** * | 0.029** * | 0.075** * | 0.059** * |
| Loss | - 0.202** * | - 0.050** * | - 0.024** * | - 0.710** * | 0.206** * | 0.011 | - 0.204** * | | 0.041** * | - 0.152** * | -0.003 | -0.012 |
| Balance | 0.016* * | 0.022** * | -0.013 | - 0.056** * | - 0.038** * | 0.068** * | 0.037** * | 0.046** * | | - 0.733** * | 0.014 | - 0.091** * |
| Top1 | 0.051** * | 0.042** * | 0.009 | 0.205** * | - 0.055** * | - 0.081** * | 0.020** * | - 0.148** * | - 0.700** * | | - 0.064** * | 0.129** * |
| TobinQ | 0.023** * | - 0.020** * | - 0.278** * | 0.069** * | - 0.201** * | -0.007 | 0.033** * | 0.025** * | 0.005 | - 0.063** * | | 0.148** * |
| INST | - 0.078** * | - 0.020** * | 0.402** * | 0.082** * | 0.207** * | - 0.133** * | 0.049** * | - 0.026** * | - 0.097** * | 0.185** * | 0.167** * | |

Lower-triangular cells report Pearson's correlation coefficients, upper-triangular cells are Spearman's rank correlation

*** p<0.01, ** p<0.05, * p<0.1

Table 3. summarizes the correlation analysis results of the main variables. The absolute value of the correlation coefficient between the control variables is small, indicating that the correlation is weak and there is no multicollinearity problem between the variables. There is a significant and positive correlation between Co-share controlled by husband and wife and TONE based on LM dictionary at the 1% level, indicating that the couple's joint holdings have a positive impact on the annual report's tone. Hypothesis H1a is preliminarily verified.

5.3. Baseline regression

Column (1) of Table.4. shows the benchmark regression results of joint shareholding of couples and the tone of annual reports of listed companies. In the regression, the explained variable was the TONE of the corporate annual report, and the explanatory variable was Co-share of the family business. The regression coefficient between the couple's joint holdings and the annual report's tone is 0.001 and significantly positive at the 1% level. The preliminary judgment is that the couple's joint holdings is positively correlated with the annual report's tone, which indicates that if the actual controller of the listed company exists the couple's joint holdings, the tone of the annual report is more positive, further verifying the hypothesis H1a.

5.4. Robustness test

5.4.1. Replace the model

Columns (2) and (3) in Table.4. show the benchmark regression results of the couple's joint holdings and the annual report's tone of listed companies under the individual control year and industry individual control year respectively. In the regression, the explained variable was the annual report's tone TONE, and the explanatory variable was Co-share of the family business. Under the above two models, the regression coefficient between the couple's joint shareholding and the annual report's tone is 0.001 and significantly positive at the 5% level, which is consistent with the previous regression results and further verifies the hypothesis H1a.

5.4.2. Replace explained variables

In order to verify the robustness of the regression results, the explanatory variable TONE was replaced by TONE1, where $TONE1 = (\text{number of positive words} - \text{number of negative words}) / (\text{number of positive words} + \text{number of negative words})$, and the baseline regression was conducted again. The results are shown in Column (4) of Table.4. above. The benchmark regression results of the couple's joint shareholding and annual report tone TONE1 show that the regression coefficient is 0.005 and significantly positive at the 1% level, which is consistent with the previous regression results, proving the robustness of the benchmark regression results.

5.4.3. Endogeneity problem

Although some variables have been controlled above, there is still the possibility that some influencing factors may be omitted, so there may be some endogeneity in this study. This paper uses PSM to deal with this problem. With whether the couple jointly holds shares as dummy variable and company size, asset-liability ratio and ROE as matching variables, the matching principle of 1:3 proximity matching is carried out. The balance test results showed no significant difference between the treatment group and the control group. The regression results of matched samples are shown in Column (5) of Table.4., indicating that the regression coefficient is still significantly positive at the 5% level, which further verifies the hypothesis.

Table 4. Regression results

| | (1) | (2) | (3) | (4) | (5) |
|-----------------|-----------|-----------|-----------|-----------|-----------|
| VARIABLES | TONE | TONE | TONE | TONE1 | TONE |
| Co_share | 0.001*** | 0.001** | 0.001** | 0.005*** | 0.001** |
| | (2.82) | (2.19) | (2.41) | (2.92) | (2.31) |
| Size | -0.000 | 0.001*** | 0.001*** | -0.001 | -0.000 |
| | (-0.94) | (3.56) | (3.80) | (-1.49) | (-1.59) |
| ROE | 0.009*** | 0.008*** | 0.008*** | 0.068*** | -0.002*** |
| | (14.36) | (12.26) | (13.07) | (14.77) | (-4.36) |
| Lev | -0.002*** | -0.002*** | -0.002*** | -0.020*** | 0.009*** |
| | (-5.40) | (-3.11) | (-3.53) | (-6.00) | (12.21) |
| REC | 0.002** | 0.001 | 0.001 | 0.013** | -0.000 |
| | (2.23) | (0.62) | (1.28) | (1.98) | (-0.72) |
| Growth | 0.001*** | 0.001*** | 0.001*** | 0.006*** | 0.001*** |
| | (5.25) | (4.05) | (4.21) | (5.43) | (4.84) |
| Loss | -0.000* | -0.000 | -0.000 | -0.002 | 0.000 |
| | (-1.76) | (-1.31) | (-1.47) | (-1.38) | (1.28) |
| Top1 | 0.001 | 0.000 | 0.000 | 0.005 | -0.000*** |
| | (0.59) | (0.01) | (0.02) | (0.75) | (-2.61) |
| Balance | 0.000 | 0.000 | -0.000 | 0.002 | 0.002* |
| | (1.19) | (0.11) | (-0.20) | (1.49) | (1.90) |
| TobinQ | -0.000*** | -0.000* | -0.000 | -0.001*** | 0.001 |
| | (-2.69) | (-1.77) | (-1.59) | (-2.90) | (1.56) |
| INST | 0.001* | 0.001*** | 0.001*** | 0.004* | 0.000 |
| | (1.71) | (2.77) | (2.79) | (1.70) | (0.33) |
| Constant | 0.016*** | -0.001 | -0.001 | 0.127*** | 0.018*** |
| | (4.66) | (-0.42) | (-0.38) | (5.17) | (4.93) |
| Observations | 12,561 | 12561 | 12561 | 12,561 | 9,349 |
| Number of codes | 1,929 | 1,929 | 1929 | 1,929 | 1,838 |
| R-squared | 0.279 | 0.283 | 0.294 | 0.281 | 0.281 |
| Year FE | YES | YES | YES | YES | YES |
| Industry FE | YES | NO | YES | YES | YES |
| Individual FE | NO | YES | YES | NO | NO |

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

6. Heterogeneity analysis

In order to avoid the influence of characteristics such as the age of the company and whether the company's financial report of the year has been issued with standard audit opinions on the tone of the annual report, this paper refers to the practice of Zhou Bo etc. (2019) [10], and divides the company into groups with higher years and lower years according to the median years of establishment. According to whether the financial report of the company in that year has been issued by the standard audit opinion group is divided into no issued by the standard audit opinion group and issued by the standard audit opinion group, the regression results are shown in Table.5., in the higher years of the group, the regression coefficient between the couple's joint holdings Co-share and the annual report's tone TONE is 0.001, significantly positive at the 1% level. The regression coefficient of Co-share and TONE of annual report in the lower group of years is 0.001, positive at the 5% level, indicating that compared with the lower group of years, the higher group of years of establishment of the couple's joint holdings has a more significant impact on the tone of annual report, the higher the number of years of establishment of the company, the longer the operation time of the company, relatively more powerful, The company is also more willing to this strength through the annual report's tone expressed. At the same time, the results show that the regression coefficient between the couple's joint holdings

Co-share and the TONE of the annual report when the company's financial report was issued by the standard audit opinion group is 0.001, which is significantly positive at the 1% level, indicating that when the company's financial report was issued by the standard audit opinion, the couple's joint holdings will positively affect the annual report's tone. The fundamental purpose of the establishment of the company is to make a profit. The husband and wife co-holding company hopes to attract more investors to obtain funds, so it makes a real and positive discussion and good expectations for the future development of the company according to the good financial condition, operating results and cash flow of the fiscal year. The information expressed is reflected in the annual report's tone.

Table 5. Grouping regression analysis

| VARIABLES | (1) Higher years | (2) Lower years | (3) No standard audit opinion has been issued | (4) Be issued with standard audit opinions |
|-----------------|------------------|-----------------|---|--|
| VARIABLES | TONE | TONE | TONE | TONE |
| Co_share | 0.001*** | 0.001** | -0.000 | 0.001*** |
| | (3.39) | (2.50) | (-0.12) | (2.63) |
| Constant | 0.011** | 0.023*** | -0.008 | 0.018*** |
| | (2.17) | (5.39) | (-0.55) | (5.26) |
| Observations | 5,738 | 6,823 | 411 | 12,150 |
| Number of codes | 1,291 | 1,386 | 245 | 1,927 |
| Controls | YES | YES | YES | YES |
| Year | YES | YES | YES | YES |
| Industry | YES | YES | YES | YES |

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

7. Further analysis

In order to more specifically study the influence of couple's joint holdings on the intonation of annual reports, this paper will adopt the method of introducing moderating variables to carry out further analysis of the article. Due to the large dimensional difference between the independent variable Co-share and the dependent variable TONE of the annual report, the dimension of TONE of the annual report was expanded to 100 times before the introduction of the adjustment variable, that is, the original dependent variable TONE= TONE/100 after the expanded dimension. This treatment does not affect the significance of the regression results. This article is based on the marginal (2021) [19], Zhang Jiaxu (2022) [20] research, will have two Dual unity and FIXED assets accounted for FIXED as a moderator variable to the study of regulating effect, The results obtained are shown in Table 6.

7.1. Based on the combination of the two positions, explore the influence of couple's joint holdings on the tone of the annual report

Marginal (2021) [19] confirms that board supervision can significantly restrain the influence of managers' rights on the tone of the annual report text. The Dual position refers to the situation where the chairman of the board of directors and the CEO concurrently, which is the relatively centralized leadership structure of the enterprise. This management mode will have a certain impact on the independence of the board of directors, and thus affect the tone of the company's annual report.

According to column (1) in Table.6., interactional interaction (Co-share*Dual) between Dual job integration and Co-share was significant at the level of 10%, and the regression value was -0.049. It shows that the combination of the two positions can significantly inhibit the positive relationship between the couple's joint shareholding and the tone of the annual report. Among them, the coefficient of two-job integration is significantly positive, indicating that there is an obvious substitution relationship between the co-owned Co-share and dual-job integration in affecting the TONE of the

annual report. The reason for this result is that under the two-in-one management model, the extent to which the CEO's concurrent behavior weakens the supervision of the board of directors does not affect the inhibitory effect of the two-in-one on the positive relationship between the couple's joint shareholding and the annual report's tone.

7.2. Based on the proportion of fixed assets, explore the influence of couple's joint shareholding on the annual report's tone

Zhang Jiaxu (2022) [20] confirmed that the more negative the tone of the annual report, the more cash holdings of the enterprise. Cash and fixed assets as current assets and non-current assets may have a certain impact on the tone of the annual report. FIXED assets ratio Fixed refers to the ratio of fixed assets to the total assets of an enterprise. Generally speaking, the lower the ratio of fixed assets, the stronger the liquidity of enterprise assets and capital operation ability. Therefore, the proportion of fixed assets can reflect the stability of the enterprise's financial structure, and then affect the company's annual report.

According to column (2) in Table.6., there is a significant relationship between FIXED assets ratio FIXED and interactional item of Co-share (Co-share*FIXED) and the TONE of annual report at the 5% level, and the regression value is -0.284. It shows that the proportion of fixed assets can significantly inhibit the positive relationship between the couple's joint shareholding and the tone of the annual report. Among them, the coefficient of FIXED assets proportion FIXED is significantly positive, indicating that the couple's joint shareholding and fixed assets proportion have obvious substitution relationship in affecting the annual report's tone.

Table 6. Adjustment effect analysis

| | (1) | (2) |
|-----------------|----------|----------|
| VARIABLES | TONE | TONE |
| Co_share | 0.077*** | 0.114*** |
| | (3.23) | (3.74) |
| Dual | 0.055*** | |
| | (2.86) | |
| FIXED | | 0.203** |
| | | (2.42) |
| interact | -0.049* | -0.284** |
| | (-1.82) | (-2.49) |
| Constant | 1.551*** | 1.490*** |
| | (4.65) | (4.43) |
| Observations | 12,561 | 12,561 |
| Number of codes | 1,929 | 1,929 |
| Controls | YES | YES |
| Year FE | YES | YES |
| Industry FE | YES | YES |
| Individual FE | YES | YES |

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

8. Conclusion

The phenomenon of joint ownership by the actual controller: the Couple's joint holdings of the enterprise play an important role in the daily operation and future development planning of the enterprise, and its impact can be reflected by the annual report's tone. In short, the joint ownership of the actual controller: the Couple's joint holdings of the enterprise affect the annual report's tone of the enterprise more positively or negatively. This paper takes the relevant data of listed companies from 2011 to 2021 as a sample to analyze the relationship between the Couple's joint holdings and the annual report's tone. The regression results show that the Couple's joint holdings are positively correlated with

the annual report's tone, that is, if the actual controller of the listed company has the phenomenon of the Couple's joint holdings, the annual report's tone is more positive.

When using the annual report's tone to predict the future development prospects of the enterprise, relevant stakeholders of the enterprise should fully consider the impact of the Couple's joint holdings of the actual controller of the enterprise on the annual report's tone. The annual report's tone that is too positive or too negative is not necessarily a true reflection of the actual situation of the enterprise, and may be affected by the Couple's joint holdings. From the perspective of financial text information, this paper explores the correlation between the joint shareholding of husband and wife and the tone of the annual report, jumps out of the limitation of the previous literature only studying financial data information, broadens the research dimension, has certain innovative significance, and has certain reference significance for the relevant stakeholders of enterprises to evaluate the management effect and estimate the development prospects of enterprises. In order to better enrich the research results, this paper suggests that future studies can start from the perspective of gender of the actual controller of an enterprise, analyze the ratio of male to female in his family members and the shareholding situation, and further study the impact of the family structure and financial status of the actual controller of an enterprise on the tone of the annual report.

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