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Antigambling interventions and corporate financialization: Evidence from China

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ABSTRACT

This study investigates the impact of local antigambling interventions (AGIs) on corporate financialization. From the perspective of formal institutions' influence on culture, our findings suggest that firms located in regions with more effective AGIs exhibit lower levels of financialization. Mechanism tests show that AGIs reduce local risk preferences, subsequently influencing corporate financialization. Heterogeneity tests reveal that the main results are more pronounced when government trust is stronger, cultural transmission efficiency is higher, local firm interactions are more extensive, and community attention to antigambling initiatives is greater. This study enhances the understanding of the influence of the institutional environment on corporate investment decisions.

1. Introduction

A growing body of research investigates the relationship between formal institutions and culture as exemplified by notable studies (e.g., Alesina & Giuliano, 2015; Bastian, 2020; Bau, 2021; Bau & Fernández, 2021; Campa & Serafinelli, 2019; Du et al., 2017). One perspective argues that individuals' values and beliefs are deeply ingrained and change occurs at a slow pace (Alesina et al., 2013; Guiso et al., 2016; Tabellini, 2008). Conversely, a widely accepted position posits that culture undergoes shifts alongside economic development, technological progress, and changes in laws and institutions. For instance, Bau (2021) suggests that government policies, particularly pension plans, can significantly alter cultural practices and traditions by altering underlying incentives. Moreover, Sechzer (2004) contends that laws increasingly challenge the cultural notion of perceived male superiority.

While the influence of formal institutions on culture has been widely recognized, a scarcity of research examining this impact on firm operations remains. To address this gap, our study investigates the relationship between government antigambling interventions (AGIs), regional culture, and corporate financialization. Our focus on financialization is driven by its increasing prevalence as a global corporate trend. For instance, in the United States, the ratio of financial assets to total assets increased from 12% in 2004 to 16% in 2017 (Darmouni & Mota, 2022), and in China, the proportion of listed firms engaging in financialization rose from 17% in 2009 to 21% in 2017 (Du et al., 2022). This trend leads to firms increasingly diverting attention away from primary business, hindering innovation and capital market efficiency (Leng et al., 2023; Tang & Zhang, 2019; Xu & Guo, 2021). Consequently, a pressing need arises for government efforts to curb firms' tendency to transition from substantive to speculative endeavors.

Corporate financialization is characterized by an intense pursuit of profits from volatile financial products (Orhangazi, 2008). Previous evidence suggests that firms' financialization strategies may be linked to managers' risk tolerance and cultural norms regarding risk-taking (Tang, 2021; Xue et al., 2023). This implies that government interventions targeting excessive risk practices could be instrumental in curbing corporate financialization. This study explores the effect of AGIs on corporate financialization, building on studies that identify a positive

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correlation between gambling culture and risk preferences (Adhikari & Agrawal, 2016; Chen et al., 2014; Christensen et al., 2018; Ji et al., 2021).

From a theoretical perspective, AGIs have the potential to influence corporate financialization. Previous studies demonstrate that the interaction between gambling culture and corporate decision making is manifested in increasing CEOs' risk-taking preferences. Specifically, studies determine that CEOs in regions with strong gambling cultures tend to have higher risk preference (Ji et al., 2021; Xue et al., 2023). In terms of corporate financialization, Xue et al. (2023) capture the gambling culture using regional lottery sales, finding that it significantly increases firms' financialization by raising CEOs' risk preferences. In contrast to previous research, we focus on the impact of formal institutions, particularly government AGIs, as drivers of local gambling preferences in China.

The government's stance on gambling can significantly influence the gambling culture in a region. Monaghan and Derevensky (2008) reveal that the legalization of gambling leads to an increase in gambling culture and raises the likelihood of underage individuals participating in gambling activities. Conversely, government interventions in gambling activities that emphasize the negative consequences of gambling such as the potential for significant financial losses and its illegal nature (Bassoli et al., 2021) can raise public awareness about these risks. Consequently, such interventions can reduce individuals' inclination to gamble and contribute to a decline in the overall regional gambling culture. Therefore, we anticipate that when the government intervenes in gambling activities through propaganda and legislative approaches, local gambling preferences and gambling culture will diminish.

Reduced gambling preferences may exert positive and negative effects on financialization, necessitating empirical investigation. Aligning with the investment substitution motive, corporate financialization can serve as a substitute for entity investment. Firms and individuals with higher risk preferences tend to allocate more investments to financial assets. Consequently, we expect AGIs to diminish managers' gambling and risk preferences, leading to reduced corporate financialization. In contrast, the precautionary saving motive posits that firms' financial assets can function as a safeguard against potential capital chain disruptions caused by sudden cash flow fluctuations. Therefore, we speculate that managers' higher risk aversion corresponds to a higher degree of financialization within the firm. Based on this rationale, we predict that AGIs will increase corporate financialization.

Using data from nonfinancial Chinese A-share listed firms between 2008 and 2018, we investigate the relationship between local government AGIs and corporate financialization. Our measure of AGIs is based on per capita gambling criminal cases retrieved from China Judgments Online, where a lower number of cases indicates more effective government deterrence and public opinion shaping against gambling.[1] Our findings indicate that AGIs effectively restrain corporate financialization by discouraging speculative practices. These results align with Yu et al. (2021), who assert that speculative financialization is more prevalent in China's context. To enhance the robustness of our results, we conduct a series of robustness tests. First, we employ the number of personnel in grassroots governance organizations and the old revolutionary base areas in China as instrumental variables (IVs) to mitigate endogeneity concerns. We also use alternative measurements for dependent and independent variables. Finally, we employ a tobit model to further verify the robustness of our findings.

A possible mechanism underlying our study is that AGIs influence local gambling culture, which subsequently weakens corporate financialization further. Previous literature indicates that regional gambling culture is primarily manifested in local residents' risk preferences (Ji et al., 2021; Qian & Wu, 2021). Therefore, we employ local risk preferences as a mediating variable and use a mediating effect model to verify this mechanism. Our findings indicate that AGI primarily influences corporate financialization by reducing local risk preferences.

We also conduct various heterogeneity analyses to reinforce our baseline findings, and the primary outcomes are summarized as follows. First, the results are more pronounced in regions with higher government trust, indicating that AGIs are more effective when the government is more trusted by the public. Second, AGIs' effectiveness is heightened in areas where specific cultural values are readily disseminated, confirming the theoretical conjecture that AGIs influence corporate financialization by shaping regional culture. Finally, we find that AGIs' impact on corporate financialization is stronger when more extensive local firm interactions occur and higher attention is paid to AGIs in local communities.

The contributions of our study are threefold. First, we extend the understanding of the relationship between formal institutions and culture. Previous studies primarily focus on the substitution effects of culture on formal institutions, examining how cultural factors shape the effectiveness and outcomes of formal institutional arrangements (e.g., Aghion et al., 2010; Aghion et al., 2011; Alesina et al., 2013; Du et al., 2017; Li et al., 2017; Tabellini, 2008). However, limited research explores the economic consequences of the interaction between formal and informal institutions. Our study addresses this gap by demonstrating that local AGIs can inhibit corporate financialization. This finding suggests that macrolevel formal institutions exert a strong influence on local culture, which in turn affects corporate behavior. Through this contribution, we enhance the understanding of the intricate relationship between government policies and cultural preferences.

Second, our study enriches the literature concerning the determinants of corporate financialization. Previous studies predominantly focus on identifying determinants and exploring the economic consequences of financialization. Studies on macrolevel determinants mainly include formal institutions such as minimum wage, the Labor Contract Law of China, and economic policy uncertainty (Du et al., 2022; Hou et al., 2021; Huang et al., 2023; Li & Shen, 2023; Liu & Lv, 2023; Xu, Steiner, & de Haan, 2023; Zhang et al., 2023; Zhao & Su, 2022). However, a scarcity of research investigating the indirect impact and underlying mechanisms through which formal institutions affect financialization remains. Our study adopts a novel perspective by exploring the impact of government AGIs on corporate financialization through the lens of AGIs' influence on culture. This unique perspective provides a valuable supplement to previous studies on corporate financialization, providing valuable insights on the indirect pathways and mechanisms through which formal institutions shape financialization outcomes.

Finally, our study has important policy implications for preventing financial risks. The rational allocation of corporate financial assets and effective risk prevention measures are essential to ensure that the capital market effectively serves the real economy. With the development of financial markets, an increasing number of firms are engaging in financial asset investment, which can crowd out the real economy. As drivers of economic development and transformation, nonfinancial firms are deeply influenced by formal institutions and cultural factors. Our study reveals that as a macrolevel formal institution, AGIs have a substantial impact on gambling culture and effectively constrain nonfinancial firms' corporate financialization. The findings offer

[1] We acknowledge the concern that lower per capita gambling criminal cases may imply weaker enforcement or higher tolerance of gambling; however, we argue that the likelihood of this scenario is low for several reasons. First, it is important to note that all gambling cases listed on China Judgments Online involve criminal behavior. Second, the strictness of legal enforcement of crimes in China is relatively consistent nationwide. Given these factors, we argue that per capita gambling criminal cases are a reliable indicator of AGIs' effectiveness. We provide empirical evidence to further validate the reliability of our indicator. Our findings indicate that regions with stronger legal enforcement tend to have fewer gambling cases. This implies that fewer reported cases reflect a lower level of gambling activities in a region, indicating greater AGI effectiveness. See Appendix B for our detailed empirical process.

empirical evidence that can guide policymakers in effectively mitigating the phenomenon of corporate financialization and preventing financial risks at the microlevel.

The remainder of this paper is organized as follows. Section 2 provides a literature review and hypotheses development; Section 3 describes the research design; Section 4 provides the empirical results; and Section 5 concludes.

2. Literature review and hypotheses development

2.1. Literature review

2.1.1. Influence of formal institutions on informal institutions

Informal institutions have a profound influence on economic development and are reciprocally influenced by the formal institutions established by state and government policies (Alesina & Giuliano, 2015; Bau, 2021; Bau & Fernández, 2021). This implies that formal institutions can shape culture. Specifically, there are two primary ways in which formal institutions can influence culture. First, strong formal institutions can reinforce the moral norms that individuals inherently possess and facilitate the formation of cultural norms associated with these institutions. According to social identity theory (Ashforth & Mael, 1989), institutions incentivize individuals to adopt certain practices and behavioral patterns, and those who violate these rules may face lower utility or even punishment. Consequently, individuals tend to develop appropriate patterns of behavior that align with the framework of formal institutions. Second, formal institutions can also weaken individuals' intrinsic motivation to comply with existing norms, leading to a substitution effect of formal institutions on informal institutions (Bowles & Polania-Reyes, 2012; Foucault, 1995; Lowes et al., 2017). Changes in the institutional environment resulting from government policies can alter the incentives for individuals, potentially influencing and even reshaping their attitudes and social norms over time (Bau & Fernández, 2021). Therefore, the impact of government policies on the institutional environment can have far-reaching consequences for individual behavior and cultural norms.

A growing body of research building on the above theoretical logic explores the impact of formal institutions on culture. For instance, Campa and Serafinelli (2019) examine the impact of political and economic differences between East and West Germany on gender role attitudes. Their findings reveal that women from East Germany, where the socialist regime fostered gender equality, are more likely to prioritize career success than women from West Germany. This implies the within-country influence of formal institutional arrangements on cultural norms and attitudes. Additionally, Bau (2021) directly investigates whether government policies changed traditional culture, demonstrating that the introduction of pension policies has a significant effect on where future generations choose to live after marriage, suggesting that policy interventions can indeed have a significant influence on cultural considerations such as living arrangements. While these studies provide insights on the profound impact of formal institutions on local culture, research regarding how formal institutions affect firm-level behavior through cultural mechanisms remains limited.

2.1.2. Determinants of corporate financialization

Previous research extensively examines the influence of firm and macrolevel factors on corporate financialization, including formal and informal institutions. At the firm level, Zhu et al. (2023) find a positive association between corporate tax avoidance and corporate financialization. Jiang et al. (2022) reveal that the presence of other large shareholders reduces the level of corporate financialization, indicating that ownership structure influences financialization outcomes. Feng et al. (2022) determine that corporate diversification is positively associated with corporate financialization, reduces investment efficiency, and makes profitable financial assets more attractive. Additionally, Tang and Zhang (2019) demonstrate that the relative risk of fixed investments and the rate of return gap between financial and fixed investments influence firms' decisions regarding financialization.

At the macrolevel, economic policy uncertainty (Zhao & Su, 2022), housing booms (Wang, Sun, & Xu, 2022); regulatory uncertainty, measured by changes in CSRC chairs (Huang et al., 2023); green credit policy (Zhang et al., 2023); changes in minimum wage (Du et al., 2022); China's Labor Contract Law (Hou et al., 2021); low-carbon city pilot policy (Liu & Lv, 2023); accelerated depreciation policy (Li & Shen, 2023); fiscal policy (Qi et al., 2021); and the Fair Competition Review System implemented in 2016 (Xu, Gao, et al., 2023) affect corporate financialization by influencing firms' precautionary saving or speculation motivations (Du et al., 2022; Huang et al., 2023). Informal institutions also impact corporate financialization. For instance, Xue et al. (2023) find that gambling culture positively affects financialization by influencing managers' risk-taking and local investors' risk preferences.

While some studies investigate firm and macrolevel factors, including formal and informal institutions, minimal research has directly investigated the impact of formal institutions on cultural practices and subsequent influence on corporate financialization. By exploring this question, our study enriches the literature on the determinants of corporate financialization.

2.2. Hypotheses development

The analysis above highlights the profound and lasting impact of formal institutions on local culture, extending beyond immediate policy implementation. In the case of the Chinese government's AGIs, these measures establish deterrence at the societal level, reducing local gambling preferences and restraining local speculative tendencies, which fosters a preference for conservatism. Furthermore, based on social identity theory, existing, long-term behavioral norms gradually spread from some groups to a larger scale and eventually reshape behavior across society (Young, 2021). Notably, AGIs in China exhibit regional variations that have altered regional social norms, including gambling preferences, generating distinct social norms in different regions that may further affect local firms' behavior. Specifically, at the firm level, local culture has a significant impact on firms' decision making and governance processes as it influences local managers' cognition. For example, previous research indicates that factors such as a merchant guild culture, Confucianism, clan culture, and religious culture have important effects on corporate financial decisions (Du, 2015; Du et al., 2015, 2017; Hu et al., 2019; Zhang, 2020). Therefore, we argue that more effective AGIs are likely to cultivate a local culture with conservative preferences that can subsequently impact local corporate decisions, including financialization levels.

In terms of how AGIs affect financialization, we focus on two primary motives of corporate financialization, including substitution and precautionary savings motives, as the two main motives for corporate financialization (Li & Shen, 2023). Substitution motive suggests that AGIs can decrease corporate financialization by exerting a negative influence on gambling and risk preferences. According to this theory, when the rate of return on financial assets outperforms firms' profitability, they tend to invest in financial assets to maximize profits (Demir, 2009; Orhangazi, 2008; Tang & Zhang, 2019). Executives with a higher propensity for risk-taking tend to display a greater inclination toward diversifying investments (Malmendier & Tate, 2015), exhibiting a more speculative approach and allocating a larger portion of investments toward financial assets in pursuit of higher returns (Xue et al., 2023). For example, Xue et al. (2023) document that firms in regions that are influenced by a stronger gambling culture exhibit stronger risk preferences, leading to heightened financialization. More effective AGIs can affect local social norms by reducing gambling preferences, and lower gambling preferences could restrain firms' risk preferences (Alharbi et al., 2023; Xue et al., 2023), resulting in a diminished likelihood of investing in financial assets.

The precautionary saving motive suggests that AGIs can increase

corporate financialization as investing in financial assets serves as a safeguard against potential disruptions in a firm's capital chain arising from sudden cash flow fluctuations (Huang et al., 2023; Stulz, 1996; Xu & Xuan, 2021). As more effective AGIs decrease gambling and risk preferences, firms tend to exhibit lower levels of risk tolerance. Based on the precautionary saving motive, firms with lower risk preferences tend to allocate a larger proportion of resources to financial assets to protect against adverse cash flow fluctuations. Therefore, under the influence of conservative norms established by AGIs, firms are likely to hold more financial assets, contributing to higher corporate financialization. To empirically test these opposing predictions, we propose the following competing hypotheses:

H1a. Firms located in regions with more effective antigambling interventions tend to have lower financialization.

H1b. Firms located in regions with more effective antigambling interventions tend to have higher financialization.

3. Research design

3.1. Sample and data

We use Chinese A-share nonfinancial firms listed on the Shanghai and Shenzhen stock exchanges from 2008 to 2018 as our initial sample. We obtained financial data from the China Stock Market and Accounting Research (CSMAR) database. Regional data were obtained from the CSMAR database and the National Bureau of Statistics. We collected gambling-related crime data in each province from China Judgments Online.[2] We excluded firms in financial industries, those with special treatment (*ST*) status,[3] and those with missing variables. To mitigate the influence of outliers, all continuous variables were winsorized at 1% and 99% levels.

3.2. Model specification

To examine the impact of AGIs' effectiveness on corporate financialization, we reference Duchin et al. (2017) and develop the following model (1):

$$Fin\_asset_{i,t} = \alpha_0 + \alpha_1 Antigamble_{i,t} + \alpha Controls_{i,t} + Year + Industry + \varepsilon_{i,t} \quad (1)$$

where the dependent variable (*Fin_asset*) indicates corporate financialization level, which is measured by the ratio of financial assets to total assets (Duchin et al., 2017; Jiang et al., 2022). Financial assets include trading financial assets, available-for-sale financial assets, held-to-maturity investments, long-term equity investments, and real estate investments. The main independent variable is *Antigamble*, which represents the effectiveness of AGIs in each province. We use the negative value of the number of per capita gambling-related crimes[4] in each province as a proxy for *Antigamble*. Specifically, we use Python to extract the judgment documents for 2014–2019 from China Judgments Online, obtaining per capita gambling crime for each province. A lower incidence of such cases implies reduced resident gambling involvement, signaling the effectiveness of government AGIs. To facilitate the understanding of our empirical results, we use the negative value of the per capita gambling-related crime cases (*Antigamble*) in each province to measure the effectiveness of AGIs. A higher *Antigamble* value suggests greater AGI effectiveness in the province. *Antigamble* is calculated using a six-year average (2014–2019) to mitigate the potential impact of ad hoc campaigns for public safety in China. We also conduct an institutional discussion and empirical analysis to verify the validity of this proxy in Appendix B.

Referencing Duchin et al. (2017), we control for other variables that may affect corporate financialization, including sales growth (*Growth*), firm size (*Size*), leverage (*LEV*), profitability (*ROA*), ownership proportion of the largest shareholder (*Share_1*), ownership concentration (*HHI_share*), nature of ownership (*SOE*), audit quality (*Big10*), occurrence of loss (*Loss*), separation of ownership and control rights (*Separation*), cash flow (*Cashflow*), capital expenditure (*Capital*), tangibility (*PPE*), and per capita lottery sales (*Lottery*). We also control for year and industry fixed effects. Detailed variable definitions are presented in Table A1 in Appendix A.

4. Empirical results

4.1. Descriptive statistics

Table 1 presents the descriptive statistics for our main variables. The mean value of corporate financialization (*Fin_asset*) is 0.067 with a maximum value of 0.547, a minimum value of 0, and a standard deviation (SD) of 0.102. This indicates that financial assets account for 6.7% of the total assets in our sample on average, and considerable variation in financial asset ratios is evident among different companies. The effectiveness of AGIs (*Antigamble*) has a maximum value of −0.031, a minimum value of −0.095, and a SD of 0.027, indicating significant variation in the effectiveness of the policy across different provinces. The mean value of the nature of ownership (*SOE*) is 0.420, indicating that about 42% of the sample are state-owned enterprises. Descriptive statistics for all control variables fall within a reasonable range.

4.2. Baseline regression

Table 2 presents the baseline results regarding the relationship between the effectiveness of AGIs and corporate financialization. Column (1) shows the regression results of a parsimonious model that only includes *Antigamble* and year and industry fixed effects, and column (2) includes all the control variables. In column (2), the estimated coefficient of *Antigamble* is −0.179, which is significant at the 1% level, indicating that a one SD increase in *Conservativism* reduces corporate financialization by 7.21% ((0.179 * 0.027)/0.067). This result confirms H1a, indicating that AGIs curb corporate financialization.

We argue that the effectiveness of local AGIs can restrain firms' speculative investments in financial assets. When the market turnover ratio is high, market investors are optimistic about stock trading (Wang, Su, & Duxbury, 2022). In such a scenario, firms tend to use financial assets for speculation, increasing financialization. To test the constraining effect of local government AGIs on corporate financialization, we define turnover ratio (*Turnover*) as an indicator that equals one if the annual average daily turnover ratio is above the median and zero otherwise. We calculate the daily turnover ratio as the daily trading volume divided by the annual average of the firm's outstanding shares.

Table 3 presents the regression results. Column (1) only includes *Antigamble*, turnover rate (*Turnover*), and the interaction term between them (*Antigamble*Turnover*), and column (2) includes all control variables. The results in column (2) show that the estimated coefficient of the interaction term, *Antigamble*Turnover*, is −0.088 and is significantly negative at the 1% level, indicating that the restraining influence of the effectiveness of AGIs on corporate financialization is more pronounced when the market turnover rate is high. Overall, the empirical results in Tables 2 and 3 show that the effectiveness of local AGIs significantly curbs corporate financialization by reducing speculative tendencies, restricting corporate risks.

[2] An official website with approximately 105,600,000 court decisions from all regions of China. Link: https://wenshu.court.gov.cn/.

[3] Listed companies with negative net income for two consecutive years are designated as special treatment (ST).

[4] Gambling-related crimes include participating in gambling activities and operating gambling businesses.

Table 1
Descriptive statistics
This table reports descriptive statistics for our main variables. All continuous variables are winsorized at the top and bottom 1% levels. Detailed variable definitions are provided in Appendix A.

Variable	N	Mean	SD	Min	P25	P50	P75	Max
Fin_asset	23,487	0.067	0.102	0.000	0.005	0.027	0.082	0.547
Antigamble	23,487	−0.031	0.027	−0.095	−0.044	−0.025	−0.007	−0.003
SOE	23,487	0.420	0.494	0.000	0.000	0.000	1.000	1.000
ROA	23,487	0.035	0.063	−0.273	0.013	0.035	0.064	0.196
LEV	23,487	0.448	0.216	0.052	0.277	0.441	0.609	0.978
Size	23,487	22.030	1.295	19.340	21.110	21.870	22.790	25.990
Big10	23,487	0.508	0.500	0.000	0.000	1.000	1.000	1.000
Share 1	23,487	35.520	14.910	9.230	23.660	33.590	45.710	74.980
Loss	23,487	0.105	0.306	0.000	0.000	0.000	0.000	1.000
Growth	23,487	−0.110	4.043	−22.710	−0.483	0.042	0.423	19.600
Separation	23,487	5.017	7.603	0.000	0.000	0.000	8.965	28.320
HHI share	23,487	0.168	0.117	0.015	0.078	0.139	0.231	0.565
Cashflow	23,487	0.041	0.075	−0.198	0.002	0.041	0.085	0.249
Capital	23,487	0.054	0.060	−0.101	0.014	0.039	0.081	0.268
PPE	23,487	0.227	0.169	0.002	0.095	0.193	0.326	0.725
Lottery	23,487	11.537	0.659	9.689	11.216	11.477	12.219	12.421

Table 2
Antigambling intervention effectiveness and corporate financialization
This table presents the regression results regarding the relationship between the effectiveness of antigambling interventions and corporate financialization. Column (1) presents the baseline results without control variables and column (2) includes all control variables. The *t*-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980) and clustered at the firm level (Petersen, 2009). ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively. Detailed variable definitions are provided in Appendix A.

	(1)	(2)
	Fin_asset	Fin_asset
Antigamble	−0.156***	−0.179***
	(−2.70)	(−3.01)
SOE		0.019***
		(4.77)
ROA		−0.090***
		(−3.40)
LEV		−0.067***
		(−6.58)
Size		0.005***
		(3.17)
Big10		−0.001
		(−0.34)
Share_1		−0.000
		(−0.63)
Loss		0.010**
		(2.53)
Growth		0.000**
		(2.09)
Separation		0.000*
		(1.76)
HHI_share		−0.033
		(−0.70)
Cashflow		−0.003
		(−0.23)
Capital		−0.233***
		(−14.47)
PPE		−0.123***
		(−12.12)
Lottery		0.240*
		(1.77)
Constant	0.054***	0.026
	(7.56)	(0.76)
Year	Yes	Yes
Ind	Yes	Yes
Observations	23,487	23,487
Adj R^2	0.100	0.173

Table 3
Speculation motive, the effectiveness of antigambling interventions, and financialization
This table presents the regression results regarding the moderating effect of the market turnover rate on the relationship between the effectiveness of antigambling interventions and corporate financialization. Column (1) reports the results without control variables and column (2) includes all control variables. The *t*-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980) and clustered at the firm level (Petersen, 2009). ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively. Detailed variable definitions are provided in Appendix A.

	(1)	(2)
	Fin_asset	Fin_asset
Antigamble*Turnover	−0.099***	−0.088***
	(−3.10)	(−2.79)
Antigamble	−0.106*	−0.134**
	(−1.88)	(−2.28)
Turnover	0.002	0.026***
	(0.57)	(4.71)
Controls	No	Yes
Year	Yes	Yes
Ind	Yes	Yes
Observations	23,487	23,487
Adj R^2	0.100	0.173

4.3. Robustness tests

4.3.1. Instrumental variable approach

To address potential endogeneity issues, we conduct a two-stage least squares (2SLS) regression analysis using two IVs related to the effectiveness of AGIs in a region, including (1) the number of people in grassroots governance organizations (*FunOrgPeople*) and (2) the proportion of county-level old revolutionary base areas (*Revo_area*). These two IVs influence the effectiveness of AGIs but have no direct effect on corporate financialization.

In terms of the first IV, grassroots organizations have a pivotal influence on local governance, the provision of local public goods, economic development, and legal environment within a region (Pesqué-Cela et al., 2009; Zhang et al., 2004). In the specific context of AGIs in China, grassroots organizations such as village and community committees are pivotal for effective monitoring and reporting, subsequently strengthening law enforcement. For example, grassroots organization members can communicate the adverse effects of gambling to local residents such as economic losses and potential social instability through methods like propagation. Their outreach efforts endeavor to heighten local awareness regarding the harmful economic implications

of gambling and prevailing antigambling laws, bolstering law enforcement effectiveness in the area. Therefore, we posit that the proportion of practitioners in grassroots governance organizations, particularly village and community committees, positively correlates with the effectiveness of AGIs in a region; however, this factor does not directly influence corporate financialization.

The second category is the prevalence of county-level old revolutionary base areas, which were mainly established by the Communist Party of China's army between 1927 and 1945 (Yu et al., 2016). Counties identified as such traditionally exhibit strong loyalty to the Party and enthusiasm for political initiatives, benefiting from increased central government resources, which enables such regions to implement central policies more decisively and effectively (Shi et al., 2023; Xu & Tian, 2020). Furthermore, these areas typically have higher levels of government trust and stronger support for government initiatives (Zeng et al., 2021). In essence, local government actions in old revolutionary base areas are more aligned with legal directives, and have a higher likelihood of public trust, culminating in more effective government policy enforcement. Therefore, we expect that the proportion of county-level old revolutionary base areas to be significantly and positively associated with the effectiveness of AGIs in a region, with no anticipated impact on corporate financialization.

To perform these IV analyses, we define the two variables as follows. (1) *FunOrgPeople* represents the number of practitioners in grassroots governance organizations in a province, and (2) *Revo_area* is measured by the ratio of the number of county-level old revolutionary base areas to the total county count in a province.[5] We first conduct separate 2SLS regressions using these IVs, presenting the results in Table 4, columns (1)–(4). Subsequently, we include both IVs in the 2SLS regression, and the corresponding results are presented in columns (5) and (6) of Table 4.

We conduct several tests to verify the validity of the IVs. First, referencing Bertoni et al. (2023), we employ the Cragg–Donald weak instrument test. The results in Table 4 indicate that both of our IVs are robust, valid, and not weak, as evidenced by the Cragg–Donald Wald F-statistic surpassing the Stock–Yogo weak ID test's critical values (10% maximum IV size), as suggested by Stock and Yogo (2005, pp. 80–108). Additionally, an underidentification test reveals that the Kleibergen–Paap rk LM statistic's p-value is below 0.01, indicating the relevance of the instrument and that the instrument is not underidentified (Tunyi, 2021). Moreover, since we have two IVs for one endogenous variable (*Antigamble*), we also conduct an overidentification test (Wang et al., 2019). Referencing Bertoni et al. (2023), we employ the Hansen J-statistic overidentification test to determine the exogeneity of our IVs. Columns (5) and (6) indicate that the p-value of the Hansen J-statistic is above 0.1, which fails to reject the null hypothesis that the IVs are not correlated with the residuals, indicating that our IVs are exogenous. Overall, these results indicate that our IVs are valid.

The first-stage test results of the IV approach are presented in columns (1), (3), and (5), using *Antigamble* as the dependent variable. In column (1), where the number of practitioners of grassroots governance organizations serves as the IV, the coefficient for *FunOrgPeople* is 0.038, which is statistically significant at the 1% level. Column (2) displays the results using the proportion of county-level old revolutionary base areas as the IV. The coefficient of *Revo_area* is 0.066 and is statistically significant at the 1% level. In column (3), when both IVs are included, the coefficients of *FunOrgPeople* and *Revo_area* are 0.043 and 0.068, respectively. This result aligns with our expectations, indicating a significant positive correlation between the IVs and AGIs.

Columns (2), (4), and (6) present the results of the second-stage 2SLS test, using *Fin_asset* as the dependent variable and *Antigamble* as the independent variable. We observe that when *FunOrgPeople* and *Revo_area* serve as IVs, the coefficients of *Antigamble* are −0.975 in column (2) and −0.541 in column (4), which are both statistically significant at the 1% level. When both IVs are included, the coefficient of *Antigamble* is −0.630 in column (6). These results confirm the robustness of our baseline findings after addressing endogeneity concerns using the IV approach.

4.3.2. Alternative measures of the effectiveness of AGIs

In this section, we introduce alternative measures representing the effectiveness of AGIs. In the main results, *Antigamble* is the same for each province across all years in the sample period; however, the intensity of government AGIs may vary over time. Therefore, we use *Antigamble2*, representing the negative value of per capita gambling-related crime cases in each province in year *t* as an alternative measure of AGI effectiveness.[6] Column (1) of Table 5 presents the regression results. The estimated coefficient of *Antigamble2* is negative and significant at the 1% level, which is consistent with our baseline results, indicating that our findings remain robust.

Second, we use the intensity of government propaganda on antigambling as an alternative measure of AGI effectiveness. We use the weekly Baidu[7] search index with the keyword "gambling" in each province to construct an alternative variable. In China, a high incidence of gambling is often associated with legal holidays such as the Spring Festival, Labor Day, National Day, and summer vacations, during which the Chinese government emphasizes antigambling campaigns. Therefore, we use the ratio of this index during holidays in relation to the overall index to measure the local government's implementation of antigambling policies. A higher ratio indicates stronger antigambling enforcement by the local government during holidays and a higher level of government propaganda on antigambling. Column (2) of Table 5 presents the regression results. The estimated coefficient of propaganda on antigambling (*Baidu Index*) is negative and significant at the 1% level, which is consistent with our baseline results, indicating that our findings remain robust.

4.3.3. Alternative measure of corporate financialization and model

To further ensure the robustness of our results, we use an alternative variable to measure corporate financialization. Referencing Jiang et al. (2022), we exclude long-term equity investments from corporate financialization and use the remainder (trading financial assets, available-for-sale financial assets, held-to-maturity investments, and investment in real estate) as a new variable (*NewFin_asset*). Column (3) of Table 5 presents the regression results, and the estimated coefficient of the effectiveness of AGIs (*Antigamble*) is negative and significant at the 1% level, which is consistent with our baseline results.

Finally, since the dependent variable is firms' financial assets ratio, which takes values between 0 and 1, and a large portion of our sample has a value of 0, we replace the ordinary least squares regression with a tobit model to reestimate the results. Column (4) of Table 5 presents the regression results of the tobit model, indicating that the *Antigamble* coefficient is negative and significant at the 1% level. The above results confirm the robustness of our findings.

4.4. Mechanism analysis

According to our theoretical analysis, AGIs influence regional culture, affecting corporate financialization. The most relevant culture associated with AGIs is gambling culture, which is manifested through local residents' risk preferences (Ji et al., 2021; Qian & Wu, 2021).

[5] All results hold when we employ the number of county-level old revolutionary base areas in a province as our IV.

[6] Due to the available gambling crime data only covering the years since 2014, we only use samples for the years 2014–2018 when the explanatory variable is *Antigamble2*.

[7] This is a home-grown internet service provider in China that is similar to Google in the US.

Table 4
Robustness test: Instrumental variable approach
This table presents the results of the two-stage least squares regression. Columns (1), (3), and (5) (columns (2), (4), and (6)) present the first (second) stage results. The *t*-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980) and clustered at the firm level (Petersen, 2009). ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively. Detailed variable definitions are provided in Appendix A.

	(1)	(2)	(3)	(4)	(5)	(6)
	IV1: FunOrgPeople		IV2: Revo_area		IV 1&2	
	Antigamble	Fin_asset	Antigamble	Fin_asset	Antigamble	Fin_asset
Antigamble		−0.975***		−0.541***		−0.630***
		(−3.48)		(−3.86)		(−4.88)
FunOrgPeople	0.038***				0.043***	
	(17.74)				(19.64)	
Revo_area			0.066***		0.068***	
			(28.05)		(29.40)	
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
Ind	Yes	Yes	Yes	Yes	Yes	Yes
Observations	23,487	23,487	23,487	23,487	23,487	23,487
Adj R^2	0.188	0.174	0.320	0.165	0.371	0.161
Cragg–Donald Wald F-statistic	1202.374		5981.450		4186.939	
Stock–Yogo weak ID test critical values at 10% IV size	16.38		16.38		19.93	
Kleibergen–Paap rk LM statistic (*p*-value)	<0.01		<0.01		<0.01	
Hansen J-statistic (*p*-value)					0.141	

Table 5
Robustness tests: Alternative measure and tobit model
This table presents the regression results of an alternative measure of the effectiveness of antigambling interventions and corporate financialization and the tobit model. Column (4) presents the results using the tobit model. Referencing Erkens et al. (2012) and Hong et al. (2014), we report Chi2 instead of pseudo- R^2 for the tobit model because the interpretation of the pseudo-R^2 for the tobit model is unclear. The *t*-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980) and clustered at the firm level (Petersen, 2009). ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively. Detailed variable definitions are provided in Appendix A.

	(1)	(2)	(3)	(4)
	Fin_asset	Fin_asset	NewFin_asset	Fin_asset
Antigamble			−0.160***	−0.179***
			(−4.45)	(−7.48)
Antigamble2	−0.024***			
	(−3.06)			
Baidu Index		−0.221***		
		(−4.36)		
Constant	−0.040	0.274***	0.025	0.026*
	(−1.10)	(4.39)	(1.26)	(1.93)
Controls	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Ind	Yes	Yes	Yes	Yes
Observations	12,855	23,487	23,487	23,487
Adj R^2	0.165	0.175	0.151	
Chi2				4514.06

Therefore, we use local residents' risk preferences (*Risk_preference*) as a mediating variable to explore its mediating role in the relationship between the effectiveness of AGIs and corporate financialization.

Referencing Chen et al. (2020), we use data from the Chinese General Social Survey (CGSS) to measure local risk preferences. For our assessment, we analyze responses to three risk-related questions in the CGSS that used a Likert scale to capture varying degrees of risk preference among respondents. The specific questions used in our study include Question 1: *I prefer a life filled with risks and opportunities over a more mundane and stable life*; Question 2: *If I have extra money, I will opt to invest it in high-risk, high-return projects*; Question 3: *When confronted with risky situations, I am more likely to be cautious and careful rather than bold and fearless.* For Questions 1 and 2, *Strongly agree*, *Agree*, *Neither agree nor disagree*, *Disagree*, and *Strongly disagree* responses are assigned values of 1, 2, 3, 4, and 5, respectively. For Question 3, *Strongly agree*, *Agree*, *Neither agree nor disagree*, *Disagree*, and *Strongly disagree* responses are assigned values of 5, 4, 3, 2, and 1, respectively. Higher values for these three questions indicate stronger local risk preferences. We execute the calculation of the *Risk_preference* variable using two steps. (1) We calculate the average values of the responses to these questions for each province, and (2) we perform principal component analysis and obtain the first principal component as the measure of *Risk_preference*. Significant Bartlett's test results and a Kaiser–Meyer–Olkin (KMO) value exceeding 0.5 support the reliability of our analysis; however, it is important to note that the scope of the CGSS survey, which is limited to 28 provinces in China, does constrain our sample size.

Referencing Roy et al. (2022) to establish *Risk_preference* as a mediator in the relationship between *Antigamble* and *Fin_asset*, the following three conditions should be satisfied. (1) A significant association between the key independent variable, the effectiveness of AGIs (*Antigamble*) and the dependent variable financialization (*Fin_asset*); (2) a significant relationship between the key independent variable (*Antigamble*), and the mediator, local risk preferences (*Risk_preference*); and (3) a significant relationship between the mediator (*Risk_preference*) and *Fin_asset* after controlling for *Antigamble*.

We employ the Sobel (1982) test to estimate the significance of the mediating effect, presenting the results in Table 6. The first-step results in column (2) of Table 2 indicate that *Antigamble* is significantly

Table 6
Mechanism analysis
This table presents the regression results of the mechanism analysis using the mediating effect method. The *t*-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980) and clustered at the firm level (Petersen, 2009). ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively. Detailed variable definitions are provided in Appendix A.

	(1)	(2)
	Risk_preference	Fin_asset
Risk_preference		0.002*
		(1.82)
Antigamble	−20.737***	−0.148**
	(−43.56)	(−2.21)
Controls	Yes	Yes
Year	Yes	Yes
Ind	Yes	Yes
Observations	22,749	22,749
Adj R^2	0.268	0.175
Sobel test (*p-value*)	<0.01	

associated with *Fin_asset*, and the coefficient of *Antigamble* is −0.179. The second-step results, as reported in column (1) of Table 6, reveal that when *Risk_preference* is the dependent variable, the coefficient of *Antigamble* is significantly negative, indicating that the effectiveness of AGIs significantly reduces local risk preferences. The third-step results, as reported in column (2) of Table 6, show that after controlling for *Antigamble*, the coefficient of *Risk_preference* is significantly positive and that the coefficient of *Antigamble* is −0.148, which has a magnitude lower than −0.179 in the first step, suggesting that a gambling culture partially mediates the relationship between the effectiveness of AGIs and financialization. Additionally, the Sobel test results ($p < 0.01$) show that the mediating effect of gambling culture is statistically significant. Combined, these results indicate that gambling culture is a mechanism through which the effectiveness of AGIs impacts financialization.

4.5. Cross-sectional heterogeneity

Referencing Ramalingegowda et al. (2021) and Quan et al. (2023), we enhance our theoretical analysis of the impact of AGIs on corporate financialization by incorporating cross-sectional variation. Specifically, our analysis is enriched and strengthened by exploring the moderating effects of four key factors, which include the level of trust in the government, the efficiency of cultural transmission, the proportion of local subsidiaries, and public attention to gambling. Examining these factors provides a more nuanced understanding of the influence of AGIs in varying contexts.

4.5.1. Government trust

This subsection examines the influence of government trust on the relationship between AGI effectiveness and corporate financialization. Theoretically, formal institutions impact cultural and social norms over time and not instantaneously. As noted previously, local AGIs first impact specific societal segments and gradually influence local risk preferences through legal sanctions and deterrence. Consequently, the effect of AGIs on regional culture is moderated by varying degrees of government trust. Regions with greater receptiveness to government policies due to higher trust are more likely to adjust risk behaviors under AGIs, eventually influencing the broader population.

To test the moderating effect of government trust, we construct two variables to represent trust in government, drawing on the China Family Panel Studies (CFPS)[8] for regional government evaluation scores and the Chinese Enterprise Survey System (CESS) for provincial social trust data (Chen et al., 2018; Li et al., 2019). We divide the sample into two subsamples based on the variables' median scores and reestimate our baseline model, presenting the results in Table 7. The estimated coefficients of AGIs' effectiveness (*Antigamble*) are significantly negative in higher trust subsamples, indicating a more pronounced long-term impact of government policies in areas with elevated trust in governmental institutions.

4.5.2. Social norm transmission efficiency

In this subsection, we examine the influence of cultural transmission efficiency on the relationship between AGIs' effectiveness and corporate financialization. Social identity theory indicates that increased contact with affected groups leads to the adoption of similar behaviors. As groups and individuals directly or indirectly affected by AGIs continue to expand locally, new cultural and social norms may emerge at the district level; however, the spread of cultural and social norms at the regional level hinges on effective communication and acceptance of these norms. The efficiency of this transmission process, which is potentially heightened by regional cultural tightness or congruence, is pivotal; thus, we expect that the impact of AGIs on regional culture will vary based on social norm transmission efficiency.

To assess this, we measure cultural transmission efficiency through cultural tightness and dialect similarity, referencing Chua et al. (2019) and Huang et al. (2022). We divide the sample into two subsamples based on the median values of these measures and reestimate our baseline model. The results in Table 8 reveal that the estimated coefficient of *Antigamble* is significantly negative in high-efficiency subsamples but not low-efficiency ones. This suggests that regions with higher cultural tightness or similarity experience more efficient intergroup norm transmission, enhancing the influence of government policies on corporate behavior.

4.5.3. Proportion of local subsidiaries

In this section, we examine the influence of local firm interactions on the relationship between the effectiveness of AGIs and corporate

Table 7
Local government trust, effectiveness of antigambling interventions, and financialization
This table presents the regression results of the moderating effect of local government trust on the relationship between the effectiveness of antigambling interventions and corporate financialization. Columns (1) and (2) (columns (3) and (4)) measure the government trust level based on survey data from the CFPS (CESS). The *t*-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980) and clustered at the firm level (Petersen, 2009). ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively. Detailed variable definitions are provided in Appendix A.

	(1)	(2)	(3)	(4)
	Fin_asset	Fin_asset	Fin_asset	Fin_asset
	CFPS		CESS	
	Low trust group	High trust group	Low trust group	High trust group
Antigamble	−0.016	−0.253**	0.030	−0.492***
	(−0.18)	(−2.00)	(0.39)	(−4.05)
Controls	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Ind	Yes	Yes	Yes	Yes
Observations	10,214	12,108	12,629	10,858
Adj R^2	0.213	0.155	0.129	0.235

Table 8
Local culture transmission efficiency, effectiveness of antigambling interventions, and financialization
This table presents the results of the moderating effect of local culture transmission efficiency on the relationship between the effectiveness of antigambling interventions and corporate financialization. Columns (1) and (2) (columns (3) and (4)) use cultural tightness (dialect similarity) to measure local culture transmission efficiency. The *t*-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980) and clustered at the firm level (Petersen, 2009). ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively. Detailed variable definitions are provided in Appendix A.

	(1)	(2)	(3)	(4)
	Fin_asset	Fin_asset	Fin_asset	Fin_asset
	Cultural tightness		Dialect similarity	
	Low transmission efficiency group	High transmission efficiency group	Low transmission efficiency group	High transmission efficiency group
Antigamble	0.274	−0.202***	−0.026	−0.218***
	(1.58)	(−2.79)	(−0.19)	(−3.11)
Controls	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Ind	Yes	Yes	Yes	Yes
Observations	12,392	11,095	9987	13,393
Adj R^2	0.130	0.222	0.148	0.197

[8] The China Family Panel Studies (CFPS), initiated by Peking University, is a nationwide, comprehensive, longitudinal social survey designed to address research needs regarding various social phenomena in China.

financialization. Chen et al. (2014) note that firms cannot separate themselves from the local environment and local cultural characteristics influence firms' behavior through interaction with local stakeholders. Local culture may influence the behavioral preferences of local executives, employees, customers, and other stakeholders, influencing corporate behavior (Callen & Fang, 2015; Hilary & Hui, 2009). We posit that as listed companies engage in increased interaction with local stakeholders, they are more susceptible to the influence of AGIs.

To examine the heterogeneous impact of AGIs on firms, we use the proportion of local subsidiaries of listed firms to measure local interaction and divide the sample into two subsamples based on the median values of these measures. We expect that firms with a higher proportion of local subsidiaries that have stronger interaction with local stakeholders are more exposed to external scrutiny from the public and are therefore more likely to be influenced by local culture and AGIs. Table 9 presents the regression results. The estimated coefficient of *Antigamble* is negative and significant at the 1% level in column (1) and insignificant in column (2), indicating that the restraining effect of AGIs on corporate financialization is more pronounced in firms with stronger local interaction.

4.5.4. Public attention to gambling

In this section, we investigate whether public attention to gambling influences the relationship between AGIs and corporate financialization. Public attention is a crucial factor affecting corporate activities (Merton, 1987). When the local public is more concerned about gambling, they are more likely to value AGIs, disincentivizing corporate financialization; therefore, we predict that compared with regions that exhibit less public attention to gambling, the restraining effect of AGIs on corporate financialization is more pronounced in regions with more public attention to gambling. To examine the moderating effect of public attention to gambling, we proxy it with the average weekly search volume for the keyword "gambling" on Baidu at the provincial level from 2011 to 2018. We divide the sample into two subsamples based on the median search volume and reestimate our baseline model. Table 10 reports the regression results, revealing that in the subsample with more local attention to gambling, the estimated coefficient of *Antigamble* is −0.215 and significant at the 1% level and is insignificant in the subsample with less local attention to gambling. The empirical results meet our expectation that public attention to gambling strengthens the restraining effect of the effectiveness of AGIs on corporate financialization.

Table 9
Local interaction, effectiveness of antigambling interventions, and financialization
This table presents the regression results of the moderating effect of local interaction on the relationship between the effectiveness of antigambling interventions and corporate financialization. Columns (1) and (2) report the results for the strong and weak local interaction subsamples, respectively. The *t*-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980) and clustered at the firm level (Petersen, 2009). ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively. Detailed variable definitions are provided in Appendix A.

	(1)	(2)
	Fin_asset	Fin_asset
	Strong local interaction	Weak local interaction
Antigamble	−0.221***	−0.058
	(−2.62)	(−0.85)
Controls	Yes	Yes
Year	Yes	Yes
Ind	Yes	Yes
Observations	11,479	11,213
Adj R^2	0.205	0.161

Table 10
Local attention to gambling, effectiveness of antigambling interventions, and financialization
This table presents the regression results of the moderating effect of local attention to gambling on the relationship between the effectiveness of antigambling interventions and corporate financialization. Columns (1) and (2) report the results of the more and less local attention subsamples, respectively. The *t*-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980) and clustered at the firm level (Petersen, 2009). ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively. Detailed variable definitions are provided in Appendix A.

	(1)	(2)
	Fin_asset	Fin_asset
	More local attention	Less local attention
Antigamble	−0.215***	−0.102
	(−3.12)	(−1.33)
Controls	Yes	Yes
Year	Yes	Yes
Ind	Yes	Yes
Observations	10,198	10,497
Adj R^2	0.170	0.167

5. Conclusions

This study examines the impact of the effectiveness of AGIs on corporate financialization. Our empirical results suggest that AGI effectiveness curbs corporate financialization, which is primarily achieved by restraining speculative tendencies. Our mechanism tests indicate that AGIs influence corporate financialization through local risk preferences. Heterogeneity tests reveal that the results are more pronounced in regions with greater government trust, enhanced regional cultural transmission efficiency, more extensive local firm interaction, and greater community attention to antigambling initiatives. The findings demonstrate that formal institutions can change and even reshape regional culture, influencing corporate practices.

Our study has significant practical implications for regulators and corporate decision makers. A country's governance system is shaped by its historical heritage, cultural traditions, and socioeconomic context. In other words, government policies are often attuned to local culture; therefore, government policies can be influenced by, and subsequently influence, formal institutions through channels such as social identity, affecting individual and corporate practices. Our study substantiates this perspective, revealing that government AGIs can effectively reshape regional gambling culture, consequently influencing corporate financialization trends. These findings contribute to policymakers' understanding of the intricate interplay between formal institutions and culture, which is significant for regulatory bodies seeking to optimize institutional frameworks and ensure robust business development as well as decision makers within companies.

CRediT authorship contribution statement

Xun Hu: Each author made an equivalent scholarly contribution to the research and composition of the manuscript. **Zhineng Long:** Each author made an equivalent scholarly contribution to the research and composition of the manuscript. **Cheng Xue:** Each author made an equivalent scholarly contribution to the research and composition of the manuscript. **Yanyu Zhang:** Each author made an equivalent scholarly contribution to the research and composition of the manuscript. **Xiangfang Zhao:** Each author made an equivalent scholarly contribution to the research and composition of the manuscript.

Declaration of competing interest

The authors declare that they have no known competing financial

interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A

Table A.1
Variable Definitions

Variable	Definition
Fin_asset	Financialization, measured by the ratio of corporate financial assets to total assets.
Antigamble	The effectiveness of antigambling interventions, measured by the negative value of per capita gambling-related crime cases in each province.
Growth	Growth rate, measured by the growth rate of sales.
Size	Firm size, measured by the natural logarithm of total assets.
LEV	Leverage, calculated as the ratio of total liabilities to total assets.
ROA	Profitability, calculated as the ratio of net income.
Share_1	The ownership percentage of the largest shareholder.
HHI_share	Ownership concentration, measured by the sum of the squares of the proportion of shares held by the top ten largest shareholders.
SOE	The nature of ownership, an indicator that equals one if the company is a state-owned enterprise and zero otherwise.
Big10	Audit quality, an indicator that equals one if the accounting firm of the company is Big10 and zero otherwise.
Loss	The occurrence of loss, an indicator that equals one if the net income of the company is negative and zero otherwise.
Separation	The separation of ownership and control rights, measured by the difference between control rights and ownership rights.
Cashflow	Cash flow from operating activities, measured by the ratio of net cash flow from operating activities to total assets.
Capital	Capital expenditure, measured by the ratio of capital expenditure to total assets.
PPE	Tangibility, measured by the ratio of PPE to total assets.
Lottery	Lottery sales, measured by the natural logarithm of lottery sales in year *t* for each province.
Turnover	Turnover ratio equals one if the annual average daily turnover ratio is above the median and zero otherwise. The daily turnover ratio is calculated as the daily trading volume divided by the annual average of the firm's outstanding shares.
FunOrgPeople	The number of practitioners in grassroots governance organizations by province.
Revo_area	The ratio of the number of county-level old revolutionary areas to the total county count in a province.
Risk_preference	Local risk preferences, measured by the first principal component of a principal component analysis based on responses to three risk-related Likert scale questions in the Chinese General Social Survey (CGSS).
Baidu Index	The local government's implementation of antigambling policies, measured by the ratio of the Baidu search index of the keyword "gambling" during holidays to the overall index.
NewFin_asset	The ratio of the sum of trading financial assets, available-for-sale financial assets, held-to-maturity investments, and real estate investments to total assets.

Appendix B. Validity Analysis of the Main Independent Variable: *Antigambling Interventions*

First, theoretically, we assert the likelihood is quite low that low per capita gambling criminal cases might imply weaker enforcement or higher tolerance since all gambling cases in China Judgments Online involve criminal behavior, which is among the most serious illegal activities in China. Moreover, the strictness of legal enforcement of crimes in China is similar nationwide, regardless of the differences in regional legal and institutional structure. Hence, we posit that the difference in the frequency of gambling cases between regions is primarily attributable to variations in the process of antigambling interventions (AGIs) such as publicity efforts.

Second, to provide more intuitive evidence that our main proxy is effective, we exploit the judicial delocalization reform in China as an exogenous shock to validate our AGI measure. This judicial reform involved transferring the fiscal and personnel management of Intermediate and Basic People's Courts from prefecture and county governments to provincial governments, reducing local government interference and improving judges' independence and impartiality (Liu et al., 2022; Miao et al., 2023). As this judicial reform can enhance judicial independence and impartiality, it strengthens deterrence and law enforcement. For example, Zhao and Zhang (2022) demonstrate that judicial delocalization reform leads to a decrease in corporate bribery expenditure. If we consider a low frequency of gambling cases to be an indicator of weak law enforcement, we expect an increase in the number of gambling cases per capita following the reform. Conversely, if a low frequency of gambling cases reflects strong government AGIs, we would expect a decrease in the number of gambling cases per capita after the reform.

China gradually implemented judicial reform in different provinces from 2014 to 2016 (Miao et al., 2023). We take advantage of the gradual implementation of this reform and employ a differences-in-differences (DID) approach to test the impact of the judicial reform on the frequency of gambling cases. The sequence of the judicial reform in different regions is as follows:

(1) Shanghai, Guangdong, Jilin, Hubei, Hainan, Qinghai, and Guizhou started in 2014
(2) Yunnan, Shanxi, Inner Mongolia, Heilongjiang, Jiangsu, Zhejiang, Anhui, Fujian, Shandong, Chongqing, and Ningxia started in 2015
(3) Beijing, Sichuan, Tianjin, Guangxi, Xinjiang, Jiangxi, Hebei, Henan, Hunan, Gansu, Xizang, Liaoning, and Shaanxi started in 2016

To conduct this analysis, we construct a province–year sample and apply equation (B.1) to examine the effect of judicial reform on the frequency of gambling cases, with the following variable definitions. *Post_Reform* equals one for the year after a province implemented the reform and zero otherwise. *Gamble_case* is the number of gambling cases per capita in a province in year *t*. *Lottery* is the lottery sales per capita in each province–year. *Surplus* is the government budget revenue minus budget expenditure, which is divided by GDP in each province–year. *Market* is the marketization index of each province–year.

$$Gamble\_case_{j,t+1} = \alpha_0 + \alpha_1 Post\_Reform_{j,t} + \alpha Controls_{j,t} + Year + Province + \varepsilon_{i,t} \quad \text{(B.1)}$$

Table B1 presents the results of equation (B.1). The coefficient of *Post_Reform* is significantly negative, indicating that after judicial reform implementation, the number of gambling cases decreased. This result suggests that a low number of gambling cases is a measure of strong government AGIs rather than weak law enforcement.

Table B.1
The effect of judicial reform on the regional frequency of gambling-related crimes
This table presents the DID regression results regarding the relationship between regional judicial reform and regional frequency of gambling-related crimes. *Post_Reform* is an indicator that equals one for the year after a province implemented this reform and zero otherwise. *Gamble_case* is the number of gambling cases in a province per capita in year *t*. *Lottery* is the lottery sales per capita in each province–year. *Surplus* is government budget revenue minus budget expenditure divided by GDP in each province–year. *Market* is the marketization index of each province–year. Province and year fixed effects are included. The *t*-statistics in parentheses are clustered at the province level. ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively.

	F.Gamble_case
Post_Reform	−0.031*
	(−1.73)
Gamble_case	0.427***
	(6.74)
Lottery	1.021*
	(1.82)
Surplus	−0.563***
	(−3.17)
Market	−0.017*
	(−1.71)
Constant	0.081
	(1.28)
Province	Yes
Year	Yes
Observations	122
Adj R^2	0.464

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