

FINANCIAL PERFORMANCE AND THE LEGAL LANDSCAPE: AN INTERNATIONAL STUDY OF CONTROVERSIAL BUSINESS ACTIVITIES

Paolo Mazza, Mikael Petitjean, Ariana
Tohlukov

REPRINT • 2025 / 04



LFIN

Voie du Roman Pays 34, L1.03.01 B-1348 Louvain-la-Neuve

Tel (32 10) 47 43 04

Email: lidam-library@uclouvain.be

<https://uclouvain.be/en/research-institutes/lidam/lfin/publications>

Financial Performance and The Legal Landscape: An International Study of Controversial Business Activities

Paolo MAZZA*

Mikael PETITJEAN†

Aiana TOHLUKOV‡

February 20, 2024

Abstract

In our decade-long international study of controversial publicly traded companies in tobacco, alcohol, and gambling industries, we find that their performance is distinctly influenced by the legal landscape compared to their non-controversial peers. Not only controversial firms do not outperform their non-controversial peers when the determinants of the legal landscape are accounted for, but there is also evidence that controversial firm performance is sensitive to specific aspects of the legal landscape, some of them helping them thrive while others penalizing them. A stricter rule of law and regulation quality negatively affect them. Their stock performance improves in environments with widespread bribery, patronage, and embezzlement. Additionally, enhanced business freedom and property rights protection significantly boost their performance, a benefit not observed in non-controversial firms.

JEL Codes: G10, K20.

Keywords: controversial business, firm performance, legal determinants, business freedom, property rights, government integrity.

* IESEG School of Management, Univ. Lille, CNRS, UMR 9221 - LEM - Lille Economie Management, 3 rue de la Digue - 59000 Lille (France). Tel.: +33 320 54 58 92. Email: p.mazza@ieseg.fr.

† LFIN/LIDAM (UCLouvain, Belgium) & Louvain School of Management. 151, Chaussée de Mons – 7000 Mons (Belgium). Tel. +32 497 30 12 66. Email : mikael.petitjean@uclouvain.be. Corresponding author.

‡ IESEG School of Management, Univ. Lille, CNRS, UMR 9221 - LEM - Lille Economie Management, 3 rue de la Digue - 59000 Lille (France). Email: aiana.tohlukov@ieseg.fr.

1. Introduction

Corporations with primary operations in the tobacco, alcohol, and gambling sectors frequently encounter elevated levels of public and regulatory scrutiny due to the contentious nature of their alignment with societal norms. These entities, particularly those listed on public exchanges, are often labelled as controversial, unethical, or referred to as sin or vice corporations.

The tolerance of controversial business operations varies substantially across legal jurisdictions, which in turn influences the performance of enterprises engaged in these activities. For instance, corporations involved in contentious practices may either outperform the general market in regions with more permissive legal systems or struggle in those with pervasive corruption.

Academic discourse exploring the performance of these controversial companies has steadily increased, primarily focusing on financial risk while neglecting to consider the legal determinants of stock market performance. Our review of related literature suggests that contentious companies frequently offer superior risk-adjusted returns compared to their counterparts. The prevailing conventional assumption is that investors' decisions are grounded in rational deliberations and a logical balance between risk and reward. While risk-averse investors do prioritize such trade-offs, they are also susceptible to behavioural biases such as overconfidence, affecting their trading behaviours in relation to these companies. Both rational and behavioural theories propose that investors' perceptions of controversial activities in terms of risk and sentiment influence their performance.

Investors' sentiments are also moulded by the prevalent societal norms within a jurisdiction as these norms contribute to business risk assessment. For example, Hong and Kacperczyk (2009) show that societal norms have a greater impact on the performance of controversial companies than traditional economic determinants. Our investigation transcends societal norms, the utility of which relies on the "beliefs or actions" of community members (Akerlof, 1980), and whose empirical measurement can be vague and disputed.

We instead focus on the legal landscape, which more explicitly constrains business operations in contentious sectors. Our investigation draws inspiration from Gugler et al. (2004), which posits that the origin of a nation's legal system is a crucial determinant of corporate performance. Enterprises based in countries with an English legal system typically generate investment returns equal to or exceeding their capital costs. Conversely, companies in civil-law jurisdictions often earn below their capital costs on investment. Gugler et al. (2004) identify four overarching legal systems – Anglo-Saxon, Scandinavian, German, and French – without dissecting the varied dimensions and elements characterizing these systems. These systems, not only adapted in former colonies but also evolved over time, exhibit complexities that extend beyond this simple categorization.

To address this complexity and evaluate the distinct attributes of the legal landscape, we have collected data from the World Bank's Worldwide Governance Indicators (WGI) and the Heritage Foundation's Index of Economic Freedom (Kim et al., 2023). As detailed in our study, we capture a comprehensive range of indicators including the strength of the law and rule abidance in society; the degree of government effectiveness; the level of regulatory quality; the risk of political insecurity and instability; the extent to which a country's citizens perceive their freedom of expression, their ability to select their

government, their freedom of association, and free media ; the extent to which the regulations and the legal environment in general, permit people to “acquire, hold, and utilize private property ; the level of corruption, bribes, transparency of government regarding policies and civil services ; the degree of economic freedom ; and the time required to enforce a contract.

Dependent on these legal attributes, corporations engaged in contentious activities, such as those in the tobacco, alcohol, and gambling sectors, will face differential impacts from laws and regulations. While we hypothesize that these elements should influence corporate performance, the degree to which the legal environment matters has not been comprehensively examined in previous literature. In their literature review on multinationals’ misbehavior, Cuervo-Cazurra *et al.* (2021) have also underscored the need for future research to incorporate perspectives from adjacent social sciences such as ethics, psychology, sociology, anthropology, law, political science, and economics. Our research addresses this call to action by conducting a cross-disciplinary study that incorporates principles from law and economics to better comprehend how legal landscapes, in their many diverse facets, influence firm behavior in controversial industries.

Utilizing a dataset encompassing 92 contentious firms across 39 countries from 2004 to 2020, our paper seeks to augment the existing literature by elucidating the potential influence of jurisdictional and legal factors on contentious corporate performance. We initially ascertain whether controversial firms outperform their non-controversial counterparts in the stock market before probing the effects of numerous legal landscape variables. We employ propensity score matching to form a reference group of non-contentious corporations that resemble our sample group in all aspects except their contentious activities. This approach allows us to control for confounding factors and better estimate the extent to which the legal landscape influences contentious corporate performance. To our knowledge, this study is the first to comprehensively examine the effect of various legal factors on the performance of contentious corporations in the stock market, relative to properly compared non-contentious peers.

The structure of the remaining paper is as follows: Section 2 provides an overview of the related literature, Section 3 introduces the data, Section 4 is devoted to the empirical analysis, and the final section concludes the paper.

2. Literature Review

The categorization of certain industries as 'controversial' remains somewhat nebulous and lacks full objectivity due to varying perspectives on what constitutes 'vice' and 'virtue'. Notwithstanding these differences in perception, we align with the established precedent set by a multitude of studies, including Hong and Kacperczyk (2009), by incorporating the tobacco, alcohol, and gambling sectors in our analysis. These industries are frequently branded as 'sinful' due to their substantial potential to engender harmful addictive effects on human health and behaviours.

In concurrence with the recent expansion of Environmental, Social, and Governance (ESG) investing, firms that have incorporated socially responsible investment standards into their business objectives have experienced an influx of investments, particularly from institutions subject to normative constraints such as pension plans (Kumar *et al.*, 2016; Widyawati, 2020). This observation aligns with the findings of Fabozzi *et al.* (2008), suggesting that institutional investors adhere to well-defined

investment policy guidelines with the aim of generating returns within specific societal norms. Meanwhile, individual investors maintain the autonomy to make discretionary decisions regarding investments in controversial corporations.

As a result, there exists a risk that controversial companies may progressively become neglected and undervalued, leading to an increase in expected returns due to restricted risk-sharing in the face of heightened litigation risk (Hong and Kacperczyk, 2009). Indeed, these controversial companies often draw the attention of legal authorities due to their potential negative impacts on human health and well-being. In this context, stricter adherence to the rule of law would logically result in more frequent litigations, which could negatively impact their market returns in comparison to analogous non-controversial firms used as performance benchmarks.

In the World Bank's database, the rule of law indicator serves to evaluate the strength of law enforcement and societal compliance with legal norms. However, this singular indicator fails to encapsulate the intricacies of a country's legal system and jurisprudence. For instance, Bingham (2007) breaks down the rule of law into eight sub-rules, one of the most pertinent being the sixth, which states that "ministers and public officers at all levels must exercise the powers conferred on them reasonably, in good faith, for the purpose for which the powers were conferred and without exceeding the limits of such powers" (p.78).

The challenge lies in accurately representing the reality of the rule of law by identifying additional, pertinent factors to consider in assessing the legal risks faced by controversial companies. This challenge motivates our selection of multiple proxies to represent the condition of a country's legal landscape. To our knowledge, the tangible impact of the legal landscape on the performance of controversial companies remains under-explored in the existing literature.

2.1 Financial risk factors

In contrast to the legal landscape, the influence of financial risk factors on the performance of controversial companies has been extensively examined. Hong and Kacperczyk (2009) discovered positive and statistically significant alphas for controversial companies by regressing equally weighted controversial stock portfolios against a value-weighted market benchmark and economy-wide investment style controls. Their significant positive alphas could still result from the disproportionate weighting of smaller controversial stocks, which may have outperformed under-weighted larger controversial stocks. Their findings are nevertheless confirmed by Han et al. (2022) who document that the superior performance of sin stocks has persisted over the most recent decade (2009–2018). Overall, their work supports the shunned stock hypothesis and indicates the price of sin stocks is alive and well. Karim et al. (2022) still underscore the diversification benefits, safe-haven, and hedging potentials of ethical investments against both sin and conventional stocks.

Bansal et al. (2022) confirm Blitz and Fabozzi (2017) in suggesting that on average, investing in good, i.e., highly rated Socially Responsible Investments (SRI), stocks and/or divesting from bad, i.e., lowly rated SRI, stocks might just reflect the common asset market factor risks. However, they show that abnormal returns from SRI is time-varying: highly rated SRI stocks outperform lowly rated SRI stocks during good economic times, e.g. during periods with high market valuations or aggregate

consumption, but they underperform during bad times, such as recessions. Since performance is contingent on time-varying macroeconomic shocks, we incorporate time-fixed effects in our regression analyses in Section 4.

2.2 Social norms

While our study does account for financial risk factors, it primarily focuses on non-financial elements, specifically the legal landscape which is influenced by social norms. As proposed by Elster (1989), social norms are not solely “outcome-oriented”. They represent widely accepted or rejected conventions which significantly influence economic behaviours and market outcomes, even occasionally superseding the profit motive, according to Hong and Kacperczyk (2009). They observed that social norms impact controversial companies negatively, contributing to their neglect due to the apprehension of litigation amongst investors who prioritize these norms. Consequently, controversial companies become underpriced over time, allowing investors who are willing to bear the reputational risk to earn a return premium.

The interplay between social norms and market participant behaviour is further validated by Liu et al. (2014). They observed that institutional investors' shareholdings and analyst coverage of controversial companies increase in correlation with the level of social norm acceptance. Moreover, Fabozzi et al. (2008) emphasized the significance of social norms, asserting that non-economic factors hold more importance than generally believed. Their analysis of risk-adjusted performance across six controversy-laden industries (alcohol, gambling, tobacco, biotech, defence, and adult services) revealed that companies deemed unethical conspicuously outperform standard benchmark indices. They concluded that institutional investors should ponder the economic implications of upholding social standards, suggesting that trustees or fiduciaries should comprehensively understand the potential economic repercussions of excluding companies whose products conflict with their value systems.

Returns of controversial companies may also vary geographically due to cultural differences. Durand et al. (2013) highlight differences between Asian and Western attitudes towards controversial firms, attributing these variations to cultural factors, especially groupthink behavioural patterns. Their investigation into individualism and corruption as cultural dimensions reveals that in individualistic societies like the U.S. and Australia, controversial companies are less attractive to investors. However, in collectivistic societies (such as those in Asia), controversial firms are perceived as "less sinful," and cognitive dissonance decreases when the government or individuals invest in them. This sentiment eases the burden of investing in such firms for norm-constrained institutions, particularly when the official government supports controversial companies.

2.3 The Legal Landscape

People's moral attitudes can be influenced by the legal landscape, especially when it directly addresses living conditions, as posited by Kotsadam and Jakobsson (2011). This view is supported by Soss and Schram (2007), who suggest that highly visible policies not only tangibly alter individuals' lives but also provide cues to broader audiences. Thus, laws and regulations concerning controversial areas like

casinos, gambling, alcohol, and tobacco can shift investors' moral perspectives and impact the performance of controversial companies.

La Porta et al. (1998) explored how legal institutions impact economic growth and market returns in general. They rank countries based on differences in legal quality, such as judiciary efficiency, adherence to the rule of law, contract enforcement, and transaction-related legal structures. Particularly, La Porta et al. (1997) correlate external finance to legal institutions and the rule of law. They find that countries with French civil law systems provide weaker investor protection compared to those with common law systems. These disparities in legal environments impact financial markets.

Lombardo and Pagano (2006) use minority shareholders' property rights and legal system origins to understand stock market development better. They find a positive correlation between the overall quality of institutions, such as judicial efficiency and the rule of law, and the stock market. The more respected the laws and the stronger the judicial system, the higher the returns companies provide to investors. This indicates that the rule of law and the general legal environment impact stock markets, prompting our study to investigate whether controversial company stock returns are influenced by legal factors such as property rights, government corruption levels, or the quality of the legal system.

The necessity for considering different variables to capture the legal landscape is validated by Cumming et al. (2012), who use a weighted average of the legal variables employed by Porta et al. (1998). They find that the quality of legal system (including legal protections) is positively related to private equity returns. Nevertheless, private equity returns are still higher in countries with higher levels of corruption, but they show that this is mainly due to private equity managers who bring about organizational change to alleviate the costs of corruption, thereby generating higher returns.

In a more recent study, Ferris et al. (2021) investigated the ongoing issue of corporate corruption in Central and Eastern Europe. By using a proxy for corporate corruption, they discovered a surprising finding that suggests corruption contributes to a firm's profitability. Further analysis revealed that inflating staff costs is a frequently used method by companies to divert funds for corrupt practices. Despite the detrimental effects of corruption on a country's economy, the study concludes that it continues to persist due to its perceived ability to enhance corporate profitability.

Banerjee et al. (2022) explore how a firm's ethical failures affect its implied cost of equity in 44 countries. Their findings indicate that engaging in corrupt behavior significantly raises the implied cost of equity, and capital markets become more effective in disciplining corrupt firms in regions with weaker institutional quality. They also reveal that corruption's impact on the cost of equity is more pronounced during periods of high policy uncertainty.

In emerging markets, Sonenshine and Erickson (2022) show that institutional factors impact equity returns and flows where corruption, transparency, and democracy levels are below average. They also find that government-owned or controlled industries are positively impacted by a deterioration in the corruption and democracy indexes, while highly concentrated sectors, like the financial industry, are negatively impacted by improving transparency.

In conclusion, the literature provides limited information on the relationship between the legal landscape and controversial companies' performance worldwide. DeCicca et al. (2022) still underscore

the relevance of these laws and regulations and provide the first comprehensive review of tobacco regulation in two decades, focusing on their effectiveness, and ultimately, their impact on economic welfare. They nevertheless do not study financial market performance.

In our study on controversial companies, we contemplate several fundamental aspects of the legal landscape to identify which legal determinants most relate to financial performance in controversial business activities. We expand on the theoretical framework of social norms, as defined above. The definition of social norms is sufficiently vague and disputed that identifying testable hypotheses is practically impossible. We prefer to delve into the legal landscape, which is still influenced by social norms but impacts business activities more explicitly in a way that is empirically testable. In our paper, we move beyond the conventional restricted proxies related to litigation risk, taxation, or judicial efficiency. As explained in the next section, we capture all key aspects of the legal landscape using data sets from the World Bank and the Heritage Foundation.

Our first hypothesis is that the legal landscape impacts the performance of controversial companies differently than their non-controversial counterparts. Evidence from our study confirms the necessity of including the legal landscape when assessing the performance of controversial companies in comparison to their non-controversial peers. Our second hypothesis suggests that certain features of the legal landscape can either promote or inhibit the success of controversial companies. This hypothesis also holds up under examination. With all other factors being equal, we show that the performance of controversial firms is significantly and differently associated with various features of the legal landscape, as further detailed in Section 4.

3. Data

We collect data on financial performance from LSEG (formerly Refinitiv). We screen controversial stocks by filtering on the sub industries such as “breweries”, “casinos and gaming”, “distilleries and wineries”, and “tobacco”. Several categories in these sub-industries can easily be associated with controversial activities, such as “breweries”, “casino hotels”, “casinos (except casino hotels)”, “cigarette manufacturing”, “distilleries”, “other gambling industries”, “wineries”.

Our study spans the period from 2004 to 2020, encompassing 92 controversial companies spread across 39 countries. We ensured the selection of firms with readily available yearly data on market capitalization, share prices, and price-to-book ratio. These 92 firms have no data gaps, enabling us to implement a thorough matching procedure to identify their most compatible non-controversial counterparts. While stock prices are denominated in U.S. dollars, we focus on returns, defined as relative percentage changes. Table 1 provides a breakdown of these controversial companies according to their respective sub-industry groups.

In comparison to Hong and Kacperczyk (2009) who include 63 firms in 2004 (and 56 in their 2006 final year) in 7 countries, we have 92 controversial companies every year, from 2004 to 2020, across 39 countries. To better compare the performance of controversial companies against the rest of the universe, we also create a balanced group of controversial and non-controversial firms by relying on the propensity score matching (PSM) technique, introduced by Rosenbaum and Rubin (1983), which aims to reduce selection biases and make robust comparisons.

Table 1: Number of controversial companies per industry.

<i>Sub-Industry</i>	<i>No of Firms</i>
Breweries	22
Casino Hotels	12
Casinos (except Casino Hotels)	8
Cigarette Manufacturing	10
Distilleries	16
Other Gambling Industries	4
Wineries	20
<i>Total</i>	<i>92</i>

The non-controversial peer group is referenced to as the reference group in the propensity score matching where the dummy variable z takes the value of 1 for a controversial company and 0 for a non-controversial company. We make sure to select the non-controversial peer company in the same sub-industry as the controversial firm. While controversial companies are related to alcohol, tobacco and gambling, their “non-controversial peers” are all constituents belonging to: “food processing” and “fishing and farming” industries (to compare to tobacco industry); “non-alcoholic beverages” (to compare to distilleries and wineries, and brewers); and “leisure and recreation”, “restaurants and bars”, “hotels, motels and cruise lines” (to compare to casinos and gaming industry).

Starting from an original sample of 438 non-controversial companies, we compute the propensity score for each of these non-controversial firms and select the best 92 non-controversial peers, i.e., those with the highest score. The score is equal to the estimated probability that the non-controversial company perfectly matches the features in the controversial group given a set of regressors, X , including key variables such as the natural logarithm of the annual market capitalization ($LNSIZE$), the annual price-to-book ratio (PTB), the momentum factor (MOM) and the market risk premium (MKT).⁴ They correspond to the classical determinants of equity performance and are the set of covariates affecting both controversial and non-controversial companies.

Formally, this probability is given by $Prob[z=1|X]=G(X'b)$, where $G(.)$ is the logistic cumulative distribution function with b parameters in the model, including the intercept. We then keep the 92 non-controversial firms with the highest propensity scores and therefore obtain the group of non-controversial firms, which is the closest to the group of controversial firms. This matching procedure enables us to better estimate the consequence on company performance of doing business in controversial activities. We end up with 184 companies with the geographical distribution given in Tables 2.1 to 2.3. The location of a company in each country is based on the location of its headquarters.

⁴ MOM is the difference between the average returns or winners' portfolios and the average returns for losers' portfolios from for region j at time t . MKT, is the expected market return minus the risk-free rate of the region j at the time t .

**Table 2.1: Geographical distribution of firms
(OECD versus non-OECD countries)**

OECD / NON-OECD	Firms	Obs (%)
OECD	92	50.00
NON-OECD	92	50.00

Table 2.2: Regional distribution of firms

Regions	Firms	Obs. (%)
Europe	45	24.46
NAFTA	26	14.13
South America	5	2.72
Asia	91	49.46
Oceania	9	4.89
Middle East	4	2.17
Africa	4	2.17

Table 2.3: Distribution of firms by country

Country	Firm(s)	Obs. (%)	Country	Firm(s)	Obs (%)
Argentina	1	0.54	Mexico	2	1.09
Australia	7	3.80	Netherlands	1	0.54
Belgium	2	1.09	New Zealand	2	1.09
Canada	4	2.17	Norway	3	1.63
Chile	4	2.17	Pakistan	3	1.63
China	29	15.76	Poland	1	0.54
Czech Republic	1	0.54	Portugal	1	0.54
Denmark	3	1.63	Singapore	1	0.54
Egypt	1	0.54	South Africa	3	1.63
France	10	5.43	South Korea	9	4.89
Germany	4	2.17	Spain	2	1.09
Greece	5	2.72	Sri Lanka	3	1.63
Hong Kong	19	10.33	Sweden	1	0.54
India	5	2.72	Switzerland	2	1.09
Indonesia	3	1.63	Taiwan	3	1.63
Ireland	1	0.54	Thailand	3	1.63
Italy	1	0.54	Turkey	3	1.63
Japan	2	1.09	UK	7	3.80
Kuwait	1	0.54	USA	20	10.87
Malaysia	11	5.98			

We collect legal variables from public sources such as the World Bank, Doing Business (which was supported by the World Bank as well), and the Heritage Foundation Index of Economic Freedom (Kim et al., 2023). The choice of legal variables is motivated by past research studies such as Salaber (2007) and Hong and Kacperczyk (2009). Table 3 presents the selected variables. Our goal is to split the legal landscape into its different dimensions and factors. We therefore test the impact of all the key variables

derived from the legal environment, going beyond the use of the rule of law which is too broad to capture the complexity of what constitutes the legal landscape.

Table 3: Summary of legal variables.

Variable	Description
<i>RULE</i>	Rule of Law
<i>GEFF</i>	Government effectiveness
<i>QUAL</i>	Regulatory Quality
<i>PSTAB</i>	Political Stability and Absence of Violence and Terrorism
<i>ACCNT</i>	Voice and Accountability
<i>PROPR</i>	Property Rights
<i>GINT</i>	Government Integrity
<i>BFREE</i>	Business Freedom
<i>CTIME</i>	Time required to enforce a contract (in days)

This table presents the legal variables and their respective abbreviations.

These variables all are associated with the legal and institutional factors that proxy the legal environment in each country. Each of them is indexed on country j and year t . To assess the different features of the legal landscape, we collect six variables from The Worldwide Governance Indicators (WGI) developed by the World Bank. Each variable is given a score for country j and year t , ranging from -2.5 to 2.5; these are z-scores or units for the normal standard distribution (with $\mu = 0$, $\sigma = 1$). The higher the numbers, the better the legal governance.⁵

First, *RULE* is defined as the strength of the law and rule abidance in society. Second, *GEFF* refers to the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Third, *QUAL* measures the ability of the government to implement well-grounded policies to establish quality regulations for the private sector. Fourth, *PSTAB* is based on the subjective assessments of carefully selected country experts about political insecurity and instability, as well as terrorism. Firth, *ACCNT* corresponds to the extent to which a country's citizens perceive their freedom of expression, their ability to select their government, their freedom of association, and free media.

We also collect four other variables from two additional databases. *PROPR*, *GINT*, and *BFREE* are extracted from the Heritage Foundation Index of Economic Freedom (Kim et al., 2023), while *CTIME* comes from the Doing Business Project. First, *PROPR* highlights the extent to which the regulations and the legal environment in general, permit people to “acquire, hold, and utilize private property [...] secured by applicable laws that the government enforces effectively.” (Kim et al., p. 403). It focuses on some other sub-components such as the risk of expropriation, the strength of investor protection, quality of land, intellectual and physical property rights. Second, *GINT* includes components such as

⁵ We did not (re)scale the variables. They are provided as such by the World Bank, Doing Business (which was supported by the World Bank as well), and the Heritage Foundation Index of Economic Freedom. The “-2.5 to 2.5” range gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e., ranging from approximately -2.5 to 2.5 with a 0.01 increment.

absence of corruption, bribes, transparency of government regarding policies and civil services. It relates to bribery, patronage, embezzlement. Third, *BFREE* is an overall indicator of the efficiency of government regulation of business. The quantitative score is derived from an array of measurements of the difficulty of starting, operating, and closing a business. Ranging from 0 to 100, the three above-listed variables are part of the factors that measure economic freedom in each country, assessed by four large pillars: Rule of law, Regulatory efficiency, Government size, and Market openness. Finally, *CTIME* is the time required to enforce a contract, from filling in documents for a lawsuit to the closing conclusion of the court, demonstrating the efficiency of the legal institutions to deal with legal cases.

Table 4 presents the descriptive statistics of the controversial companies included in our sample and their associated non-controversial peers after matching. As expected, controversial and non-controversial companies display similar means for all the discriminant variables used in the propensity score matching procedure, i.e., *LNSIZE*, *PTB*, *MOM*, and *MKT*. The average *RULE* score is statistically higher for non-controversial firms than for controversial firms, meaning that the rule of law is better in countries where non-controversial firms do business. The time to enforce a contract is longer for controversial firms by about 77.86 days. The other legal variables display higher scores on average for the non-controversial than for the controversial companies. Student's *t* tests are conducted to test differences in means between the two groups for the different variables under scrutiny. The test fails to reject the alternative hypotheses that there are no differences for all the variables, confirming the need for further investigation.

Table 4: Descriptive statistics after propensity score matching.

<i>Variable</i>	<i>NON- CONTROVERSIAL</i>	<i>CONTROVERSIAL</i>	<i>Difference</i>	<i>T-stat</i>	<i>p-value</i>
<i>LNSIZE</i>	8.6629	8.6619	0.0010	0.0358	0.9714
<i>PTB</i>	3.1426	3.9857	-0.8431	-1.3316	0.1832
<i>MOM/WML</i>	8.3480	8.2560	0.0920	0.1327	0.8944
<i>MKT</i>	11.2452	11.3450	0.0998	-0.1100	0.9124
<i>MCAP</i>	3.7497	2.6514	1.0983	2.2006	0.0278
<i>LNAGE</i>	1.6297	1.5973	0.0324	3.3196	0.0009
<i>LNMB</i>	0.2310	0.3232	-0.0922	-6.0995	<0.0001
<i>RULE</i>	0.9228	0.8110	0.1119	3.5359	0.0004
<i>GEFF</i>	1.1095	0.9782	0.1312	5.0660	<0.0001
<i>QUAL</i>	1.0058	0.8374	0.1684	5.6795	<0.0001
<i>PSTAB</i>	0.2758	0.1469	0.1289	4.7540	<0.0001
<i>ACCNT</i>	0.4214	0.3276	0.0938	2.4679	0.0136
<i>PROPR</i>	69.2260	65.1136	4.1124	4.7699	<0.0001
<i>GINT</i>	62.6286	59.1382	3.4904	4.7142	<0.0001
<i>BFREE</i>	80.0114	75.0944	4.9169	8.5330	<0.0001
<i>CTIME</i>	491.5810	569.4441	-77.8632	-7.9123	<0.0001

The first column refers to the variable name. The second and third column show the means of each variable for the non-controversial and controversial groups, respectively. The last three columns present the results of Student's *t* test of comparison of means between the two groups.

We use a balanced panel and

4. Empirical results

In most papers, controversial firm performance is estimated by running time series regressions. Salaber (2007) explains abnormal returns by relying on the CAPM setting and the four-factor model (Fama and French, 2004). Hong and Kacperczyk (2009) do the same, but they also run cross-sectional regressions to “soak up as much of the cross-sectional variation as possible so that we can better identify the differential effect of controversial stocks compared to non-controversial stocks”. This is the goal of our panel data models below. We also fine tune the comparison between controversial and non-controversial companies by matching them through propensity scores, as explained in the previous section. First, we add the classical control variables for financial performance and then extend the analysis by controlling for the legal landscape.

For firm i and year t , our first panel model is:

$$R_{it} = \beta_0 + \beta_1 DSIN_{it} + \beta_2 LNAGE_{it} + \beta_3 LN SIZE_{it} + \beta_4 LNMB_{it} + \delta' \varepsilon_i + \omega' \xi_t + \mu_{it} \quad (1)$$

where R is the company annual stock return, i.e., relative percentage changes, minus the risk-free rate; $DSIN$ is a dummy variable that equals 1 if the company is associated with a controversial firm and 0 otherwise. $LNAGE$ is the log of the age of the company; $LN SIZE$ is the natural logarithm of the company market capitalization; $LNMB$ is the natural logarithm of the market-to-book ratio. Finally, ε includes the cross-sectional fixed effects that depend on each firm, with the associated δ' vector of coefficients; these are all the effects that could not be observed and are time independent. ξ controls for time fixed effects which are constant cross-sectionally, with the associated ω' vector of coefficients; and μ is the error term.⁶

Table 5 presents the results. The model is estimated using robust standard errors and two-way fixed least square dummy variable model (LSDV).

Table 5: Company stock returns and performance drivers.

Variable	Estimate	p-value
Intercept	6.1556 (3.4731)	0.0764
<i>DSIN</i>	-0.2998 (0.2211)	0.1752
<i>LOGAGE</i>	-5.7763 (2.3153)	0.0126
<i>LOGSIZE</i>	0.1315 (0.1511)	0.3843
<i>LOGMB</i>	0.8001 (0.1602)	<0.0001
Year fixed-effects	YES	
Firm fixed-effects	YES	

This table presents the results of the estimation of the model depicted in Equation 1. The second column refers to the OLS estimates with robust standard-errors below. The associated p-values are reported in the third column. The balanced panel includes 3128 observations, i.e., 184 firms (n) over 17 years (T).

⁶ As a robustness check, we have included regional fixed effects based on the regional split indicated in Table 2.2. There was no change in the coefficient estimates and statistical significance, except the intercept estimate of course. This holds true for the empirical results reported in Tables 6 and 7.

Our results are not consistent with Salaber (2007) and Hong and Kacperczyk (2009). When controversial companies are carefully matched to comparable non-controversial companies using propensity scores, we find no statistical difference in performance between the two groups. Although the coefficient estimate of *DSIN* is negative and equal to -0.30, it is not significant. So, controversial companies and their non-controversial peers display similar firm performance. Hong and Kacperczyk (2009) find a significant difference in performance in favour of controversial companies by around 30 bps per month, but they do not use the propensity score matching technique.

Among the control variables, two of them are significant. We find that the realized returns decrease as the firm gets older and reaches its maturity stage, when sales begin to level off. In addition, the higher the market-to-book ratio, the higher the realized returns. Our sample covers the 2004-2020 period and during that period, growth-oriented companies have indeed outperformed value companies which typically display lower market-to-book ratios on average.

In Table 5, the legal landscape is ignored. It is therefore possible that the model is incorrectly specified, with its coefficient estimates being biased and inconsistent due to an omission bias. We address this identification issue in the next section.

Our second panel model aims to specifically test whether the legal landscape bears on controversial firm performance. For firm *i* and year *t*, it is specified as follows:

$$R_{it} = \beta_0 + \beta_1 DSIN_i + \beta_2 LAW_{it} + \beta_3 LAW_{it} * DSIN_i + \beta_4 LNAGE_{it} + \beta_5 LN SIZE_{it} + \beta_6 LNMB_{it} + \delta' \varepsilon_i + \omega' \xi_t + \mu_{it} \quad (2)$$

where we add two terms in comparison to Equation (1). *LAW_{it}* is a generic variable name associated with each of the nine legal landscape variables that we investigate and list in Table 3, i.e., *RULE*, *CTIME*, *GEFF*, *QUAL*, *PSTAB*, *ACCNT*, *PROPR*, *GINT*, *BFREE*. The interaction term between the *LAW* variable and *DSIN* is also included to test whether the impact of the legal landscape is more or less pronounced for controversial companies in comparison to their non-controversial peers. For instance, the parameter estimate of the interaction term *RULE*DSIN* would measure the specific effect that the rule of law has on controversial companies (and therefore *not* on their “virtue” peers). Table 6 reports the results for Equation (2). We also run the same model with the *DVIR* dummy (instead of the *DSIN* dummy) to estimate the significance level for the *LAW* variable for non-controversial companies as well; we report the results in Table 7.⁷

Table 6 presents the results of these estimations using robust standard errors. First, *DSIN* displays a negative coefficient in all the 9 cases, as it was the case in Table 5. *DSIN* is significant in 4 cases out of 9 while it was not significant in Table 4. In other words, controversial companies *underperform* their matched non-controversial peers in 4 cases out of 9 when the legal landscape is controlled for in

⁷ We also control for cultural factors across regions by adding geographical fixed effects. The distributions of firms across regions and countries are given in Tables 2.2 and 2.3. The level of significance of all our variables is unchanged. These tables are available upon request..

addition to the classical financial performance drivers used in Table 4. In these four cases, the underperformance varies from 43.84 to 107 basis points, which is economically significant. This is the first indication that the legal landscape must be included to correctly assess the performance of controversial companies with respect to their non-controversial peers.

Second, *LAW* is significant in five specifications in Table 7 where the controversial group is used as the reference group and captured by the model intercept. (See the rows in bold). The number of cases where *LAW* is significant goes down to two when the non-controversial group is used as the reference group. This contributes to the validation of our hypotheses. Not only the correlation between the legal landscape and the performance of controversial companies is different, compared to the universe of non-controversial companies, but the performance of controversial companies is significantly and differently associated with several features of the legal landscape.

For example, the coefficient estimate of *RULE* is -0.2020, which indicates that the strength of the law and rule abidance in society is negatively associated with companies returns, even for the reference group of non-controversial companies. More specifically, company stock returns drop by 20.20 basis points annually on average when the rule of law in a country is stronger by one unit in the z-score. This negative impact is nevertheless larger for controversial companies, as revealed in Table 7 where controversial companies are used as a reference group. Controversial company returns drop by 47.29 basis points on average when the rule of law is reinforced, i.e., when there is a one-z-score increase in the rule of law.

The indicator for accountability (*ACCNT*) brings additional insights into the way the legal landscape bears on performance. The extent to which citizens perceive their freedom of expression, their ability to select their government, their freedom of association, and free media in their country, is not significantly related to the returns of non-controversial companies (Table 6). However, this is not true for controversial companies: a one-z-score increase in *ACCNT* is associated with a significant *fall* in controversial firm performance by 44.66 basis points (Table 7). This is additional evidence that the relationship between the legal landscape and firm performance depends on the types of industries and business activities.

The Heritage Foundation measure of government integrity (*GINT*) relates to bribery, patronage, and embezzlement. The absence of corruption or bribes, as well as high transparency of government regarding policies and civil services, favours non-controversial firm performance but penalizes controversial firm performance. When the score in *GINT* increases by one point, the annual stock return of non-controversial companies increases by 0.63 basis point on average (Table 6), while it decreases by 0.30 basis point for controversial companies (Table 7).

In Table 7, where controversial companies are used as the reference group, we also observe that the coefficient estimate of *QUAL* is negative and equal to - 0.2861. When the ability of the government to implement well-grounded policies and establish quality regulations for the private sector improves (by one unit in the z-score), controversial company returns are lower by 28.61 basis points annually on average. This legal dimension does not relate to non-controversial company returns (since the *QUAL* variable is not significant in Table 6). Overall, these findings suggest that firms doing business in controversial markets report lower returns when facing stronger legal institutions and environments.

**Table 6: Company stock returns and legal landscape
with non-controversial companies as reference group**

Variable	RULE	GEFF	QUAL	PSTAB	ACCNT	PROPR	GINT	BFREE	CTIME
<i>Intercept</i>	6.4408 * (3.5454)	6.2364 * (3.5406)	6.3223 * (3.4963)	6.1831 * (3.4479)	6.3471 * (3.4710)	6.2246 * (3.4178)	6.2505 * (3.4525)	6.1697 * (3.4473)	6.2985 (3.4642)
<i>DSIN</i>	-1.0696 *** (0.3075)	-0.4384 * (0.2582)	-0.7054 ** (0.2923)	-0.3135 (0.2278)	-0.7251 (0.4553)	-0.0998 (0.2243)	-0.3582 (0.2336)	-0.1299 (0.2299)	-0.3554 (0.2232)
<i>LAW</i>	-0.2020 * (0.1181)	-0.0260 (0.0847)	-0.0687 (0.0893)	0.0112 (0.0513)	-0.1878 (0.2239)	0.0009 (0.0018)	0.0063 ** (0.0031)	0.0001 (0.0025)	0.0003 (0.0002)
<i>LAW*DSIN</i>	-0.2709 (0.1839)	-0.1120 (0.1312)	-0.2174 (0.1434)	-0.0394 (0.1074)	-0.2587 (0.2649)	0.0040 * (0.0024)	-0.0092 ** (0.0043)	0.0067 * (0.0037)	-0.0001 (0.0003)
<i>LOGAGE</i>	-5.9809 ** (2.3694)	-5.869 ** (2.3571)	-5.9048 ** (2.3346)	-5.8011 ** (2.3218)	-5.8129 ** (2.3034)	-5.8714 ** (2.287)	-5.759 ** (2.2996)	-5.8212 ** (2.2998)	-5.8875 (2.326)
<i>LOGSIZE</i>	0.1495 (0.1511)	0.1402 (0.1508)	0.1416 (0.1521)	0.1314 (0.1517)	0.1258 (0.1514)	0.1371 (0.1518)	0.1325 (0.1514)	0.1385 (0.1492)	0.1418 (0.1539)
<i>LOGMB</i>	0.8031 *** (0.1596)	0.8009 *** (0.1604)	0.8034 *** (0.1604)	0.8029 *** (0.1555)	0.8103 *** (0.1595)	0.8046 *** (0.1606)	0.7971 *** (0.1606)	0.7974 *** (0.16)	0.8012 (0.1588)
Year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES	YES
Firm fixed-effects	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R-squared	0.8632	0.8628	0.8629	0.8627	0.8631	0.8629	0.8628	0.8629	0.8629

This table presents the results of the estimations of the models depicted in Equation 2. In each column, the generic *LAW* variable is replaced by the header of the column, starting with *RULE* and ending with *CTIME*. The models are conducted with robust standard errors. Variables are demeaned to get more accurate estimates of the intercept and the dummies. The table presents the parameter estimates, the robust standard errors (in parenthesis), and the associated level of statistical significance using stars. *, ** and *** denote significance at the 10%, 5% and 1%, respectively. We use the Arellano (1987) standard errors robust to the presence of both heteroscedasticity and autocorrelation in the residuals.

**Table 7: Company stock returns and legal landscape
with controversial companies as the reference group**

Variable	RULE	GEFF	QUAL	PSTAB	ACCNT	PROPR	GINT	BFREE	CTIME
<i>Intercept</i>	5.3712 *	5.7979 *	5.6168 *	5.8696 *	5.6220 *	6.1248 *	5.8923 *	6.0397 *	5.9431
	(3.3411)	(3.3234)	(3.2837)	(3.2603)	(3.3794)	(3.2292)	(3.2667)	(3.2810)	(3.2614)
<i>DVIR</i>	1.0696 ***	0.4384 *	0.7054 **	0.3135	0.7251	0.0998	0.3582	0.1299	0.3554
	(0.3075)	(0.2582)	(0.2923)	(0.2278)	(0.4553)	(0.2243)	(0.2336)	(0.2299)	(0.2232)
<i>LAW</i>	-0.4729 ***	-0.138	-0.2861 **	-0.0283	-0.4466 ***	0.0049 **	-0.0030	0.0068 *	0.0004
	(0.1424)	(0.1051)	(0.1187)	(0.0998)	(0.1601)	(0.002)	(0.0035)	(0.0039)	(0.0003)
<i>LAW*DVIR</i>	0.2709	0.1120	0.2174	0.0394	0.2587	-0.0040 *	0.0092 **	-0.0067 *	0.0001
	(0.1839)	(0.1312)	(0.1434)	(0.1074)	(0.2649)	(0.0024)	(0.0043)	(0.0037)	(0.0003)
<i>LOGAGE</i>	-5.9809 **	-5.869 **	-5.9048 **	-5.8011 **	-5.8129 **	-5.8714 **	-5.759 **	-5.8212 **	-5.8875
	(2.3694)	(2.3571)	(2.3346)	(2.3218)	(2.3034)	(2.287)	(2.2996)	(2.2998)	(2.326)
<i>LOGSIZE</i>	0.1495	0.1402	0.1416	0.1314	0.1258	0.1371	0.1325	0.1385	0.1418
	(0.1511)	(0.1508)	(0.1521)	(0.1517)	(0.1514)	(0.1518)	(0.1514)	(0.1492)	(0.1539)
<i>LOGMB</i>	0.8031 ***	0.8009 ***	0.8034 ***	0.8029 ***	0.8103 ***	0.8046 ***	0.7971 ***	0.7974 ***	0.8012
	(0.1596)	(0.1604)	(0.1604)	(0.1555)	(0.1595)	(0.1606)	(0.1606)	(0.16)	(0.1588)
Year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES	YES
Firm fixed-effects	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R-squared	0.8632	0.8628	0.8629	0.8627	0.8631	0.8629	0.8628	0.8629	0.8629

This table presents the results of the estimations of the models depicted in Equation 2. In each column, the generic *LAW* variable is replaced by the header of the column, starting with *RULE* and ending with *CTIME*. The models are conducted with robust standard errors. Variables are demeaned to get more accurate estimates of the intercept and the dummies. The table presents the parameter estimates, the standard errors (in parenthesis) and the associated level of statistical significance using stars. *, ** and *** denote significance at the 10%, 5% and 1%, respectively. We use the Arellano (1987) standard errors robust to the presence of both heteroscedasticity and autocorrelation in the residuals.

As indicated above, several features of the legal landscape penalize the performance of controversial companies, but other legal aspects help them thrive, validating our second hypothesis. This is the case for the *PROPR* and *BFREE* variables. In two specifications (columns 7 and 9 in Table 7), the coefficient estimates of the *LAW* variable are indeed positive and significant (while they are not for non-controversial companies in Table 6). *PROPR* and *BFREE* correspond to two dimensions of economic freedom. They are extracted from the Heritage Foundation Index of Economic Freedom. The results for *PROPR* indicate that controversial companies benefit from regulations permitting to acquire, hold, and utilize private property, secured by clear laws that the government enforces effectively. This implies that it is easier for controversial business activities to thrive when expropriation risk is lower, investor protection is stronger, and intellectual and physical property rights are better protected. When the score in property rights protection (ranging from 0 to 100) increases by 1 unit, the returns for controversial companies increase by 0.68 basis points.

This makes sense, especially if we combine these results with those related to the last specification using the *BFREE* indicator of business freedom. The higher this score, the easier it is to start, operate, and close a business. In countries where businesses are secured by clearer laws that the government enforces effectively to protect free enterprise, controversial business activities can thrive more easily. In our case, an increase by 1 unit in business freedom (ranging from 0 to 100) is associated with an average rise by 0.49 basis point in controversial company returns.

When we examine the empirical results for the interaction term (*LAW*DSIN* in Table 6 or *LAW*DVIR* in Table 7), there is even stronger evidence that the legal landscape bears on controversial companies differently than it does on their non-controversial matches. This is the case when we consider the three measures estimated by the Heritage Foundation, i.e., *PROPR*, *BFREE*, and *GINT*.

In line with our discussion above, the interaction term using *GINT* indicates that a higher level of government integrity is beneficial to non-controversial companies (by 0.92 basis point in Table 7) while it remains neutral for controversial companies. This differential impact is significant at 5%. The interaction terms using *PROPR* and *BFREE* display negative coefficient estimates in Table 6 and are both significant at 10%. This implies that controversial companies benefit significantly more than their non-controversial peers when free enterprise is secured by the legal landscape (as estimated by the Heritage Foundation). In fact, the positive association that these two variables have with controversial firm performance vanishes when we zoom in on non-controversial companies. This is revealed by the statistically significant and negative coefficients of the interaction terms (*PROPR*DVIR* and *BFREE*DVIR*), equal to -0.4 basis point and 0.67 basis point respectively in Table 7.

Finally, we observe that *CTIME* and its interaction term are not significant. As such, the time required to enforce a contract is not associated with controversial company returns or their peers.

To sum it up, there is *no* evidence of controversial firm outperformance. When we control for the legal landscape, we even find evidence of underperformance. In Tables 5 and 6, the dummies capturing company classification between controversial and non-controversial activities (*DVIR* and *DSIN*) are indeed statistically different in four cases out of 9, always pointing to the underperformance of controversial companies.

Regarding the legal landscape and its different aspects, we find that the World Bank rule of law indicator (*RULE*) bears more negatively on controversial firm performance. This is in line with our findings on the complementary Heritage Foundation measure of government integrity (*GINT*) which increases when bribery, patronage, and embezzlement becomes less widespread. All else equal, controversial firm performance is negatively associated with government integrity while it is the opposite for non-controversial companies. Both associations are statistically significant. This suggests that controversial companies find it easier to thrive in corrupted environments. This is the opposite for non-controversial companies.

The performance of controversial firms is also affected by the quality of the regulation (*QUAL*). In countries where legal institutions and environments are stronger, firms doing business in controversial markets tend to record lower returns. In the case of non-controversial companies, there is no noticeable association between their performance and regulation quality from a statistical perspective.

The Heritage Foundation indicators of business freedom and property rights protection play a critical role as well. We find that controversial business activities can prosper more easily in countries where companies are secured by clearer laws that governments can enforce more easily to protect free enterprise. Together with *GINT*, *BFREE* and *PROPR* are the only variables related to the legal landscape, for which the interaction term is statistically significant. The sign of the coefficient estimates indicates that both greater business freedom and enhanced protection for property rights benefit controversial companies significantly, while the impact remains neutral to non-controversial peers.

5. Limitations

Notwithstanding the meticulous methodology implemented in this study, it is imperative to recognize several constraints and assumptions. Primarily, the robustness of our conclusions is contingent upon the availability and accuracy of our data set. Particularly within the realms of contentious sectors such as tobacco, alcohol, and gambling, data limitations may introduce biases and affect the robustness of our conclusions. For instance, discrepancies in reporting practices, regulatory enforcement, or the classification of firms as controversial could potentially impact the precision of our results. These biases are however very limited in our case since we rely on LSEG data that is a professional financial data provider.

Furthermore, the study assumes that the legal landscape is accurately captured by the selected determinants, and that these determinants adequately reflect the complexity of the regulatory environments in different jurisdictions. Variability in legal interpretation, enforcement practices, and changes in legislation over the course of the sample may not be fully captured by our model, potentially leading to oversimplification, and overlooking nuanced factors influencing controversial firm performance.

It is important to recognize the potential biases inherent in our research design. Selection bias may arise due to the focus on publicly traded companies, and the findings may not be fully representative of the entire spectrum of controversial firms in the tobacco, alcohol, and gambling sectors. Additionally, stock performance measures may not fully capture the economic impact of controversial

firms, as they do not account for externalities such as social and environmental costs, which could introduce bias towards a more favourable view of these firms.

Moreover, our study assumes that market participants respond rationally to legal and regulatory changes. Behavioural biases and market inefficiencies may lead to mispricing and could affect the observed relationship between legal landscape determinants and controversial firm performance.

The study primarily focuses on a sixteen-year-long analysis of controversial firms in specific industries, and the dynamics observed may not be applicable to different contexts. External factors, such as global economic conditions, technological advancements, or shifts in public opinion, may influence controversial firm performance in ways not captured by our study.

In conclusion, while our research provides valuable insights into the influence of the legal landscape on the performance of controversial firms, it is crucial to interpret the results within the context of these limitations and assumptions. Addressing these concerns will contribute to a more nuanced understanding of the intricate relationship between legal environments and the financial outcomes of companies operating in contentious industries.

6. Concluding remarks

The findings of this study illuminate the nuanced interplay between legal environments and the operational success of firms engaged in controversial business practices. Our investigation delves into how the legal landscape—characterized by factors such as corruption, government effectiveness, regulatory quality, political stability, and the protection of property rights—exerts a differential influence on the performance of controversial versus non-controversial companies. This analysis sheds light on the substantial impact that specific legal determinants have on shaping business outcomes in industries that often find themselves at the intersection of ethical debates and regulatory scrutiny.

Our research reveals that the legal framework within which companies operate serves as more than a backdrop; it actively influences the viability and profitability of controversial business activities. Unlike traditional risk factors, which do not show a significant difference in performance between controversial and non-controversial firms, the legal landscape provides a more discerning lens through which the subtle dynamics of business performance can be understood. Controversial firms, when viewed through this lens, exhibit a tendency to underperform in environments with a stricter rule of law, underscoring the heightened sensitivity of these companies to legal constraints compared to their non-controversial counterparts.

Notably, our findings indicate that certain legal elements disproportionately benefit or disadvantage controversial firms. For instance, while controversial companies appear relatively unaffected by corruption levels, non-controversial firms suffer in corrupt environments, suggesting that the former may possess a unique resilience or adaptability to such conditions. Conversely, aspects like government integrity and regulatory quality present a more challenging landscape for controversial companies, hinting at the complex ways in which legal norms and enforcement practices can either facilitate or hinder their business operations.

Moreover, the study highlights the importance of business freedom and property rights protection as critical factors that can enable controversial businesses to thrive. This suggests that the legal environment's support for free enterprise and the protection of property rights may serve as key enablers for firms operating in contested sectors.

The implications of our research extend beyond academic discourse, offering practical insights for business leaders, regulators, and policymakers. It underscores the importance of understanding the legal landscape's role in shaping the competitive dynamics of controversial industries. For those aiming to navigate or influence the trajectory of such firms, our findings emphasize that legal mechanisms wield a varied impact on business performance. This variability calls for a strategic approach to legal and regulatory policymaking, one that is attuned to the specificities of controversial business practices and the broader legal and ethical considerations they invoke.

Considering these insights, our study echoes the complexity of governance highlighted by Tolstoy's (2016) who wrote that “writing laws is easy, but governing is difficult”, reminding us of the intricate balance required in crafting legal frameworks that effectively manage the diverse challenges presented by controversial businesses. As we move forward, it becomes imperative to identify and implement legal strategies that not only address the immediate concerns of regulation and compliance but also consider the long-term implications for business sustainability and societal well-being.

References

- Banerjee, R., Gupta, K., & Krishnamurti, C. (2022). Does corrupt practice increase the implied cost of equity? *Journal of Corporate Finance*, 73, 102191.
- Bansal, R., Wu, D., & Yaron, A. (2022). Socially responsible investing in good and bad times. *The Review of Financial Studies*, 35(4), 2067-2099.
- DeCicca, P., Kenkel, D., & Lovenheim, M. F. (2022). The economics of tobacco regulation: A comprehensive review. *Journal of Economic Literature*, 60(3), 883-970.
- Akerlof, G. A. (1980). A theory of social custom, of which unemployment may be one consequence. *The Quarterly Journal of Economics*, 94(4), 749-775.
- Arellano, M. (1987). Computing robust standard errors for within-groups estimators. *Oxford Bulletin of Economics and Statistics*, 49(4), 431-34.
- Bingham, L. (2007). The rule of law. *The Cambridge Law Journal*, 66(1), 67-85.
- Blitz, D., & Fabozzi, F. J. (2017). Controversial stocks revisited: Resolving the controversial stock anomaly. *The Journal of Portfolio Management*, 44(1), 105-111.
- Cuervo-Cazurra, A., Dieleman, M., Hirsch, P., Rodrigues, S. B., & Zyglidopoulos, S. (2021). Multinationals' misbehavior. *Journal of World Business*, 56(5), 101244.
- Cumming, D., Fleming, G., Johan, S., & Takeuchi, M. (2012). Legal protection, corruption and private equity returns in Asia. In *Entrepreneurship, Governance and Ethics*, 173-193. Springer, Dordrecht.
- Durand, R. B., Koh, S., & Tan, P. L. (2013). The price of controversial in the Pacific-Basin. *Pacific-Basin Finance Journal*, 21(1), 899-913.
- Elster, J. (1989). Social norms and economic theory. *Journal of Economic Perspectives*, 3(4), 99-117.
- Fabozzi, F. J., Ma, K. C., & Oliphant, B. J. (2008). Controversial stock returns. *The Journal of Portfolio Management*, 35(1), 82-94.
- Fama, E. F., & French, K. R. (2004). The capital asset pricing model: Theory and evidence. *Journal of Economic Perspectives*, 18(3), 25-46.
- Ferris, S. P., Hanousek, J., & Tressl, J. (2021). Corporate profitability and the global persistence of corruption. *Journal of Corporate Finance*, 66, 101855.
- Gugler, K., Mueller, D. C., & Yurtoglu, B. B. (2004). Corporate governance and the returns on investment. *The Journal of Law and Economics*, 47(2), 589-633.
- Han, X., Li, Y., & Onishchenko, O. (2022). Shunned stocks and market states. *The European Journal of Finance*, 28(7), 705-717.
- Hong, H., & Kacperczyk, M. (2009). The price of controversial: The effects of social norms on markets. *Journal of Financial Economics*, 93(1), 15-36.

- Karim, S., Naeem, M. A., & Lucey, B. M. (2022). Do ethics outpace sins? *Finance Research Letters*, 47, 102945.
- Kim, A., Roberts, J., & Tyrrell, P. (2023). *The Heritage Foundation. 2023 Index of Economic Freedom*. Washington DC.
- Kotsadam, A., & Jakobsson, N. (2011). Do laws affect attitudes? An assessment of the Norwegian prostitution law using longitudinal data. *International Review of Law and Economics*, 31(2), 103-115.
- Kübler, D. (2001). On the regulation of social norms. *Journal of Law, Economics, and Organization*, 17(2), 449-476.
- Kumar, N. C. A., Smith, C., Badis, L., Wang, N., Ambrosy, P., & Tavares, R. (2016). ESG factors and risk-adjusted performance: a new quantitative model. *Journal of Sustainable Finance & Investment*, 6(4), 292-300.
- La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Legal Determinants of External Finance. *The Journal of Finance*, 52(3), 1131–1150.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of Political Economy*, 106(6), 1113–1155.
- Liu, Y., Lu, H., & Veenstra, K. (2014). Is controversial always a controversial? The interaction effect of social norms and financial incentives on market participants' behavior. *Accounting, Organizations and Society*, 39(4), 289-307.
- Lombardo, D., & Pagano, M. (2006). Legal determinants of the return on equity. *Corporate and institutional transparency for economic growth in Europe*, 1, 235-270.
- Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41-55.
- Sonenshine, R., & Erickson, B. O. (2022). Institutional determinants of emerging market returns and flows. *Emerging Markets Review*, 51, 100888.
- Soss, J., & Schram, S. F. (2007). A public transformed? Welfare reform as policy feedback. *American Political Science Review*, 101(1), 111-127.
- Tolstoy, L. (2016). *War and peace*. Random House. (Original work published in 1869).
- Widyawati, L. (2020). A systematic literature review of socially responsible investment and environmental social governance metrics. *Business Strategy and the Environment*, 29(2), 619-637.