

Do ESG Ratings Discipline Managers? Evidence from the Reduction in Excessive Executive Perks

Yanxia Liu

liuyanxia@cfte@163.com

Beijing University of Chemical Technology

Huaijin Q

Central University of Finance and Economics

Siqin Liu

Inner Mongolia University

Yao Yu

China Academy of Fiscal Science

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Abstract

This study employs Chinese listed companies' inclusion in SynTao Green Finance's ESG ratings as a quasi-natural experiment. Based on the data of A-share listed companies from 2009 to 2021, it empirically examines the impact of ESG ratings on excessive executive perks using the difference-in-differences model. The results show that SynTao Green Finance's ESG ratings significantly reduce excessive executive perks. Mechanism tests indicate that ESG ratings inhibit executives' motivation for excessive executive perks by promoting executive shareholding and mitigating managerial myopia; and they reduce the opportunities for such excessive executive perks by lowering information asymmetry and increasing analyst coverage. Additionally, the study finds that the restraining effect of ESG ratings on excessive executive perks helps improve firms' total factor productivity. This study not only enriches ESG-related research from the perspective of informal regulation but also provides empirical evidence for promoting the high-quality development of enterprises.

1. Introduction

Environmental, Social, and Governance (ESG) practices have emerged as a comprehensive framework for promoting sustainable development, aiming to foster a harmonious relationship between humanity and the natural environment. Over time, ESG has transitioned from being a voluntary initiative to a mandatory compliance mechanism, with global regulatory landscapes revealing distinct patterns: the European Union leads in ESG regulation, China and the United States follow divergent paths, and emerging markets gradually align. In China, ESG has gained substantial attention from policymakers, regulators, businesses, and investors, particularly in light of the country's ambitious sustainability goals, including its "carbon peak" and "carbon neutrality" targets.

The ESG framework closely aligns with China's five development principles—namely "innovation, coordination, green development, openness, and sharing"—as well as the sustainable development goals outlined in the "14th Five-Year Plan" and the 2035 Vision. From a policy perspective, the Hong Kong Stock Exchange set a precedent by introducing the first ESG disclosure guidelines in August 2012, and the China Securities Regulatory Commission followed with the release of the "Corporate Governance Guidelines for Listed Companies" in 2018, which laid the groundwork for mandatory ESG information disclosure. Additionally, in November 2018, the Asset Management Association of China published the "Research Report on ESG Evaluation System of Listed Companies in China." By September 2021, the ESG public fund market in China had grown to a scale of 250 billion RMB, marking a fourfold increase from 2020. This rapid growth underscores the rising importance of ESG investment, with ESG ratings becoming a pivotal tool in investor decision-making. However, a significant challenge persists: the inconsistencies in ESG ratings across various agencies, which complicate the overall landscape.

Existing research primarily focuses on ESG ratings as a measure of corporate ESG performance and explores their economic consequences (Ghoul et al., 2011; Ng & Rezaee, 2015; Albuquerque et al., 2019; Yuan et al., 2022). However, research has found that divergence in ESG ratings significantly increases the stock price synchronicity of the rated companies, suggesting the presence of a "noise effect" in ESG rating discrepancies (Liu et al., 2023). These discrepancies are primarily attributed to variations in the evaluation criteria, weight distributions, and measurement methodologies employed by different rating agencies. Furthermore, the insufficient, inconsistent, and low-quality ESG data disclosed by companies exacerbates the difficulty of data collection for these agencies. Consequently, scholars have increasingly focused on the exogenous shocks created by authoritative ESG ratings. A prominent example is SynTao Green Finance, the first Chinese ESG rating agency, whose data is available on Bloomberg Terminal and is widely recognized in the market, offering an ideal setting to investigate the impact of ESG soft regulation on managerial behavior. In China's listed companies, excessive executive perks by executives have remained persistently high over the years. This phenomenon raises a pressing and underexplored question: Can market-based mechanisms, which lack legal enforceability, exert meaningful influence on curbing such excessive executive perks? And if so, what is the magnitude and nature of their impact? While the existing literature has examined the economic consequences of ESG ratings from perspectives such as firm valuation and corporate innovation (Tang & Zhong, 2019; Liu et al., 2023; Christensen et al., 2022), little attention has paid to the behavioral response of corporate managers—particularly regarding self-serving behaviors—in relation to ESG evaluations. That is, the existing body of work tends to treat ESG ratings as exogenous signals or inputs influencing firm outcomes, without exploring the potential of ESG as a soft governance mechanism to shape managerial behavior at the micro level. This paper addresses that gap by focusing specifically on excessive executive perks by senior executives, a salient and pervasive form of managerial rent extraction in China's corporate landscape. It seeks to investigate whether ESG ratings—despite their non-binding and non-regulatory nature—can effectively restrain executives from using corporate resources for personal gain. By doing so, this study contributes novel empirical evidence on the micro-level effectiveness of ESG ratings as instruments of soft regulation in emerging markets.

On-the-job consumption, also referred to in the literature as executive perks or perquisite consumption, lacks a universally accepted academic definition. Generally, it is regarded as a form of compensation or gain received by executives in addition to their regular wages or salaries. Some scholars further conceptualize it as privilege-based consumption, i.e., benefits extracted by executives by virtue of their positional power and organizational authority (Wan, 2007). In practical terms, executive on-the-job consumption typically includes access to luxurious office facilities, exclusive use of corporate vehicles or private jets, as well as expenditure on entertainment, dining, and other leisure activities. Empirical research suggests that the scale of such consumption is nontrivial: on-the-job consumption accounts for approximately 15% to 32% of total executive compensation in Chinese firms (Kato & Long, 2006), and may reach up to eight times the average cash salary of executives (Chen et al., 2010). These findings underscore that on-the-job consumption occupies a significant role in the executive compensation structure in China, functioning as a form of implicit incentive that often lies outside the boundaries of formal pay packages. However, the perverse effects of this phenomenon are increasingly evident. In practice, particularly in state-owned enterprises, some executives have exploited the loosely defined boundaries of on-the-job consumption to justify luxury spending in areas such as housing, dining, travel, and entertainment. These practices not only constitute rent-seeking behavior but also result in the misallocation of corporate resources and the erosion of shareholder and public interests. Consequently, the study of excessive executive perks by executives carries both policy relevance and academic value—especially in emerging markets where formal governance institutions remain underdeveloped or inconsistently enforced. Against this backdrop, this paper aims to empirically investigate the regulatory role of ESG ratings in restraining excessive executive perks by corporate executives. Specifically, this study seeks to address the following two questions: Do ESG ratings serve as an effective soft governance mechanism in curbing excessive executive perks by

executives? If such a disciplining effect exists, through what underlying mechanisms does the ESG rating system exert its influence on executive consumption behavior?

To examine the relationship between ESG ratings and excessive executive perks by corporate executives, this study focuses on the Chinese capital market and it utilizes the ESG ratings issued by SynTao Green Finance as an exogenous shock representing soft regulatory pressure. Several reasons justify the selection of this specific ESG rating source. First, SynTao Green Finance was the first domestic ESG rating agency in China whose data were integrated into the Bloomberg Terminal, signaling high market recognition and professional credibility. As such, its ratings have garnered significant attention from institutional investors and are regarded as a reliable reference point in the capital market. Second, SynTao Green Finance's ESG coverage is remarkably comprehensive. It includes all publicly listed firms in mainland China, Hong Kong-listed companies under the Stock Connect program, and major bond-issuing entities. Its data are drawn from both firm-level voluntary disclosures and externally sourced information obtained via big data technologies, such as media coverage, regulatory filings, and third-party reports. This allows the ratings to more accurately reflect a firm's actual ESG performance, beyond self-reported metrics. Third, SynTao Green Finance has developed a proprietary ESG risk assessment model that generates both quantitative ESG risk exposure scores and event-based risk indicators. These scores cover A-share (mainland), H-share (Hong Kong), U.S.-listed Chinese companies, and bond issuers, thereby offering a robust and unified ESG risk signal. This feature makes it especially valuable for researchers and practitioners seeking to evaluate ESG risks across multiple capital market platforms. Accordingly, this paper treats the introduction of a firm into SynTao Green Finance's ESG rating system as a quasi-natural experiment to study the disciplining effect of ESG ratings. Specifically, the indicator variable ESG is coded as one for the year in which a firm first receives a rating from SynTao Green Finance and for all subsequent years, and zero otherwise (Tan & Zhu, 2022). The core dependent variable, excessive executive perks, is defined as the residual component of actual executive consumption beyond the level predicted by fundamental economic determinants such as firm size, profitability, and industry characteristics. This approach captures the discretionary element of executive perks, which is more likely to be associated with managerial opportunism than with performance-based incentives.

This study uses a panel dataset of Chinese A-share listed firms spanning the period from 2009 to 2021. Leveraging the staggered inclusion of firms into the ESG rating system of SynTao Green Finance as a quasi-natural experiment, we implement a difference-in-differences (DID) model to identify the effect of ESG ratings on excessive executive perks. The baseline regression results indicate that, after controlling for a comprehensive set of covariates, as well as firm fixed effects and year fixed effects, ESG-rated firms experience a significant reduction in excessive executive perks. This finding suggests that ESG ratings, even without formal legal enforcement, can act as an effective soft governance mechanism. To ensure the robustness of the main results, we conduct several additional analyses. First, we employ alternative measures of excessive executive perks, and the negative association between ESG ratings and executive consumption persists across specifications. This confirms that our results are not sensitive to how the dependent variable is constructed. Second, we subject the findings to a series of robustness checks, including the replacement of variable definitions, alternative model specifications, subsample analyses, and controls for potential endogeneity. Across all these exercises, the central conclusion—that ESG ratings mitigate excessive executive perks—remains statistically and economically significant. Third, we vary the design of the DID framework to test for specification sensitivity. These alternative implementations consistently show that firms newly rated by SynTao Green Finance experience a greater post-treatment decline in excessive executive perks compared to firms not covered by the ESG rating system. Finally, we address a potential timing concern. Since the ESG rating may only influence firm behavior partially in the year of introduction, especially if the rating occurs mid-year, we conduct an exclusion test by removing all observations from the year 2015, during which SynTao Green Finance expanded its coverage. The results remain unchanged—ESG ratings continue to be associated with a statistically significant reduction in excessive executive perks. These findings jointly reinforce the argument that ESG ratings serve not only as symbolic signals to the market but also as effective disciplinary tools that constrain managerial opportunism in emerging capital markets.

To address potential endogeneity issues, particularly those arising from reverse causality, selection bias, or omitted variable bias, we employ the following identification strategies to strengthen the causal interpretation of our results. First, to mitigate concerns about reverse causality—i.e., the possibility that excessive executive perks influences a firm's likelihood of being rated—we re-estimate the main specification using a one-period lagged ESG rating as the key explanatory variable. The results remain robust and statistically significant: lagged ESG ratings are still associated with reduced levels of excessive executive perks, indicating that the effect is not driven by contemporaneous feedback. Second, to account for potential self-selection bias, we implement Propensity Score Matching (PSM) based on observable firm characteristics. Following the approach of Chen (2018), we use nearest-neighbor matching on firm size, financial leverage, firm age, and profitability to construct a matched sample of rated and unrated firms. The DID analysis on the matched sample yields results consistent with our baseline findings—the coefficient on ESG ratings remains significantly negative, suggesting that the effect is not an artifact of non-random sample selection. Third, to ensure that the observed relationship is not driven by unobservable time-varying confounders or random shocks, we conduct a placebo test. Specifically, we artificially assign ESG ratings to firms in 2013—a period before the actual ESG coverage expansion—and restrict the analysis to the pre-treatment window of 2010 to 2015. The placebo results show no statistically significant relationship between ESG ratings and excessive executive perks, which supports the validity of our identification strategy and suggests that the main results are not driven by spurious correlations or other latent factors. Collectively, these robustness checks reinforce the conclusion that ESG ratings exert a genuine disciplining effect on managerial rent extraction, rather than reflecting endogenous firm characteristics or random noise.

To further explore the underlying mechanisms and contextual conditions under which ESG ratings affect excessive executive perks, we conduct a series of cross-sectional analyses based on both managerial incentive structures and institutional environments. Specifically, we examine how the disciplining effect of ESG ratings varies across four dimensions: external pay fairness, internal control quality, ownership type, and regional marketization level. First, with regard to external pay fairness, we compare firms where executive compensation is below the industry-year average to those where it is not. The results show that the negative effect of ESG ratings on excessive executive perks is more pronounced when executive pay is relatively low, suggesting that executives with perceived pay inequity may have more substantial incentives to extract private benefits, making ESG oversight more consequential. Second, we examine the role of internal control quality. We find that ESG ratings have a more substantial constraining effect in firms with more effective internal control systems, implying that ESG-based external monitoring is more effective when complemented by robust internal governance mechanisms. Third, we consider ownership structure, distinguishing between state-owned enterprises (SOEs) and non-SOEs. The results indicate that the disciplining effect of ESG

ratings is significantly stronger in non-SOEs, where managerial autonomy is higher and market pressures are more pronounced. In contrast, SOEs may face less performance pressure and weaker market constraints, diluting the effect of ESG evaluation. Finally, we explore regional differences in market development, using the degree of marketization as a proxy. We find that ESG ratings are more effective in provinces or regions with higher levels of marketization, where market-based governance mechanisms are more functional and ESG-related reputational concerns are more salient.

Building on the preceding analyses, this study explores the underlying mechanisms through which ESG ratings affect excessive executive perks, focusing on two fundamental dimensions: managerial motivation and opportunity structure. First, from the perspective of incentive motivation, we find that ESG ratings reduce excessive executive perks by enhancing managerial ownership and curbing short-termism. These effects work by aligning the interests of management with those of long-term stakeholders, thereby lowering the managerial incentive to extract private benefits through on-the-job perks. Second, from the perspective of opportunity restriction, ESG ratings appear to reduce the information asymmetry between firms and external stakeholders and increase analyst coverage. Together, these mechanisms increase external scrutiny, reduce the opacity of managerial behavior, and thus constrain the opportunity set available for rent-seeking.

Moreover, prior studies have shown that strong ESG performance improves total factor productivity (Wu et al., 2023), while excessive executive perks, as a manifestation of agency problems, can hinder operational efficiency. Motivated by this, we further investigate whether the disciplinary effect of ESG ratings on executive perks translates into higher firm-level productivity. The results confirm this channel: ESG ratings, by curbing excessive executive perks, contribute to improvements in total factor productivity, thereby serving as a potential driver for high-quality, sustainable corporate development.

Our findings contribute to the existing literature in three important ways. First, while prior research has primarily focused on the economic consequences of ESG performance, such as its effects on financing costs, investment efficiency, or earnings quality (Lemma, 2022; Xie & Lyu, 2022; Pathak & Gupta, 2022), this paper is the first to investigate the behavioral impact of ESG ratings—as opposed to internal ESG practices—on executive-level rent extraction, specifically excessive executive perks. By leveraging a multi-period difference-in-differences design, we address potential endogeneity concerns and demonstrate that ESG ratings improve the firm's external information environment, effectively disciplining managerial behavior. In doing so, we extend the literature on ESG from the firm-level outcomes to micro-level governance mechanisms.

Second, this study contributes to the institutional development of ESG rating systems in China. The ESG ratings issued by SynTao Green Finance—China's first third-party rating agency to publish ESG indices—began with coverage of the CSI 300 firms in 2015. These ratings integrate ESG performance data with quantitative assessments of risks and negative externalities, thereby providing both investors and regulators with actionable insights. Unlike earlier studies that merely use ESG ratings as continuous variables in regressions, our empirical strategy leverages the initial release of ratings as an exogenous shock, offering a more credible identification strategy. Our findings provide empirical evidence supporting the governance value of ESG ratings and offer practical implications for improving rating system transparency and regulatory utility.

Third, the study enriches the literature on excessive executive perks by incorporating ESG into the analytical framework. While prior research has examined this issue from the perspectives of formal policy interventions or internal corporate governance (Zhang et al., 2020; Chu & Fang, 2016; Liu et al., 2020), we are the first to link ESG ratings—an informal, market-based governance mechanism—to the reduction of managerial perks. By identifying the dual pathways through which ESG ratings mitigate both the motivation and opportunity for excessive executive perks, we advance our understanding of how soft regulation can influence executive behavior. Furthermore, we demonstrate that this governance channel has real economic consequences by improving total factor productivity, thereby offering policy-relevant insights into the role of ESG in promoting sustainable and high-quality development.

The remainder of this paper is organized as follows. Section 2 provides a review of the literature and develops the research hypotheses. Section 3 describes the data, sample selection, model specifications, and variable definitions. Section 4 presents the baseline empirical results, while Section 5 examines the mechanisms through which ESG ratings affect executive behavior. Section 6 addresses endogeneity concerns, and Section 7 provides additional robustness checks. Section 8 concludes with a summary of findings and implications for policy and future research.

2. Literature Review and Hypothesis Development

2.1 Literature Review

2.1.1 Research on Corporate ESG

Existing research on ESG has primarily focused on the economic consequences of firms' ESG performance, with the majority of studies approaching the topic from the perspective of corporate financial behavior. In particular, a substantial body of literature has investigated how ESG performance influences corporate financing activities. Several studies have documented that strong ESG performance is associated with lower financing costs (Ghoul et al., 2011; Ng & Rezaee, 2015; Qiu & Yin, 2019). Among the mechanisms identified, the quality of ESG disclosure plays a critical role. Wang and Xie (2022) demonstrate that ESG information disclosure reduces financing costs through both an information channel—by improving transparency—and a reputational channel, by signaling corporate responsibility and long-term commitment to stakeholders. He et al. (2022) further find that good ESG performance helps alleviate financing constraints, thereby reducing firms' overall risk exposure. Similarly, Lemma (2022) reports a negative relationship between ESG engagement and debt financing, suggesting that firms with strong ESG activities may rely less on debt due to improved stakeholder trust and internal governance. In addition, ESG performance has been shown to enhance corporate information transparency, encourage long-term institutional ownership, and curb excessive investment behavior, all of which contribute to mitigating firms' reliance on short-term debt for long-term investments (Li & Chen, 2023).

In the domain of corporate investment, improvements in ESG performance have been shown to significantly reduce firm-level risk (Albuquerque et al., 2019; Yuan et al., 2022) and promote outbound foreign direct investment (Xie & Lyu, 2022). Strong ESG performance also contributes to greater investment

efficiency. According to Gao et al. (2021), ESG mitigates underinvestment through two channels—reducing agency costs and alleviating financing constraints—while it curbs overinvestment primarily by addressing agency problems. Moreover, ESG engagement enhances production efficiency by promoting energy conservation, emissions reduction, and resource optimization (Li & Li, 2023). From the perspective of corporate innovation, Fang and Hu (2023) find that ESG performance facilitates innovation by alleviating financing constraints, enhancing employee innovation efficiency, and increasing firms' risk tolerance. Beyond studies focusing on internal ESG practices, Liu et al. (2023) investigate the impact of third-party ESG ratings on firm innovation. They find that ESG ratings exert external pressure on firms to increase the quantity of green innovation, but potentially at the cost of reducing its quality, highlighting a possible trade-off between ESG-driven reputational compliance and substantive innovation outcomes.

In terms of earnings quality, Pathak & Gupta (2022), using a cross-country dataset covering 33 countries from 2010 to 2020, find that firms with stronger ESG performance engage in less opportunistic earnings management. Moreover, Borralho et al. (2022) highlight that the three components of ESG—environmental, social, and governance—have differentiated impacts on earnings management practices, indicating that the influence of ESG is multidimensional rather than uniform. In the Chinese context, Xi & Zhao (2022) show that strong ESG performance enhances the persistence of earnings by alleviating financing constraints, reducing operational risk, and promoting green innovation. Wu et al. (2023) further unpack the mechanisms by which ESG performance improves the value relevance of accounting earnings, identifying three core pathways: capability transformation (by enhancing endogenous growth capacity and mitigating operational risk), information transmission (by providing incremental non-financial information and increasing analyst coverage), and reputation enhancement (by strengthening corporate reputation in capital markets). Additionally, Bernardi & Stark (2016), analyzing panel data from South Africa between 2008 and 2012, find that after the mandatory adoption of Integrated Reporting (IR), the positive effect of ESG performance on analyst forecast accuracy becomes more pronounced, suggesting that improved ESG disclosure enhances the transparency and reliability of financial information.

Beyond its influence on firms' internal financial behavior, recent studies have also examined how ESG performance affects the decisions and judgments of external auditors. Tang et al. (2023) find that firms with higher ESG ratings are more likely to receive favorable audit opinions. This effect operates through ESG's impact on the firm's information production and disclosure behaviors, which in turn shape auditors' assessments and reporting decisions. Consistent with this, Wang et al. (2022) document that auditors are more inclined to issue unqualified (standard) audit opinions for firms with strong ESG performance, as these firms are generally associated with lower operational risk and a reduced risk of material misstatement, making auditors more confident in the integrity of the financial statements. Furthermore, Xiao et al. (2021) find that ESG ratings help reduce audit fees by mitigating both information risk and operational risk. As ESG-rated firms provide more transparent, consistent, and reliable information, the perceived audit risk declines, resulting in lower audit effort and cost.

An important question arising from the above findings is whether the various impacts of ESG performance ultimately translate into corporate value creation. This issue has drawn considerable scholarly attention, with a growing body of literature suggesting that ESG performance has significant effects on firm value and financial performance (Friede et al., 2015). Several studies have explored both the impact and the mechanisms through which ESG contributes to corporate value. For instance, Chen et al. (2025) identify a significant inverted U-shaped relationship between ESG disclosure and financial performance, suggesting that while moderate ESG engagement enhances value, excessive disclosure may incur diminishing or even negative returns. Qiang et al. (2025) demonstrate that ESG improves the efficiency of value creation by mitigating firm-level risk. Using data on Chinese listed firms, Han & Wu (2024) show that ESG ratings enhance corporate value by facilitating access to credit, which serves as a crucial financial conduit for firm growth. Similarly, Gao et al. (2022) find that strong ESG performance helps alleviate stock price crash risk by increasing investor attention to green investments, improving analysts' forecast accuracy, and disciplining managerial behavior. Beyond firm-level analyses, some studies have investigated the macro-level value-creation effects of ESG. For example, Mao & Wang (2023) examine ESG's employment effects through the lens of the labor market, finding that ESG advantages improve employment outcomes via three mechanisms: economies of scale in production, relaxation of financing constraints, and enhanced labor market attractiveness. At the national level, Wang et al. (2023) report that ESG performance at the country level fosters economic growth by promoting energy efficiency, increasing female labor force participation, and enhancing foreign investment attractiveness.

The above literature clearly demonstrates that corporate ESG performance generates positive economic outcomes across a variety of dimensions. In fact, this series of positive effects implies an important assumption that corporate ESG performance can be effectively identified and priced by the market. However, information in the real world is not completely transparent, and the market needs reliable signals to identify corporate ESG performance. Third-party independent ESG rating agencies represented by SynTao Green Finance play the role of information intermediaries and supervisors. It is particularly worth noting that when a company is first included in the coverage of such authoritative rating systems, this itself constitutes a strong exogenous signal event: it marks that the company is henceforth placed under a standardized, continuous, and public ESG review framework, and its production and disclosure of non-financial information will face systematic scrutiny from rating agencies and stakeholders.

2.1.2 Research on Executive Perks

Excessive executive perks by executives has long been a prevalent phenomenon among Chinese listed companies. As a product of incomplete contracting between shareholders and management, a certain level of on-the-job consumption may be rationalized as part of managerial incentives. However, when such consumption exceeds a reasonable threshold, it typically transforms into a form of agency cost (Jensen, 2001; Fama, 1980). In practice, the disclosure of on-the-job consumption remains largely voluntary in China. According to Chen et al. (2010), less than half of listed firms disclose such expenditures, and even when disclosed, they are usually reported only in aggregated form. This lack of granularity makes it difficult for external shareholders to distinguish normal from abnormal consumption, ultimately incentivizing greater opportunistic behavior by executives and pushing up excessive executive perks levels. Existing literature on the economic consequences of on-the-job consumption suggests that it reflects managerial rent extraction, whereby executives exploit their positional authority to pursue private benefits at the expense of firm resources, thereby undermining shareholder value. Against this backdrop, an important question arises: What factors influence managerial on-the-job consumption? Prior studies have examined this issue from various internal governance and incentive perspectives. At the individual level, Chen et al. (2017), drawing on upper echelons theory, find that executive characteristics—such as career stage,

gender, educational attainment, and CEO duality—affect on-the-job consumption. Zhang et al. (2020) report that academic experience enhances CEOs' moral awareness and self-discipline, leading to lower consumption-related agency costs. Xie & Sun (2020) show that independent directors with auditing experience play a significant role in curbing on-the-job consumption. From the compensation perspective, Feng & Zhao (2012) document a substitution effect between managerial ownership and on-the-job consumption: higher equity holdings by managers are associated with reduced perk consumption, thereby improving firm performance. Carrothers (2017) finds that firm size and cash compensation are key determinants of executive consumption behavior. At the institutional level, Chen et al. (2021) reveal that autonomous corporate charter provisions, particularly anti-takeover clauses, exert a trench effect by facilitating excessive executive perks. Chen & Yu (2022), using data on state-owned enterprises undergoing mixed-ownership reform along their control chains, find that such reforms are associated with significant reductions in on-the-job consumption, suggesting that shifts in control structure can reshape managerial incentives and accountability.

In addition to internal factors, a growing body of research has examined the external determinants of executive on-the-job consumption, highlighting the influence of regulatory, institutional, and capital market environments. From the governmental oversight perspective, Chu & Fang (2016) investigate the effect of government auditing conducted by the National Audit Office on excessive executive perks in central state-owned enterprises (SOEs). Their findings suggest that enhanced regulatory scrutiny curbs executive rent extraction. Similarly, Zhang et al. (2020) explore the impact of the "Eight-Point Regulation"—a nationwide anti-corruption initiative introduced in 2012—as an exogenous policy shock. By 2016, the average on-the-job consumption of SOEs had declined by 26.97% compared to non-SOEs unaffected by the regulation, indicating the policy's significant governance impact. Xu & Tan (2014) approach the issue from a relative compensation fairness standpoint. They find that when executives perceive their salaries to be below the regional or industry average, they are more likely to develop a sense of distributive injustice. This psychological response increases the likelihood of executives using on-the-job perks as a substitute for compensation. Research has also emphasized the disciplinary role of capital markets. Liu et al. (2020) find that short-selling pressure serves as an effective governance mechanism by reducing information asymmetry and alleviating agency problems, thereby constraining executives' on-the-job consumption. Sun & Qi (2021) examine the opening of China's capital markets via the Shanghai-Hong Kong and Shenzhen-Hong Kong Stock Connect programs. Their analysis shows that capital market liberalization suppresses executive perks by improving the information environment, enhancing the effectiveness of monetary compensation, and increasing dividend payouts. Finally, Chen et al. (2020) exploit the 2013 disclosure mandate by the Shanghai Stock Exchange regarding audit committee responsibilities, constructing a quasi-natural experiment using a difference-in-differences (DID) approach. They find that greater audit committee transparency significantly reduces executive on-the-job consumption, confirming the governance role of institutional disclosure reforms.

In the existing ESG literature, most studies have concentrated on the impact of firms' own ESG performance, while only a limited number have examined the implications of third-party ESG ratings. Krueger et al. (2021) find that mandatory ESG disclosure policies improve the quality of corporate ESG reporting. Liu et al. (2023), focusing on the role of ESG ratings, observe that external ESG assessments pressure firms to increase the quantity of green innovation, albeit at the cost of reduced innovation quality. However, other studies have pointed to unintended consequences. Christensen et al. (2021) show that mandatory ESG disclosure may intensify rating divergence across third-party ESG evaluators, leading to greater stock price volatility. Liu et al. (2023) further examine the impact of ESG rating disagreement on stock price synchronicity, finding that rating divergence significantly increases synchronicity, consistent with a "noise effect" that impairs market informativeness. Existing research has extensively explored the impacts of ESG rating results, but has relatively neglected the influence of the quasi-regulatory process of being included in the rating on the internal behaviors of enterprises. Based on this, this paper does not focus on the level of ESG of enterprises, but examines the governance effects generated by the event of being included in the ESG rating system itself. Specifically, this study takes the inclusion of Chinese enterprises in the ESG rating of SynTao Green Finance as a natural experiment to explore whether the introduction of this exogenous supervision signal will inhibit the on-the-job consumption of enterprise executives by strengthening reputation constraints and external attention. This study will provide new evidence from the micro-level of enterprise behavior for understanding the practical effectiveness of ESG ratings as an external governance mechanism. Moreover, this study is situated within the distinct institutional context of China, where ESG disclosure has historically lacked top-down regulatory enforcement. In contrast to Western economies—where mandatory ESG disclosure policies have been driven by governmental or supranational authorities—China's ESG regime has largely relied on bottom-up mechanisms, particularly through the influence of third-party ESG ratings. Despite the growing prevalence of such ratings, little is known about their actual economic consequences in emerging markets. In this regard, the introduction of ESG ratings by SynTao Green Finance in 2015 offers a rare and policy-relevant quasi-experiment. As China enters a new stage of high-quality development, examining the disciplinary impact of ESG ratings on managerial behavior not only contributes novel empirical evidence to the ESG literature, but also provides insights into the broader governance potential of market-driven sustainability initiatives in non-Western contexts.

In contrast to the relatively rich literature on executive on-the-job consumption, few studies have investigated the role of ESG ratings as a potential market-based disciplinary mechanism. While prior research has explored the determinants of on-the-job consumption from both internal governance structures and external regulatory perspectives—including factors such as ownership structure, board composition, government auditing, and anti-corruption policies—some scholars have also examined the influence of capital market mechanisms, such as short selling and Stock Connect programs, on managerial consumption behavior. However, to the best of our knowledge, no existing studies have examined whether third-party ESG ratings, as a form of soft market regulation, can exert a meaningful constraint on executive excessive executive perks. ESG ratings are typically designed to monitor and evaluate firms' environmental, social, and governance practices, but in doing so, they may also indirectly shape managerial behavior, as executives become increasingly subject to market scrutiny and reputational pressures. Against this backdrop, the present study aims to fill this gap by focusing on the governance effects of ESG ratings on executive on-the-job consumption. Specifically, we investigate whether ESG ratings can serve as an informal disciplinary mechanism that curbs managerial rent-seeking behavior. By incorporating ESG ratings into the analytical framework of on-the-job consumption, this study contributes to the theoretical enrichment of the literature on executive incentives and agency costs. At the same time, our findings offer practical implications for improving the oversight of managerial behavior, especially in emerging markets where formal enforcement mechanisms remain limited.

2.2 Development of the hypothesis: ESG rating and excessive executive perks

According to agency theory, managers do not always act in the best interests of shareholders. Instead, they may pursue actions that deviate from the objective of shareholder value maximization. To mitigate such agency conflicts, shareholders typically design incentive mechanisms that align managerial behavior with their own interests. The primary purpose of executive compensation contracts is to reduce agency costs by addressing the divergence between principals and agents. These contracts may take various forms, including cash compensation, on-the-job consumption, equity-based incentives, and promotion opportunities. Ideally, shareholders would tie cash compensation directly to firm performance, thereby creating strong performance-based incentives for managers. However, in practice, regulatory constraints on executive pay or other institutional frictions often prevent complete alignment between monetary compensation and firm outcomes. As a result, on-the-job consumption may emerge as a substitutional form of compensation, implicitly addressing incentive gaps left unfulfilled by formal pay mechanisms.

On-the-job consumption refers to non-salary benefits and discretionary perks obtained by executives by virtue of their positions, in addition to formal monetary compensation. When kept within a reasonable range, such consumption can partially compensate for deficiencies in cash-based contracts and serve as an implicit incentive. However, on-the-job consumption is characterized by high managerial discretion, making it susceptible to manipulation and abuse. Under conditions of information asymmetry, the resulting moral hazard and adverse selection problems can transform on-the-job consumption into a form of self-serving, hedonic spending, which imposes significant agency costs on the firm (Jensen & Meckling, 1976). This not only dilutes the intended incentive effect, but also undermines firm performance—an outcome that shareholders are keen to avoid. Moreover, because on-the-job consumption typically comes with use-specific restrictions, its utility to executives is lower than that of freely disposable cash compensation. As such, executives tend to prefer direct monetary rewards over constrained non-cash perks. Therefore, when firms can implement effective cash-based incentive contracts, the managerial motivation to engage in excessive executive perks declines, resulting in a reduction in consumption-related agency costs.

From the perspective of opportunity structures, on-the-job consumption—as a form of implicit incentive contract—differs fundamentally from explicit compensation arrangements such as fixed salaries or performance-based bonuses. Due to its inherently vague and ambiguous nature, the contractual boundaries of on-the-job consumption are often loosely defined. As the primary implementers of such consumption, managers typically possess substantial discretion and autonomy in designing and executing these arrangements. Under conditions of information asymmetry, the ability of shareholders and boards of directors to effectively monitor managerial consumption is significantly weakened. This lack of oversight increases the likelihood that managers will engage in pleasure-oriented or self-serving activities unrelated to core business operations, leading to overconsumption beyond optimal levels. In this context, information asymmetry creates a structural advantage that enables excessive executive perks to go undetected and unchallenged. However, once this informational advantage is disrupted—whether through increased transparency, external scrutiny, or regulatory mechanisms—the opportunity for excessive executive perks diminishes, thereby constraining managerial behavior and reducing the scale of on-the-job consumption.

Accordingly, the following analysis focuses on how ESG ratings influence excessive executive perks through two primary channels: managerial motivation and opportunity structures.

First, from an incentive-based perspective, ESG ratings can reduce the managerial motivation for excessive executive perks by enhancing the effectiveness of executive compensation schemes and mitigating short-termism in managerial decision-making. From a signaling theory standpoint, capital markets respond to a firm's ESG performance. ESG ratings and related disclosures improve market transparency, thereby increasing investor confidence, enhancing market liquidity, and channeling capital toward firms with higher ESG scores. This resource allocation effect in financial markets compels firms to improve corporate governance and enhance overall performance, in order to deliver superior risk-adjusted returns to investors (Zhou et al., 2020). To meet these heightened expectations, firms must implement effective incentive mechanisms that align managerial objectives with corporate goals. As a result, ESG ratings indirectly pressure firms to strengthen compensation-based incentives, thereby reducing executives' incentives for rent extraction via excessive executive perks. Among various incentive tools, equity-based compensation is particularly important. When managers hold a substantial proportion of company shares, their personal wealth becomes tied to the firm's future performance. Since excessive executive perks impair firm value, managers with larger equity stakes have stronger incentives to curb such behavior. In summary, ESG ratings enhance managerial ownership and strengthen incentive alignment, which in turn reduces the motivation for excessive executive perks.

From the perspective of stakeholder theory, firms that engage in environmental pollution, social irresponsibility, or poor corporate governance are likely to harm the interests of key stakeholders, ultimately undermining the firm's long-term profitability. Although ESG-related expenditures may appear as short-term costs, they can enhance operational efficiency through reduced energy consumption, improved resource utilization, and elevated employee quality, thereby promoting sustainable development. ESG ratings serve as a signal to the market that a firm is committed to sustainability. When a company is included in an ESG rating system, it attracts greater attention from stakeholders, including investors, employees, regulators, and the public. Under such stakeholder monitoring, firms are incentivized to embed sustainability-oriented practices into their day-to-day operations, which not only strengthens long-term competitiveness but also aligns with broader stakeholder expectations. As a result, the supervisory pressure from stakeholders—triggered by ESG rating inclusion—helps constrain managerial short-termism and reduces executives' incentive to engage in excessive executive perks. In this way, ESG ratings indirectly curb managerial opportunism by encouraging long-term value creation over short-term personal gain.

Second, from a monitoring perspective, ESG ratings reduce the opportunity for excessive executive perks by enhancing information transparency and increasing analyst coverage. According to information asymmetry theory, when a firm is rated by SynTao Green Finance, it is required to disclose more non-financial information to the market. This additional information improves the firm's visibility in the capital market and helps alleviate information asymmetry between management and other stakeholders. As transparency increases, the agency conflict between shareholders and executives diminishes, aligning managerial objectives more closely with shareholder value maximization. In turn, this shift constrains self-serving behavior, including excessive consumption of firm resources. Moreover, greater transparency raises the likelihood that opportunistic behaviors will be detected, thereby increasing the reputational and monitoring costs of such actions. Faced with higher exposure and risk of sanction—whether formal or informal—managers become more cautious and are

more likely to curtail excessive executive perks. In this way, ESG ratings operate as an informal governance mechanism that compresses the opportunity space for rent extraction by reducing information asymmetry, ultimately lowering the level of executive consumption beyond optimal levels.

According to reputation theory, corporate reputation is a critical form of intangible capital. A firm's ESG performance serves as a credible signal to capital markets, facilitating the formation and enhancement of its reputation. Firms that receive ESG ratings are more likely to attract attention from key stakeholders, such as financial analysts and institutional investors. Among these, analysts play a pivotal role as information intermediaries in the capital market. They collect, interpret, and disseminate firm-specific information to stakeholders, thereby enhancing market transparency and reducing information asymmetry. When a firm becomes the subject of analyst coverage, it is exposed to greater external scrutiny, which increases the monitoring cost of managerial misbehavior. Heightened scrutiny imposes reputational pressure on executives, who are incentivized to avoid actions that could harm either their personal image or the company's public standing. As a result, managers are less likely to engage in opportunistic behavior such as excessive executive perks. Thus, analyst coverage and reputational considerations together function as a form of external governance, constraining managerial discretion and limiting the opportunity space for self-serving consumption.

In summary, ESG ratings can constrain excessive executive perks through two complementary channels: by reducing managerial motivation and by limiting the opportunity for rent-seeking behavior. On the one hand, ESG ratings enhance the alignment of interests between managers and shareholders through improved incentive mechanisms and long-term performance orientation. On the other hand, ESG ratings increase transparency, attract analyst attention, and elevate reputational pressure, thereby tightening external supervision and reducing the space for managerial discretion. Accordingly, this study proposes the following hypothesis:

H1: ESG ratings are negatively associated with the level of excessive executive perks.

3. Sample Selection, Research Design, and Empirical Proxies

3.1 Data and Sample

This study uses data from Chinese A-share listed companies between 2009 and 2021 to investigate the impact of ESG ratings on managerial perquisites, employing a difference-in-differences (DID) model. The reason why the period from 2009 to 2021 is that the first rating by SynTao Green Finance was conducted in 2015. To observe the changes before and after this exogenous shock, the time period before and after the shock was kept the same. The sample selection process is as follows: (1) Exclude financial, insurance, and real estate companies, as well as those classified as ST, ST* or PT during the year; (2) Exclude companies listed within the year to avoid potential biases stemming from incomplete disclosure periods; (3) Exclude companies listed on the SME Board and ChiNext Board; (4) Exclude samples with substantial missing data. The final sample consists of 23,515 observations. To minimize the impact of extreme values on the results, continuous variables are winsorized at the 1st and 99th percentiles during the empirical analysis. ESG rating data is sourced from the Wind database, while other data is obtained from the CSMAR database.

3.2 Measurement of the Variables

3.2.1 Measuring ESG

SynTao Green Finance is the earliest institution in China to publish ESG rating data. In 2015, it became the first third-party information intermediary to release ESG ratings for the constituents of the CSI 300 Index. Since then, with growing attention to ESG issues among listed firms, the volume of disclosed ESG-related information has steadily increased. Consequently, the number of firms incorporated into SynTao Green Finance's ESG rating system has expanded significantly, reaching 1,063 listed firms by 2021. The progressive inclusion of firms into the ESG rating system offers a unique setting to construct treatment and control groups for a multi-period difference-in-differences (DID) framework. Following the methodology of Tan & Zhu (2022), this study defines a firm-year observation as treated ($ESG = 1$) if the firm is included in SynTao Green Finance's ESG rating system in a given year or any subsequent year; otherwise, the variable ESG is coded as 0.

3.2.2 Measuring Non-Pecuniary Compensation

Following the approach of Luo et al. (2011) and Quan (2010), this study measures excessive executive perks as the residual between a firm's actual managerial consumption and its predicted "normal" consumption level, which is determined by a set of economic fundamentals. Specifically, the following model is estimated by year and by industry to obtain the benchmark level of expected consumption.

$$Perki,t/Asseti,t-1 = \alpha_0 + \beta_1 \times 1/Asseti,t-1 + \beta_2 \times \Delta Salesi,t/Asseti,t-1 + \beta_3 \times PPEi,t/Asseti,t-1 + \beta_4 \times Inventoryi,t/Asseti,t-1 + \beta_5 \times LnEmployeei,t + \varepsilon_{i,t}$$

1

In this model, Perk represents the firm's actual on-the-job consumption, which is measured as administrative expenses after deducting items that clearly do not pertain to executive consumption. These deductions include executive compensation, provisions for bad debt, inventory write-downs, and amortization of intangible assets. The explanatory variables in the benchmark regression include: $\rho Sales$ is the annual change in the firm's main operating revenue; PPE is the net value of property, plant, and equipment at the end of the year; Inventory is the total value of inventory at year-end; Asset is the total assets; $\ln$ (Employee) represents the natural logarithm of the number of employees in the current year.

3.2.3 Control Variables

Following prior literature (Liao & Liu, 2016; Luo et al., 2011; Chen et al., 2010), we include a comprehensive set of control variables in the regression analysis to account for firm-specific and governance-related factors that may influence on-the-job consumption. Specifically, we control for the following: monetary compensation, relative compensation gap, firm size, financial leverage, firm performance, growth potential, management team size, board size, managerial shareholding ratio, independent director ratio, whether the CEO and Chairman positions are combined, and ownership concentration. Additionally, all regressions control for firm fixed effects and year fixed effects to account for unobserved heterogeneity across firms and time. Detailed definitions of all variables are presented in Table 1.

Table 1
Variable Definitions

Name	Symbol	Variable Definition
excessive executive perks	Unperk	As defined above
ESG Rating	ESG	one if SynTao Green Finance releases a rating for firm i in year t, otherwise zero
Monetary Compensation	Pay	The natural logarithm of the annual managerial salary
Relative Compensation Gap	Rpay	The ratio of the average executive salary to the average employee salary
Firm Size	Size	The natural logarithm of total assets
Financial Leverage	Lev	The ratio of total liabilities to total assets
Firm Age	Age	The number of years since the company's listing, plus 1, with the natural logarithm taken
Profitability	Roa	The ratio of net profit to total assets
Cash Ratio	Cash	The ratio of cash holdings to total assets
Growth Potential	Growth	The growth rate of operating revenue
Board Size	Board	The natural logarithm of the number of board members
Managerial Shareholding	Masha	The ratio of shares held by executives to total shares
Ownership Concentration	Share	The proportion of shares held by the top 10 shareholders
Independent Director Ratio	Indep	The ratio of independent directors to total board members
Dual CEO and Chairman Roles	Dual	A dummy variable that equals one if the CEO and Chairman roles are combined, otherwise zero

3.3 Summary Statistics

Table 2 presents descriptive statistics for the key variables. The mean of excessive executive perks is -0.0477, with a large standard deviation, indicating considerable variation across the sample. The mean of ESG is 0.1360, meaning that 13.6% of the sample companies are rated by SynTao Green Finance. The mean of the natural logarithm of managerial annual salary is 15.2514, with a standard deviation of 0.7664, suggesting relatively small differences in executive compensation across the sample. Other key variables, such as firm size, financial leverage, and profitability, also exhibit significant variation. The descriptive statistics are provided in Table 2.

Table 2
Descriptive Statistics

Variable	N	Mean	SD	Min	P25	P50	P75	Max
Unperk	23,515	-0.0477	2.3015	-4.6376	-1.4572	-0.3584	0.9385	8.7731
ESG	23,515	0.1360	0.3428	0	0	0	0	1
Pay	23,515	15.2514	0.7664	13.2690	14.7613	15.2463	15.7520	17.2208
Rpay	23,515	7.5242	6.2992	0.8193	3.7589	5.6919	8.9346	38.9014
Size	23,515	22.3069	1.2640	19.8853	21.4178	22.1506	23.0296	26.1563
Lev	23,515	0.4460	0.1979	0.0655	0.2931	0.4426	0.5933	0.8978
Age	23,515	2.3426	0.6828	0.7607	1.8368	2.4920	2.9140	3.3368
Roa	23,515	0.0358	0.0604	-0.2450	0.0125	0.0347	0.0647	0.1934
Cash	23,515	0.1718	0.1166	0.0142	0.0890	0.1423	0.2243	0.5808
Growth	23,515	0.1570	0.3729	-0.5404	-0.0224	0.1016	0.2522	2.3551
Board	23,515	0.0044	0.0061	0.0001	0.0011	0.0025	0.0051	0.0420
Masha	23,515	0.0998	0.1762	0.0000	0.0000	0.0008	0.1230	0.6737
Share	23,515	0.5739	0.1551	0.2287	0.4609	0.5793	0.6926	0.9048
Indep	23,515	0.3729	0.0526	0.3333	0.3333	0.3333	0.4286	0.5714
Dual	23,515	0.2469	0.4312	0	0	0	0	1

3.4 Correlation Analysis

We conducted a correlation analysis of the key variables, with the results presented in Table 3. The correlation coefficient between ESG ratings and excessive executive perks is -0.085, which is statistically significant at the 1% level. This suggests that, compared to firms that are not rated by SynTao Green Finance, those rated by the agency tend to exhibit lower levels of excessive executive perks. This finding provides preliminary evidence supporting the hypothesis of the study, indicating that ESG ratings may indeed reduce excessive executive perks. The correlation coefficients between other variables are generally below 0.5, indicating that the selected variables are appropriately chosen and that multicollinearity is not a concern in this regression model.

Table 3
Correlation Analysis

	Unperk	ESG	Pay	Rpay	Size	Lev	Age	Roa	Cash	Growth	Board	Masha
Unperk	1											
ESG	-0.085***	1										
Pay	0.111***	0.401***	1									
Rpay	-0.021	0.281***	0.662***	1								
Size	-0.129***	0.553***	0.538***	0.378***	1							
Lev	-0.065***	0.089***	0.157***	0.109***	0.497***	1						
Age	-0.043***	0.275***	0.248***	0.110***	0.476***	0.282***	1					
Roa	0.108***	0.091***	0.179***	0.153***	0.014	-0.369***	-0.105***	1				
Cash	0.094***	-0.014	0.022	0.014	-0.149***	-0.280***	-0.160***	0.217***	1			
Growth	0.169***	-0.003	0.047***	0.052***	0.085***	0.039***	-0.028**	0.242***	0.001	1		
Board	-0.018	-0.261***	-0.267***	-0.316***	-0.494***	-0.235***	-0.238***	-0.076***	0.106***	-0.033***	1	
Masha	0.049***	-0.119***	-0.107***	-0.084***	-0.284***	-0.221***	-0.504***	0.097***	0.068***	0.055***	0.135***	1
Share	-0.011	0.039***	-0.015	0.028**	0.040***	-0.085***	-0.323***	0.200***	0.111***	0.090***	-0.036***	0.180*
Indep	-0.029**	0.047***	-0.026**	0.020	0.014	0.006	-0.005	-0.010	0.007	0.011	0.026**	0.084*
Dual	0.009	-0.011	-0.054***	0.052***	-0.062***	-0.059***	-0.177***	0.020	0.027**	0.035***	0.049***	0.172*

Table 4 is correlation analysis of the key variables. Statistical significance at the 1%, 5%, and 10% level is indicated by ***, **, and *, respectively.

4. Regression Results

4.1 Baseline Regression of Non-Pecuniary Compensation on ESG Rating

To examine the effect of ESG ratings on non-pecuniary compensation, we estimate a firm fixed-effects model (henceforth referred to as the baseline model) as follows:

$$Unperk_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + B * Controls_{i,t} + \lambda_i + \eta_t + \varepsilon_{i,t}$$

2

Where i and t index firms and years, respectively; $Unperk$ is firm i 's excessive executive perks in fiscal year t ; the ESG measures are our proxies for ESG ratings at the firm-year level; and $Controls$ is a vector of control variables described in Section 3.2.3. To mitigate the reverse causality issue, we include year fixed effects in our regressions to control for time trends (η_t) in non-pecuniary compensation and firm fixed effects (λ_i) to mitigate the concern that omitted firm-level, time-invariant variables correlate with both non-pecuniary compensation and ESG rating.

The baseline regression results are presented in Table 4. Column (1) shows the regression results controlling for both firm and year fixed effects, with the ESG coefficient of -0.676, significant at the 1% level. In Column (2), a series of control variables are added to the model, and the ESG coefficient decreases to -0.432, which remains statistically significant at the 1% level. Column (3) further includes managerial shareholding in the model, and the ESG coefficient becomes -0.428, still significant at the 1% level. These results indicate that SynTao Green Finance's ESG ratings are associated with a reduction in excessive executive perks, thereby supporting the study's hypothesis.

The coefficients of the control variables are generally consistent with prior research. For example, as seen in studies by Luo et al. (2011) and Chen et al. (2010), the regression coefficient for managerial compensation is significantly positive, indicating that higher compensation is associated with higher levels of excessive executive perks. The coefficient for relative compensation is significantly negative, showing that greater disparity between executive and employee compensation leads to lower levels of excessive executive perks. Firm size is negatively correlated with excessive executive perks, suggesting that larger firms tend to have lower levels of excessive executive perks. Additionally, the coefficient for company age is significantly positive, indicating that older companies tend to have higher levels of managerial perquisites. Growth potential is positively associated with excessive executive perks, and the board size is also positively correlated with excessive executive perks. Finally, ownership concentration is positively related to excessive executive perks.

Table 4
Baseline Regression Results

	(1)	(2)	(3)
	Unperk	Unperk	Unperk
ESG	-0.676***	-0.432***	-0.428***
	(-7.90)	(-5.32)	(-5.26)
Pay		0.646***	0.652***
		(10.06)	(10.14)
Rpay		-0.055***	-0.056***
		(-8.26)	(-8.46)
Size		-0.452***	-0.456***
		(-6.23)	(-6.34)
Lev		0.268	0.274
		(1.32)	(1.35)
Age		0.774***	0.715***
		(6.99)	(6.11)
Roa		-0.264	-0.224
		(-0.67)	(-0.57)
Cash		-0.023	-0.032
		(-0.10)	(-0.14)
Growth		1.100***	1.100***
		(18.25)	(18.26)
Board		12.575*	12.109*
		(1.91)	(1.84)
Masha			-0.507
			(-1.46)
Share		0.015***	0.016***
		(5.73)	(5.89)
Indep		0.041	0.038
		(0.09)	(0.08)
Dual		0.059	0.058
		(1.09)	(1.07)
Firm-fixed effect	Yes	Yes	Yes
Year-fixed effect	Yes	Yes	Yes
Constant	-0.087	-2.032	-1.886
	(-1.44)	(-1.26)	(-1.18)
N	23,515	23,515	23,515
Adj R-squared	0.012	0.105	0.105

Table 4 presents result from OLS regressions of ESG ratings on excessive executive perks. *Unperk* represents excessive executive perks as the residual between a firm's actual managerial consumption and its predicted "normal" consumption level, which is determined by a set of economic fundamentals. *ESG* represents ESG ratings which is one if SynTao Green Finance releases a rating for firm *i* in year *t*, otherwise zero. The control variables in these models is described in Section 3.2.3. To mitigate the reverse causality issue, we include year fixed effects in our regressions to control for time trends in non-pecuniary compensation and firm fixed effects to mitigate the concern that omitted firm-level, time-invariant variables correlate with both non-pecuniary compensation and ESG rating. All standard errors reported in parentheses are clustered at the firm level. Statistical significance at the 1%, 5%, and 10% level is indicated by ***, **, and *, respectively.

4.2 Robustness Tests

To ensure the reliability of our findings, we conduct a series of robustness tests to verify the consistency of the results.

First, In the previous section, we estimated excessive executive perks using a regression model, where negative residuals indicate the presence of excessive executive perks. In the robustness test, we exclude the observations with negative residuals and re-estimate the model. The results, shown in Column (1) of Table 5, reveal that the ESG coefficient remains significant at the 1% level, with a value of -0.409. This confirms that even when excluding firms with negative residuals, the primary finding holds. Additionally, given the incomplete disclosure of absolute perquisite consumption data and the large share of administrative expenses such as office expenses, travel, and business entertainment in management expenses, which can largely reflect executive perquisite consumption, we follow the method of Liu & Qi (2019) and use the management expense ratio (management expenses / operating revenue) to measure perquisite consumption levels. The results are presented in Column (2) of Table 5. Using this alternative measure of perquisite consumption, ESG ratings remain significantly negatively correlated with excessive executive perks.

Second, In the previous analysis, we used a multi-period difference-in-differences (DID) model, as proposed by Mullainathan & Bertrand (2003), which includes ESG as the primary independent variable, with firm and year fixed effects. To address potential model selection biases, we further employ a classic DID model to test our hypothesis. In this model, we define firms rated by SynTao Green Finance as the treatment group (ESG = 1) and those not rated as the control group (ESG = 0), controlling for industry and year fixed effects. The results, presented in Column (3) of Table 5, show that the ESG coefficient is -0.294, significant at the 1% level. This supports the initial finding that firms rated by SynTao Green Finance exhibit reduced excessive executive perks compared to non-rated firms.

Third, SynTao Green Finance first released ESG ratings for the constituents of the CSI 300 index in 2015. To exclude the potential impact of the market shock that year, which had only half a year of influence, we remove the 2015 data from the analysis. The results, shown in Column (4) of Table 5, demonstrate that the ESG coefficient is -0.431, significant at the 1% level. This suggests that even after excluding the 2015 market shock, ESG ratings continue to significantly reduce managerial excessive executive perks.

Fourth, Given that other institutions, such as Huazheng and Wind, also released ESG ratings during the sample period, we control for their ratings in the baseline regression to account for their potential impact on SynTao Green Finance's ratings. The results, shown in Columns (5) and (6) of Table 5, indicate that after controlling for ESG ratings from Wind and Huazheng, the ESG coefficients remain significant at the 5% and 1% levels, with values of -0.414 and -0.413, respectively. This further confirms that even after accounting for other rating agencies, the soft regulatory effect of SynTao Green Finance's ESG ratings on reducing excessive executive perks remains robust.

Table 5
Robustness Tests

	(1)	(2)	(3)	(4)	(5)	(6)
	Unperk	Unperk	Unperk	Unperk	Unperk	Unperk
ESG	-0.409***	-0.624***	-0.294***	-0.431***	-0.414**	-0.413***
	(-3.43)	(-3.99)	(-3.14)	(-5.06)	(-2.06)	(-5.07)
List			0.272**			
			(2.35)			
ESG_hz						-0.058***
						(-3.34)
ESG_wind					-0.077***	
					(-2.68)	
Pay	0.358***	0.181	1.339***	0.649***	0.108	0.651***
	(3.82)	(1.23)	(18.93)	(9.75)	(1.37)	(9.84)
Rpay	-0.016	0.018	-0.094***	-0.056***	-0.011	-0.055***
	(-1.58)	(1.50)	(-12.95)	(-8.41)	(-1.47)	(-8.28)
Size	-0.622***	0.238*	-0.648***	-0.473***	-0.110	-0.461***
	(-6.91)	(1.75)	(-12.91)	(-6.38)	(-0.80)	(-6.18)
Lev	1.020***	-1.901***	0.374*	0.236	1.136***	0.226
	(3.50)	(-3.60)	(1.87)	(1.10)	(4.11)	(1.08)
Age	0.479***	0.052	0.435***	0.712***	0.155	0.704***
	(2.90)	(0.22)	(6.66)	(6.07)	(1.19)	(5.96)
Roa	-0.231	-18.785***	1.214**	-0.142	-0.267	0.129
	(-0.45)	(-17.32)	(2.39)	(-0.35)	(-0.77)	(0.31)
Cash	0.103	-0.588	0.874***	-0.074	0.383*	0.014
	(0.36)	(-1.10)	(3.03)	(-0.32)	(1.71)	(0.06)
Growth	1.300***	-1.642***	1.044***	1.070***	0.734***	1.147***
	(15.51)	(-16.51)	(15.91)	(17.01)	(9.56)	(18.17)
Board	1.043	16.199	-38.095***	11.128*	18.720*	4.109
	(0.12)	(0.82)	(-6.42)	(1.66)	(1.87)	(0.54)
Masha	-0.172	-1.602**	-0.067	-0.521	-0.822***	-0.505
	(-0.46)	(-2.33)	(-0.31)	(-1.53)	(-2.92)	(-1.45)
Share	0.018***	-0.004	0.009***	0.016***	-0.003	0.016***
	(4.57)	(-0.71)	(3.54)	(5.52)	(-0.60)	(5.92)
Indep	0.305	-0.541	0.012	0.055	-0.029	0.055
	(0.50)	(-0.54)	(0.02)	(0.12)	(-0.06)	(0.12)
Dual	-0.028	-0.070	0.202***	0.058	-0.087	0.077
	(-0.39)	(-0.53)	(2.87)	(1.05)	(-1.62)	(1.39)
Firm-fixed effect	Yes	Yes		Yes	Yes	Yes
Year-fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry-fixed effect			Yes			
Constant	7.761***	-5.851*	-6.244***	-1.417	0.651	-1.484
	(4.00)	(-1.83)	(-5.33)	(-0.88)	(0.22)	(-0.90)
N	9,837	23,725	23,515	21,725	8,954	22,772

	(1)	(2)	(3)	(4)	(5)	(6)
	Unperk	Unperk	Unperk	Unperk	Unperk	Unperk
Adj R-squared	0.180	0.126	0.133	0.101	0.076	0.105

Table 5 is results of robustness tests. *Unperk* represents excessive executive perks as the residual between a firm's actual managerial consumption and its predicted "normal" consumption level, which is determined by a set of economic fundamentals. *ESG* represents ESG ratings which is one if SynTao Green Finance releases a rating for firm *i* in year *t*, otherwise zero. The control variables in these models is described in Section 3.2.3. To mitigate the reverse causality issue, we include year fixed effects in our regressions to control for time trends in non-pecuniary compensation and firm fixed effects to mitigate the concern that omitted firm-level, time-invariant variables correlate with both non-pecuniary compensation and ESG rating. Industry-fixed effect is used to control the differences among industries. All standard errors reported in parentheses are clustered at the firm level. Statistical significance at the 1%, 5%, and 10% level is indicated by ***, **, and *, respectively.

4.3 Cross-sectional evidence

To elucidate possible mechanisms for the influence of ESG rating on non-pecuniary compensation, we perform several cross-sectional tests to examine the heterogeneity in the coefficient on non-pecuniary, β_1 , from Eq. (2). Building on considerations of managerial motivation and opportunity for excessive executive perks, this study conducts a heterogeneity analysis from four dimensions: external pay equity, internal control quality, marketization level, and ownership nature.

First, the psychological perception of unfairness induced by external pay inequity reduces executives' work enthusiasm, prompting them to seek alternative compensatory incentives. Executives' perception of external pay equity stems from pay comparisons. During such comparisons, executives often focus on upward comparison outcomes—meaning that negative pay gaps (where their own pay is lower than others') have a greater impact on executives than positive pay gaps. Moreover, larger negative pay gaps strengthen executives' sense of inequity, increasing the likelihood of them taking actions to restore fairness (Adams, 1963). Accordingly, we conduct group tests based on external pay gaps. The results, presented in Table 6, show that the coefficient on ESG is significantly negative at the 1% level in the subsample where executive pay is below the industry-year average. In contrast, the coefficient is statistically insignificant in the subsample where pay is above the average. This indicates that when a negative pay gap exists, managers perceive external pay inequity and are more likely to use excessive executive perks as a compensatory mechanism. Consequently, ESG ratings exhibit a stronger curbing effect in such cases.

Second, a key objective of internal controls is to provide reasonable assurance regarding the authenticity and completeness of financial reports and to enhance sustainable development capabilities (Zhu, 2021). In firms with weaker internal governance, lower information transparency and pronounced agency problems incentivize managers to conceal existing internal control deficiencies (Zhao & Xu, 2013), thereby creating opportunities for excess perk consumption. Our group tests based on the presence of internal control deficiencies reveal the following results (Table 6): In the subsample with internal control deficiencies, the coefficient on ESG is -0.212, significant at the 10% level. In the subsample without such deficiencies, the coefficient is -0.575, significant at the 5% level. This suggests that the inhibitory effect of ESG on excessive executive perks is more pronounced in firms without internal control deficiencies, implying that higher internal control quality raises the cost for managers engaging in such activities. Thus, under better internal control, managers are more inclined to proactively reduce excess perk consumption in response to external monitoring from ESG ratings.

Third, from the perspective of ownership nature, different types of ownership lead to significant differences in corporate mission, organizational management, and resource allocation. State ownership imbues firms with inherent governmental functions, making ESG responsibility a fundamental obligation. Compared to the proactive adoption of ESG practices by private enterprises, ESG practices in state-owned enterprises (SOEs) are more policy-driven and mandatory, eliciting relatively weaker societal reactions (Wang & Yang, 2022). Therefore, the monitoring effect of SynTao Green Finance's ESG ratings is likely less pronounced for SOEs. Based on this, we split the sample into two groups by ownership nature for heterogeneity tests. The results in Table 6 show that the inhibitory effect of SynTao Green Finance's ESG ratings on excessive executive perks is greater in the non-SOE subsample. This indicates that for non-SOEs, ESG ratings attract greater stakeholder scrutiny, which enhances monitoring and discipline. Under stronger external supervision, managers are more likely to curb self-serving behaviors to signal effective performance to stakeholders.

Fourth, the monitoring effect of SynTao Green Finance's ESG ratings may partly depend on the marketization environment. These ratings draw stakeholder attention, which in turn disciplines managerial behavior. Firms in regions with higher marketization levels exhibit greater information transparency, facilitating more effective stakeholder oversight (Cai et al., 2018). Accordingly, we use the marketization index for Chinese provinces to measure the regional marketization level. For years with missing data, we use the data from the closest available year. We divide the sample into low and high marketization groups based on the annual mean of the index. Regression results in Table 6 show that the inhibitory effect of ESG ratings on excessive executive perks is stronger in the high marketization subsample. This suggests that the governance effect of ESG ratings on executive excess perk consumption relies on a mature market environment, where a higher level of marketization provides a solid foundation for ESG ratings to exert their governance role.

Table 6
Heterogeneity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Above-average salary	Below-average salary	ICD	Non-ICD	SOE	Non-SOE	Low level of marketization	High level of marketization
ESG	-0.140	-0.434***	-0.212*	-0.575***	-0.208*	-0.694***	-0.337***	-0.606***
	(-1.26)	(-3.66)	(-1.68)	(-5.10)	(-1.89)	(-5.66)	(-2.88)	(-5.13)
Pay	0.577***	0.659***	0.299***	0.764***	0.489***	0.804***	0.598***	0.600***
	(4.67)	(8.42)	(2.79)	(8.74)	(5.18)	(8.95)	(6.85)	(6.02)
Rpay	-0.040***	-0.151***	-0.019	-0.054***	-0.056***	-0.060***	-0.055***	-0.052***
	(-4.86)	(-12.14)	(-1.63)	(-6.38)	(-4.76)	(-7.23)	(-5.51)	(-6.09)
Size	-0.769***	-0.250***	-0.575***	-0.479***	-0.476***	-0.464***	-0.402***	-0.470***
	(-6.37)	(-2.99)	(-4.00)	(-5.44)	(-3.99)	(-5.28)	(-4.40)	(-3.97)
Lev	0.133	0.189	0.106	0.608**	-0.240	0.603**	0.340	0.401
	(0.35)	(0.82)	(0.29)	(2.35)	(-0.70)	(2.39)	(1.16)	(1.36)
Age	0.362*	0.790***	0.338*	0.849***	0.573***	0.764***	0.894***	0.597***
	(1.73)	(5.85)	(1.69)	(5.62)	(2.67)	(5.22)	(4.64)	(3.76)
Roa	1.543**	-0.915**	-0.412	0.014	-0.081	-0.369	-0.308	-0.736
	(2.08)	(-2.09)	(-0.62)	(0.03)	(-0.11)	(-0.76)	(-0.52)	(-1.42)
Cash	-0.474	-0.039	-0.593	-0.026	0.007	-0.236	0.321	-0.484
	(-1.18)	(-0.16)	(-1.50)	(-0.09)	(0.02)	(-0.97)	(1.07)	(-1.47)
Growth	1.321***	0.966***	1.021***	1.094***	1.326***	0.932***	1.188***	1.044***
	(11.06)	(13.84)	(9.12)	(13.97)	(12.76)	(12.57)	(13.52)	(12.05)
Board	30.662***	7.065	8.141	12.579	8.969	11.732	5.147	21.915***
	(3.08)	(0.92)	(0.52)	(1.38)	(0.76)	(1.44)	(0.53)	(2.58)
Masha	0.730	-0.582*	-0.479	-0.690	2.240	-0.518	-0.243	-0.271
	(1.20)	(-1.74)	(-0.93)	(-1.63)	(1.02)	(-1.37)	(-0.37)	(-0.81)
Share	0.011**	0.016***	0.016***	0.016***	0.016***	0.016***	0.018***	0.010**
	(2.08)	(5.20)	(3.07)	(4.58)	(3.40)	(4.68)	(4.72)	(2.55)
Indep	-0.761	0.842*	-0.341	-0.414	0.409	-0.683	0.441	-0.283
	(-0.86)	(1.71)	(-0.46)	(-0.75)	(0.62)	(-1.10)	(0.78)	(-0.40)
Dual	0.031	0.074	-0.056	0.136*	0.121	0.049	0.086	-0.019
	(0.32)	(1.30)	(-0.76)	(1.90)	(1.38)	(0.71)	(1.07)	(-0.26)
Firm-fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	7.658***	-6.558***	7.543**	-3.265	1.359	-3.845*	-3.174	-0.534
	(2.75)	(-3.64)	(2.45)	(-1.55)	(0.53)	(-1.76)	(-1.55)	(-0.20)
N	7,991	15,524	7,148	14,380	9,833	13,303	11,433	11,251
Adj R-squared	0.142	0.115	0.0865	0.111	0.122	0.110	0.125	0.107
P-value (Diff.)	0.022		0.009		0.000		0.038	

Table 6 presents result from OLS regressions of ESG ratings on excessive executive perks in different samples. The explained variable is excessive executive perks which is residual between a firm's actual managerial consumption and its predicted "normal" consumption level. The explaining variable is ESG ratings which is one if SynTao Green Finance releases a rating for firm *i* in year *t*, otherwise zero. The control variables in these models is described in Section 3.2.3. To mitigate the reverse causality issue, we include year fixed effects in our regressions to control for time trends in non-pecuniary compensation and firm

fixed effects to mitigate the concern that omitted firm-level, time-invariant variables correlate with both non-pecuniary compensation and ESG rating. Industry-fixed effect is used to control the differences among industries. All standard errors reported in parentheses are clustered at the firm level. Statistical significance at the 1%, 5%, and 10% level is indicated by ***, **, and *, respectively.

5. Mechanisms Through Which ESG Ratings Restrain Excessive Executive Perks

5.1 Based on Non-Pecuniary Consumption Motivation

Theoretical analysis suggests that ESG ratings influence managerial incentives by shifting the focus of executives from short-term financial performance to long-term sustainability and investor expectations. As a result, executives may be more inclined to reduce excessive executive perks in order to meet the performance expectations set by investors, thereby aligning their behavior with the company's sustainable development goals.

In examining this potential mechanism, we find that ESG ratings promote an increase in managerial shareholding. The interaction between ESG ratings and managerial shareholding is tested in the model, and the regression coefficient for managerial shareholding is -0.507, significant at the 1% level. The ESG coefficient is -0.428, also significant at the 1% level. A Sobel test confirms a significant mediation effect, indicating that ESG ratings reduce excessive executive perks through the incentive effect of promoting managerial shareholding.

Moreover, theoretical analysis also suggests that ESG ratings reduce managerial short-termism, which is often manifested in excessive executive perks driven by immediate personal gratification. In the presence of ESG ratings, the scrutiny from stakeholders and the heightened focus on sustainable development pressures management to prioritize long-term goals over short-term desires.

Following the framework of Bushee (1998) and other studies on managerial short-termism, we use reductions in R&D spending ($\Delta R\&D$) as a proxy for short-termism. The results, shown in Table 7, reveal that ESG ratings promote an increase in R&D expenditures (Column 3), suggesting that ESG ratings help curb managerial short-termism. In Column (4), the regression coefficient for $\Delta R\&D$ is -5.734, significant at the 1% level, and the ESG coefficient is -0.392, also significant at the 1% level. The Sobel test confirms a significant mediation effect, indicating that ESG ratings reduce managerial short-termism, which subsequently lowers excessive executive perks.

5.2 Based on Non-Pecuniary Consumption Opportunities

Another theoretical mechanism through which ESG ratings may reduce excessive executive perks is by increasing transparency and reducing information asymmetry between management and external stakeholders. When companies are rated by SynTao Green Finance, they are compelled to disclose more information on their environmental, social, and governance practices, which increases the likelihood of excessive executive perks being uncovered. As a result, executives are more likely to curtail their excessive executive perks to avoid reputational damage and the increased scrutiny of stakeholders.

To measure information asymmetry, we use the level of earnings management as an indicator. In Column (5) of Table 7, the regression coefficient for earnings management is -0.004, significant at the 1% level, indicating that ESG ratings help reduce information asymmetry. In Column (6), the regression coefficient for earnings management is 1.131, significant at the 1% level, and the ESG coefficient is -0.426, also significant at the 1% level. A Sobel test confirms a significant mediation effect, suggesting that ESG ratings reduce information asymmetry, which in turn diminishes opportunities for excessive executive perks.

Furthermore, ESG ratings also increase the attention of capital market participants, particularly analysts, who exert supervisory pressure on firms. This heightened scrutiny reduces opportunities for excessive executive perks. In Column (7) of Table 7, we find that ESG ratings increase the frequency of analyst follow-ups, which enhances their supervisory role. In Column (8), the regression coefficient for analyst coverage is 0.034, significant at the 10% level, and the ESG coefficient is -0.256, significant at the 1% level. The Sobel test confirms the presence of a significant mediation effect, indicating that ESG ratings, by increasing analyst coverage, reduce excessive executive perks.

Table 7
Mechanism Test

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Masha_	Unperk	pR&D	Unperk	Dacc	Unperk	Ana	Unperk
ESG	0.007***	-0.428***	0.001**	-0.392***	-0.004*	-0.426***	0.068***	-0.256***
	(3.88)	(-9.87)	(2.51)	(-7.67)	(-1.89)	(-9.81)	(3.58)	(-6.19)
Masha		-0.507***						
		(-3.13)						
pR&D				-5.734***				
				(-3.12)				
Dacc						1.131***		
						(7.12)		
Ana								0.034*
								(1.85)
Pay	0.012***	0.652***	0.002***	0.496***	0.003**	0.636***	0.116***	0.598***
	(8.09)	(18.14)	(8.72)	(10.23)	(2.05)	(17.51)	(5.92)	(13.90)
Rpay	-0.001***	-0.056***	-0.000***	-0.031***	0.000	-0.055***	0.006***	-0.067***
	(-9.56)	(-15.93)	(-4.07)	(-6.90)	(1.47)	(-15.75)	(2.96)	(-14.76)
Size	-0.009***	-0.456***	-0.002***	-0.562***	-0.006***	-0.487***	0.412***	-0.585***
	(-7.18)	(-15.31)	(-11.36)	(-13.34)	(-4.25)	(-16.06)	(26.05)	(-16.48)
Lev	0.011**	0.274**	-0.003***	0.381**	0.033***	0.218*	-0.092	0.526***
	(2.26)	(2.38)	(-4.02)	(2.46)	(6.44)	(1.87)	(-1.54)	(4.01)
Age	-0.115***	0.715***	0.000	0.645***	0.000	0.689***	0.089***	0.620***
	(-40.90)	(10.47)	(0.21)	(5.82)	(0.00)	(9.99)	(2.63)	(8.36)
Roa	0.078***	-0.224	-0.008***	-0.815***	-0.157***	0.110	6.567***	4.154***
	(7.62)	(-0.94)	(-6.19)	(-2.89)	(-14.32)	(0.44)	(34.59)	(9.58)
Cash	-0.018***	-0.032	-0.007***	-0.180	0.018***	-0.027	0.110	-0.267*
	(-3.14)	(-0.24)	(-7.92)	(-1.03)	(3.09)	(-0.20)	(1.60)	(-1.77)
Growth	0.001	1.100***	0.003***	1.358***	0.021***	1.093***	0.086***	1.066***
	(0.57)	(37.65)	(13.26)	(31.69)	(15.75)	(36.55)	(3.79)	(21.33)
Board	-0.921***	12.109***	-0.236***	19.534**	0.844***	9.252***	2.942	0.732
	(-6.80)	(3.83)	(-6.54)	(2.57)	(5.55)	(2.69)	(0.76)	(0.09)
Masha			-0.001	-0.767***	0.000	-0.705***	0.433***	-0.712***
			(-0.62)	(-3.98)	(0.01)	(-4.30)	(4.96)	(-3.71)
Share	0.001***	0.016***	-0.000	0.014***	0.000***	0.017***	0.001*	0.012***
	(15.71)	(10.63)	(-0.42)	(7.16)	(4.79)	(10.91)	(1.66)	(7.58)
Indep	-0.006	0.038	0.001	0.089	0.023*	0.132	0.141	-0.217
	(-0.48)	(0.13)	(0.66)	(0.24)	(1.73)	(0.44)	(0.79)	(-0.56)
Dual	-0.003*	0.058	0.000	0.081*	-0.001	0.077**	0.037**	0.068*
	(-1.75)	(1.63)	(1.35)	(1.91)	(-0.52)	(2.15)	(2.13)	(1.80)
Firm-fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.289***	-1.886***	0.024***	2.704***	0.103***	-1.025	-9.208***	2.061**
	(9.90)	(-2.77)	(5.07)	(2.76)	(3.38)	(-1.48)	(-24.58)	(2.46)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Masha_	Unperk	pR&D	Unperk	Dacc	Unperk	Ana	Unperk
N	23,515	23,515	15,517	15,517	23,034	23,034	16,758	16,758
Adj R-squared	0.206	0.106	0.054	0.110	0.048	0.111	0.224	0.102
Slobel	-2.686***		-1.839*		2.006***		5.824***	

Table 7 is results of mechanism test. The control variables in these models is described in Section 3.2.3. To mitigate the reverse causality issue, we include year fixed effects in our regressions to control for time trends in non-pecuniary compensation and firm fixed effects to mitigate the concern that omitted firm-level, time-invariant variables correlate with both non-pecuniary compensation and ESG rating. Industry-fixed effect is used to control the differences among industries. All standard errors reported in parentheses are clustered at the firm level. Statistical significance at the 1%, 5%, and 10% level is indicated by ***, **, and *, respectively.

6. Identification Strategies

The observed negative relationship between ESG ratings and excessive executive perks may be driven by reverse causality, where firms with high non-pecuniary consumption are more likely to be rated by SynTao Green Finance. Additionally, unobserved firm or institutional characteristics may influence both ESG ratings and non-pecuniary compensation, leading to spurious correlations. To address concerns of omitted variable bias and reverse causality, we implement three identification strategies.

First, To mitigate the potential endogeneity arising from reverse causality—where firms with high excessive executive perks may be more likely to receive ESG ratings—we lag the ESG rating variable by one period in our empirical tests. The results, shown in Column (1) of Table 8, reveal that the ESG coefficient remains significantly negative at the 1% level, indicating that ESG ratings continue to lead to a reduction in excessive executive perks even after addressing reverse causality concerns.

Second, it is possible that firms rated by SynTao Green Finance differ systematically from those not rated, making them fundamentally different in terms of excessive executive perks. To address potential self-selection bias, we employ Propensity Score Matching (PSM) to match firms based on key characteristics such as company size, financial leverage, company age, and profitability. The results after matching, presented in Column (2) of Table 8, show that the ESG coefficient is -0.401, significant at the 1% level. This indicates that after addressing self-selection bias, the results remain robust and ESG ratings continue to reduce excessive executive perks.

Third, Since SynTao Green Finance began its ESG rating process in 2015, we conduct a placebo test to ensure that the observed effect of ESG ratings on excessive executive perks is not driven by random factors. In this test, we shift the timing of the ESG ratings to 2013 and use data from 2010 to 2015 to examine the period prior to the ESG rating implementation. The results, shown in Column (3) of Table 8, reveal that the ESG coefficient is not statistically significant, which suggests that the effect of ESG ratings on excessive executive perks is not driven by unobservable factors before the ratings were implemented.

Fourth, based on the parallel trends assumption, we expect that if SynTao Green Finance's ESG rating had not been implemented, the trends in excessive executive perks for rated and non-rated firms would have been similar. To test this assumption, we perform a parallel trends test, examining whether there was a significant difference in the trends of excessive executive perks between rated and non-rated firms prior to the implementation of the ratings. The results, presented in Fig. 1, show that the regression coefficients for the years before the implementation of SynTao Green Finance's ESG ratings are close to zero within the 95% confidence interval, and fluctuate between zero without showing significant results. However, starting from the year of implementation, the coefficients significantly deviate from zero in a positive direction, gradually revealing the policy effect. This suggests that the effect of SynTao Green Finance's ESG ratings on reducing excessive executive perks is not due to pre-existing trends.

Table 8
Endogeneity Test

	(1)	(2)	(3)
	Unperk	Unperk	Unperk
ESG	-0.369***	-0.401***	-0.183
	(-4.83)	(-3.84)	(-1.59)
Pay	0.617***	0.311***	0.692***
	(9.08)	(3.65)	(7.24)
Rpay	-0.054***	-0.032***	-0.070***
	(-7.70)	(-3.89)	(-8.10)
Size	-0.480***	-0.353***	-0.071
	(-5.97)	(-3.10)	(-0.66)
Lev	0.241	0.494*	0.511
	(1.12)	(1.71)	(1.58)
Age	0.497***	0.116	1.536***
	(3.09)	(0.77)	(7.33)
Roa	-0.490	-0.721*	-0.019
	(-1.26)	(-1.76)	(-0.02)
Cash	0.070	-0.104	0.446
	(0.28)	(-0.36)	(1.61)
Growth	1.144***	1.047***	1.051***
	(18.06)	(14.60)	(11.12)
Board	12.536*	7.305	30.672***
	(1.72)	(0.59)	(4.05)
Masha	-0.418	-0.916***	-0.351
	(-1.09)	(-2.68)	(-0.51)
Share	0.016***	0.008**	0.019***
	(5.53)	(2.20)	(4.41)
Indep	0.072	0.314	-0.250
	(0.16)	(0.58)	(-0.45)
Dual	0.078	0.049	0.037
	(1.38)	(0.77)	(0.44)
Firm-fixed effect	Yes	Yes	Yes
Year-fixed effect	Yes	Yes	Yes
Constant	-0.880	2.186	-13.106***
	(-0.47)	(0.86)	(-4.95)
N	20,598	13,027	9,452
Adj R-squared	0.108	0.0934	0.155

Table 8 is results of endogeneity test. The control variables in these models is described in Section 3.2.3. To mitigate the reverse causality issue, we include year fixed effects in our regressions to control for time trends in non-pecuniary compensation and firm fixed effects to mitigate the concern that omitted firm-level, time-invariant variables correlate with both non-pecuniary compensation and ESG rating. Industry-fixed effect is used to control the differences among industries. All standard errors reported in parentheses are clustered at the firm level. Statistical significance at the 1%, 5%, and 10% level is indicated by ***, **, and *, respectively.

7. Additional Analysis of the Supervisory Role of ESG Ratings in Reducing Non-Pecuniary Consumption

The market-based soft regulation effect of ESG ratings encourages firms to develop and improve sustainable management frameworks and ESG practices. These practices drive departments, business lines, and employees to effectively implement ESG strategies, leading to a comprehensive evaluation of ESG issues and targeted governance (Wang & Huang, 2021). This process, in turn, enhances business models and management quality, contributing to the endogenous drivers of high-quality development.

In line with endogenous growth theory, total factor productivity (TFP) is a critical indicator of economic growth and the foundation for sustainable, high-quality development. TFP improvement reflects the optimization of management models, enhancements in product quality, and structural transformation, thus serving as an excellent measure of a firm's endogenous growth drivers. Existing literature has shown that ESG performance can positively influence TFP (Wu et al., 2023). However, excessive executive perks, as a manifestation of agency problems, can diminish operational efficiency. Given that ESG ratings reduce excessive executive perks, this study further investigates whether ESG ratings improve TFP by reducing excessive executive perks and stimulating the endogenous drivers of high-quality development.

We calculate total factor productivity (TFP) using the Levinsohn-Petrin (LP) method. The results are presented in Table 9. Column (1) shows that the ESG rating coefficient for TFP is 0.05, significant at the 1% level, indicating that ESG ratings improve total factor productivity. In Column (2), the regression coefficient for excessive executive perks is 0.044, significant at the 1% level, and the ESG coefficient is 0.037, also significant at the 1% level. This suggests that ESG ratings enhance TFP by reducing excessive executive perks, thereby promoting the endogenous drivers of high-quality development in firms.

Table 9
Economic Consequences Test

	(1)	(2)
	TFP	TFP
ESG	0.050***	0.037***
	(3.51)	(2.80)
Unperk		-0.044***
		(-24.84)
Pay	0.115***	0.130***
	(8.04)	(9.77)
Rpay	-0.008***	-0.007***
	(-4.37)	(-4.49)
Size	0.372***	0.385***
	(22.45)	(24.70)
Lev	0.440***	0.362***
	(8.45)	(7.92)
Age	0.032	0.033
	(1.17)	(1.36)
Roa	2.528***	1.804***
	(21.65)	(16.80)
Cash	0.228***	0.190***
	(4.41)	(4.02)
Growth	0.293***	0.203***
	(25.83)	(19.32)
Board	-8.290***	-9.906***
	(-2.82)	(-3.65)
Masha	-0.015	-0.056
	(-0.24)	(-0.91)
Share	0.000	-0.000
	(0.02)	(-0.46)
Indep	0.180	0.099
	(1.58)	(0.94)
Dual	0.005	0.005
	(0.43)	(0.47)
Firm-fixed effect	Yes	Yes
Year-fixed effect	Yes	Yes
Constant	-3.125***	-3.529***
	(-8.78)	(-10.56)
N	19,728	19,728
Adj R-squared	0.537	0.616

Table 8 is results of economic consequences test which is the effects of ESG ratings on total factor productivity through excessive executive perks. The control variables in these models is described in Section 3.2.3. To mitigate the reverse causality issue, we include year fixed effects in our regressions to control for time trends in non-pecuniary compensation and firm fixed effects to mitigate the concern that omitted firm-level, time-invariant variables correlate with both non-pecuniary compensation and ESG rating. Industry-fixed effect is used to control the differences among industries. All standard errors reported in parentheses are clustered at the firm level. Statistical significance at the 1%, 5%, and 10% level is indicated by ***, **, and *, respectively.

8. Conclusions

This paper investigates the governance effects of ESG ratings on excessive executive perks using a quasi-natural experiment with data from Chinese A-share listed companies between 2009 and 2021. The findings demonstrate that, after controlling for other variables and fixed effects, SynTao Green Finance's ESG ratings significantly reduce excessive executive perks. This relationship remains robust across a series of robustness tests and endogeneity checks. Furthermore, the study explores the underlying mechanisms through which ESG ratings influence managerial behavior, finding that ESG ratings reduce excessive executive perks by promoting managerial shareholding and curbing short-termism. Additionally, ESG ratings reduce the opportunities for excessive executive perks by decreasing information asymmetry and increasing analyst coverage.

From a heterogeneity perspective, the study reveals that ESG ratings exert a more significant impact on reducing excessive executive perks in firms with lower executive compensation relative to industry averages, stronger internal controls, higher marketization, and non-state-owned status. Finally, the study examines whether ESG ratings contribute to higher operational efficiency by improving TFP. The results suggest that the reduction in excessive executive perks, driven by ESG ratings, leads to an increase in total factor productivity, further stimulating the endogenous drivers of high-quality development.

In conclusion, this study sheds light on the positive economic consequences of ESG ratings, offering valuable insights for policymakers, regulators, and investors who aim to improve corporate governance and promote sustainable development.

Declarations

Ethical approval

This article does not contain any studies with human participants performed by any of the authors.

Author Contribution

Yanxia Liu: Funding acquisition, Conceptualization, Data Curation, Design of Study, Writing-Original Draft. Huaijin Qi: Conceptualization, Writing-Original Draft, and Writing - Review & Editing. Siqin Liu: Conceptualization, Data Curation, Writing - Review & Editing. Yao Yu: Paper revision, Data Curation and Editing.

Data Availability

The datasets and analysis code supporting the findings of this study are available as supplementary materials submitted with this manuscript.

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Figures

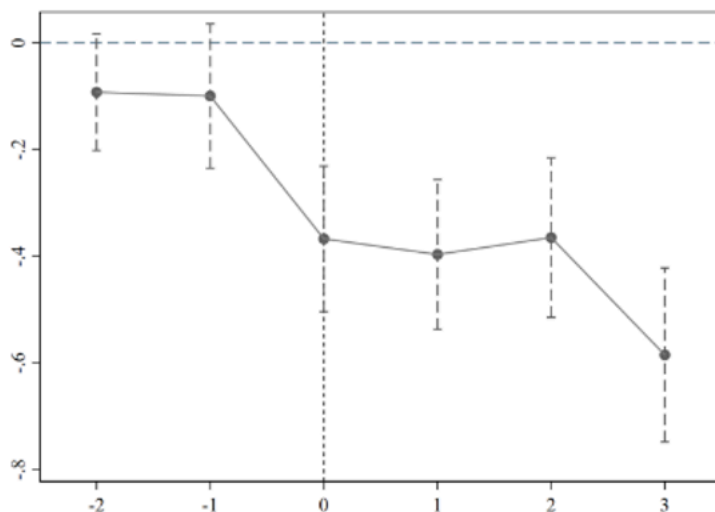


Figure 1

